

# libprs500

## API Documentation

November 14, 2006

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# 1 Package libprs500

This package provides an interface to the SONY Reader PRS-500 over USB.

The public interface of libprs500 is in `libprs500.communicate`. To use it

```
>>> from libprs500.communicate import PRS500Device
>>> dev = PRS500Device()
>>> dev.open()
>>> dev.get_device_information()
('Sony Reader', 'PRS-500/U', '1.0.00.21081', 'application/x-bbeb-book')
>>> dev.close()
```

There is also a script `prs500` that provides a command-line interface to libprs500. See the script for more usage examples.

The packet structure used by the SONY Reader USB protocol is defined in the module `prstypes`. The communication logic is defined in the module `communicate`.

This package requires PyUSB<sup>1</sup>. In order to use it as a non-root user on Linux, you should have the following rule in `/etc/udev/rules.d/90-local.rules` :

```
BUS=="usb", SYSFS{idProduct}=="029b", SYSFS{idVendor}=="054c", MODE="660", GROUP="plugdev"
```

You may have to adjust the GROUP and the location of the rules file to suit your distribution.

## 1.1 Modules

- **communicate**: Contains the logic for communication with the device (a SONY PRS-500).  
(Section 2, p. 7)
- **errors**: Defines the errors that libprs500 generates.  
(Section 3, p. 13)
- **prstypes**: Defines the structure of packets that are sent to/received from the device.  
(Section 4, p. 22)
- **terminfo** (Section 5, p. 222)

## 1.2 Variables

Name	Description
VERSION	<b>Value:</b> '0.2.1'
__author__	<b>Value:</b> 'Kovid Goyal <kovid@kovidgoyal.net>'

---

<sup>1</sup><http://pyusb.berlios.de/>

## 2 Module *libprs500.communicate*

Contains the logic for communication with the device (a SONY PRS-500).

The public interface of class `PRS500Device` defines the methods for performing various tasks.

### 2.1 Variables

Name	Description
<code>MINIMUM_COL_WIDTH</code>	Minimum width of columns in ls output <b>Value:</b> 12
<code>KNOWN_USB_PROTOCOL_VERSIONS</code>	Protocol versions <i>libprs500</i> has been tested with <b>Value:</b> [3472328296227680560L]

### 2.2 Class File

object  **libprs500.communicate.File**

Wrapper that allows easy access to all information about files/directories

#### 2.2.1 Methods

**`__init__(self, file)`**  
`x.__init__(...)` initializes x; see `x.__class__.__doc__` for signature  
 Overrides: `object.__init__` `exitit`(inherited documentation)

**`__repr__(self)`**  
 Return path to self  
 Overrides: `object.__repr__`

**`__str__(self)`**  
`str(x)`  
 Overrides: `object.__str__` `exitit`(inherited documentation)

**`__delattr__(...)`**  
`x.__delattr__('name') <==> del x.name`

**`__getattr__(...)`**  
`x.__getattr__('name') <==> x.name`

**`__hash__(x)`**  
`hash(x)`

```
__new__(T, S, ...)
```

**Return Value**

a new object with type S, a subtype of T

```
__reduce__(...)
```

helper for pickle

```
__reduce_ex__(...)
```

helper for pickle

```
__setattr__(...)
```

x.\_\_setattr\_\_('name', value) <==> x.name = value

### 2.2.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>

### 2.2.3 Instance Variables

Name	Description
<code>is_dir</code>	True if self is a directory
<code>is_readonly</code>	True if self is readonly
<code>size</code>	Size in bytes of self
<code>ctime</code>	Creation time of self as a epoch
<code>wtime</code>	Creation time of self as an epoch
<code>path</code>	Path to self
<code>name</code>	Name of self

## 2.3 Class *DeviceDescriptor*

Describes a USB device.

A description is composed of the Vendor Id, Product Id and Interface Id. See the USB spec<sup>2</sup>

### 2.3.1 Methods

```
__init__(self, vendor_id, product_id, interface_id)
```

<sup>2</sup>[http://www.usb.org/developers/docs/usb\\_20\\_05122006.zip](http://www.usb.org/developers/docs/usb_20_05122006.zip)



**getDevice(self)**

Return the device corresponding to the device descriptor if it is available on a USB bus. Otherwise, return None. Note that the returned device has yet to be claimed or opened.

**2.4 Class PRS500Device**

object   
**libprs500.communicate.PRS500Device**

Contains the logic for performing various tasks on the reader.

The implemented tasks are:

1. Getting information about the device
2. Getting a file from the device
3. Listing of directories. See the `list` method.

**2.4.1 Methods****safe(func)**

Decorator that wraps a call to `func` to ensure that exceptions are handled correctly.

As a convenience, `safe` automatically sends the a `USBConnect` after calling `func`, unless `func` has a keyword argument named `end_session` set to `False`.

An `ArgumentError` will cause the `USBConnect` command to be sent to the device, unless `end_session` is set to `False`. An `usb.USBError` will cause the library to release control of the USB interface via a call to `close`.

**\_\_init\_\_(self, log\_packets=False)****Parameters**

`log_packets`: If true the packet stream to/from the device is logged

Overrides: `object.__init__`

**open(self)**

Claim an interface on the device for communication. Requires write privileges to the device file. Also initialize the device. See the source code for the sequence of initialization commands.

**To Do:**

- Implement unlocking of the device
- Check this on Mac OSX

**close(self)**

Release device interface

---

**get\_device\_information**(\*args, \*\*kwargs)
 

---

Ask device for device information. See **DeviceInfoQuery**.

**Return Value**

(device name, device version, software version on device, mime type)

---

**path\_properties**(\*args, \*\*kwargs)
 

---

Send command asking device for properties of **path**. Return **FileProperties**.

---

**get\_file**(\*args, \*\*kwargs)
 

---

Read the file at **path** on the device and write it to outfile. For the logic see **\_get\_file**.

The data is fetched in chunks of size  $\leq 32\text{K}$ . Each chunk is made of packets of size  $\leq 4\text{K}$ . See **FileOpen**, **FileRead** and **FileClose** for details on the command packets used.

**Parameters**

**outfile**: file object like **sys.stdout** or the result of an **open** call

---

**list**(\*args, \*\*kwargs)
 

---

Return a listing of **path**. See the code for details. See **DirOpen**, **DirRead** and **DirClose** for details on the command packets used.

**Parameters**

**path**: The path to list  
           (*type=string*)  
**recurse**: If true do a recursive listing  
           (*type=boolean*)

**Return Value**

A list of tuples. The first element of each tuple is a path. The second element is a list of **Files**. The path is the path we are listing, the **Files** are the files/directories in that path. If it is a recursive list, then the first element will be (**path**, children), the next will be (child, its children) and so on. If it is not recursive the length of the outermost list will be 1.

---

**available\_space**(\*args, \*\*kwargs)
 

---

Get free space available on the mountpoints:

1. /Data/ Device memory
2. a:/ Memory Stick
3. b:/ SD Card

**Return Value**

A list of tuples. Each tuple has form ("location", free space, total space)

---

**touch**(\*args, \*\*kwargs)
 

---

Create a file at **path**

**To Do**: Update file modification time if file already exists

---

**put\_file**(\*args, \*\*kwargs)
 

---

<code>del_file(*args, **kwargs)</code>
--

<code>mkdir(*args, **kwargs)</code>
-------------------------------------

<code>rm(*args, **kwargs)</code>
----------------------------------

Delete path from device if it is a file or an empty directory
---

<code>__delattr__(...)</code>
-------------------------------

<code>x.__delattr__('name') &lt;==&gt; del x.name</code>
--

<code>__getattr__(...)</code>
-------------------------------

<code>x.__getattr__('name') &lt;==&gt; x.name</code>
--

<code>__hash__(x)</code>
--------------------------

<code>hash(x)</code>
----------------------

<code>__new__(T, S, ...)</code>
---------------------------------

**Return Value**

a new object with type S, a subtype of T

<code>__reduce__(...)</code>
------------------------------

helper for pickle
-------------------

<code>__reduce_ex__(...)</code>
---------------------------------

helper for pickle
-------------------

<code>__repr__(x)</code>
--------------------------

<code>repr(x)</code>
----------------------

<code>__setattr__(...)</code>
-------------------------------

<code>x.__setattr__('name', value) &lt;==&gt; x.name = value</code>
---

<code>__str__(x)</code>
-------------------------

<code>str(x)</code>
---------------------

## 2.4.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute <code>'__class__'</code> of <code>'object'</code> objects>

### 2.4.3 Class Variables

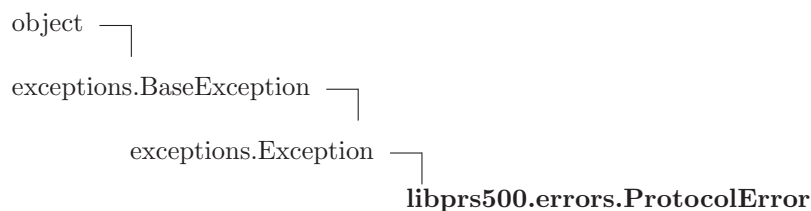
Name	Description
SONY_VENDOR_ID	SONY Vendor Id <b>Value:</b> 1356
PRS500_PRODUCT_ID	Product Id for the PRS-500 <b>Value:</b> 667
PRS500_INTERFACE_ID	The interface we use to talk to the device <b>Value:</b> 0
PRS500_BULK_IN_EP	Endpoint for Bulk reads <b>Value:</b> 129
PRS500_BULK_OUT_EP	Endpoint for Bulk writes <b>Value:</b> 2

## 3 Module `libprs500.errors`

Defines the errors that `libprs500` generates.

(GRAPH)

### 3.1 Class `ProtocolError`



**Known Subclasses:** `libprs500.errors.ArgumentError`, `libprs500.errors.ControlError`, `libprs500.errors.PacketError`

The base class for all exceptions in this package

#### 3.1.1 Methods

<code>__init__(self, msg)</code> <code>x.__init__(...)</code> initializes <code>x</code> ; see <code>x.__class__.__doc__</code> for signature Overrides: <code>exceptions.Exception.__init__</code> <code>exitit</code> (inherited documentation)
---

<code>__delattr__(...)</code> <code>x.__delattr__('name')</code> <==> <code>del x.name</code> Overrides: <code>object.__delattr__</code>
--

<code>__getattribute__(...)</code> <code>x.__getattribute__('name')</code> <==> <code>x.name</code> Overrides: <code>object.__getattribute__</code>
---

<code>__getitem__(x, y)</code> <code>x[y]</code>
---

<code>__hash__(x)</code> <code>hash(x)</code>
--

<code>__new__(T, S, ...)</code> <b>Return Value</b> a new object with type <code>S</code> , a subtype of <code>T</code> Overrides: <code>exceptions.BaseException.__new__</code>
---

```
__reduce__(...)  
helper for pickle  
Overrides: object.__reduce__ exitit(inherited documentation)
```

```
__reduce_ex__(...)  
helper for pickle
```

```
__repr__(x)  
repr(x)  
Overrides: object.__repr__
```

```
__setattr__(...)  
x.__setattr__('name', value) <==> x.name = value  
Overrides: object.__setattr__
```

```
__setstate__(...)
```

```
__str__(x)  
str(x)  
Overrides: object.__str__
```

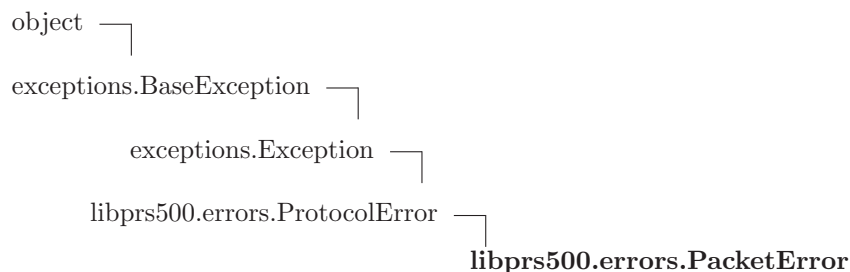
### 3.1.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>object</code> ' objects>
<code>args</code>	<b>Value:</b> <attribute ' <code>args</code> ' of ' <code>exceptions.BaseException</code> '-objects>

### 3.1.3 Class Variables

Name	Description
<code>message</code>	<b>Value:</b> <member ' <code>message</code> ' of ' <code>exceptions.BaseException</code> '-objects>

## 3.2 Class `PacketError`



Errors with creating/interpreting packets

### 3.2.1 Methods

<b><code>__delattr__</code></b> (...)
<code>x.__delattr__('name') &lt;==&gt; del x.name</code>
Overrides: <code>object.__delattr__</code>

<b><code>__getattr__</code></b> (...)
<code>x.__getattr__('name') &lt;==&gt; x.name</code>
Overrides: <code>object.__getattr__</code>

<b><code>__getitem__</code></b> ( <i>x</i> , <i>y</i> )
<code>x[y]</code>

<b><code>__hash__</code></b> ( <i>x</i> )
<code>hash(x)</code>

<b><code>__init__</code></b> ( <i>self</i> , <i>msg</i> )
<code>x.__init__(...)</code> initializes <code>x</code> ; see <code>x.__class__.__doc__</code> for signature
Overrides: <code>exceptions.Exception.__init__</code> <code>exitit</code> (inherited documentation)

<b><code>__new__</code></b> ( <i>T</i> , <i>S</i> , ...)
<b>Return Value</b>
a new object with type <code>S</code> , a subtype of <code>T</code>
Overrides: <code>exceptions.BaseException.__new__</code>

<b><code>__reduce__</code></b> (...)
helper for pickle
Overrides: <code>object.__reduce__</code> <code>exitit</code> (inherited documentation)

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)repr(*x*)

Overrides: object.\_\_repr\_\_

**\_\_setattr\_\_**(...)*x*.\_\_setattr\_\_('name', value) <==> *x*.name = value

Overrides: object.\_\_setattr\_\_

**\_\_setstate\_\_**(...)**\_\_str\_\_**(*x*)str(*x*)

Overrides: object.\_\_str\_\_

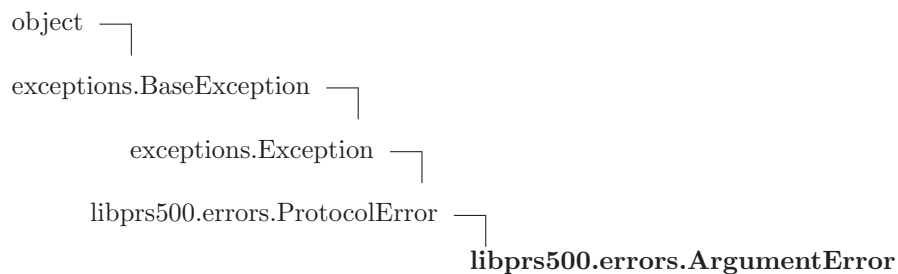
### 3.2.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>object</code> ' objects>
<code>args</code>	<b>Value:</b> <attribute ' <code>args</code> ' of ' <code>exceptions.BaseException</code> '-objects>

### 3.2.3 Class Variables

Name	Description
<code>message</code>	<b>Value:</b> <member ' <code>message</code> ' of ' <code>exceptions.BaseException</code> '-objects>

## 3.3 Class *ArgumentError*

**Known Subclasses:** `libprs500.errors.PathError`

Errors caused by invalid arguments to a public interface function



### 3.3.1 Methods

**`__delattr__`**(...)

`x.__delattr__('name') <==> del x.name`

Overrides: `object.__delattr__`

**`__getattr__`**(...)

`x.__getattr__('name') <==> x.name`

Overrides: `object.__getattr__`

**`__getitem__`**(*x*, *y*)

`x[y]`

**`__hash__`**(*x*)

`hash(x)`

**`__init__`**(*self*, *msg*)

`x.__init__()` initializes `x`; see `x.__class__.__doc__` for signature

Overrides: `exceptions.Exception.__init__` `exitit`(inherited documentation)

**`__new__`**(*T*, *S*, ...)

**Return Value**

a new object with type `S`, a subtype of `T`

Overrides: `exceptions.BaseException.__new__`

**`__reduce__`**(...)

helper for pickle

Overrides: `object.__reduce__` `exitit`(inherited documentation)

**`__reduce_ex`**(...)

helper for pickle

**`__repr__`**(*x*)

`repr(x)`

Overrides: `object.__repr__`

**`__setattr__`**(...)

`x.__setattr__('name', value) <==> x.name = value`

Overrides: `object.__setattr__`

**`__setstate__`**(...)

<code>__str__(x)</code>
<code>str(x)</code>
Overrides: <code>object.__str__</code>

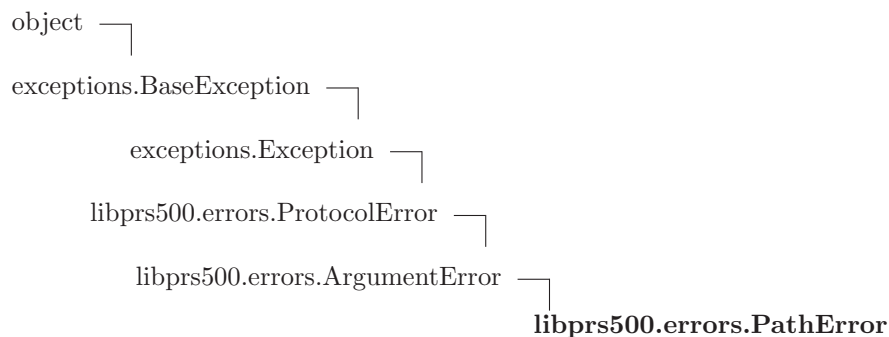
### 3.3.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>object</code> ' objects>
<code>args</code>	<b>Value:</b> <attribute ' <code>args</code> ' of ' <code>exceptions.BaseException</code> '-objects>

### 3.3.3 Class Variables

Name	Description
<code>message</code>	<b>Value:</b> <member ' <code>message</code> ' of ' <code>exceptions.BaseException</code> '-objects>

## 3.4 Class *PathError*



When a user supplies an incorrect/invalid path

### 3.4.1 Methods

<code>__delattr__(...)</code>
<code>x.__delattr__('name') &lt;==&gt; del x.name</code>
Overrides: <code>object.__delattr__</code>

<code>__getattr__(...)</code>
<code>x.__getattr__('name') &lt;==&gt; x.name</code>
Overrides: <code>object.__getattr__</code>

`__getitem__(x, y)``x[y]``__hash__(x)``hash(x)``__init__(self, msg)``x.__init__(...)` initializes `x`; see `x.__class__.__doc__` for signatureOverrides: `exceptions.Exception.__init__` `exitit`(inherited documentation)`__new__(T, S, ...)`**Return Value**a new object with type `S`, a subtype of `T`Overrides: `exceptions.BaseException.__new__``__reduce__(...)`

helper for pickle

Overrides: `object.__reduce__` `exitit`(inherited documentation)`__reduce_ex__(...)`

helper for pickle

`__repr__(x)``repr(x)`Overrides: `object.__repr__``__setattr__(...)``x.__setattr__('name', value)`  $\iff$  `x.name = value`Overrides: `object.__setattr__``__setstate__(...)``__str__(x)``str(x)`Overrides: `object.__str__`

### 3.4.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute <code>'__class__'</code> of <code>'object'</code> objects>

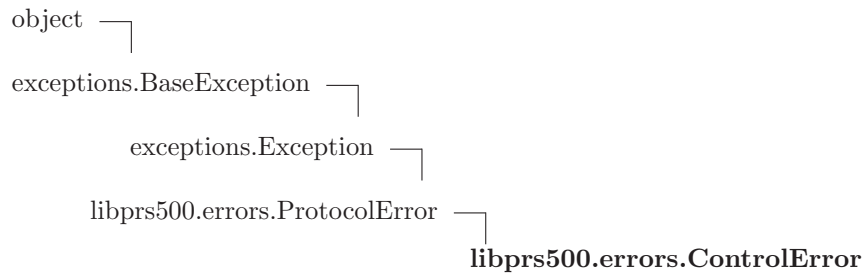
*continued on next page*

Name	Description
args	<b>Value:</b> <attribute 'args' of 'exceptions.BaseException'-objects>

### 3.4.3 Class Variables

Name	Description
message	<b>Value:</b> <member 'message' of 'exceptions.BaseException'-objects>

## 3.5 Class ControlError



Errors in Command/Response pairs while communicating with the device

### 3.5.1 Methods

```
__init__(self, query=None, response=None, desc=None)
x.__init__(...) initializes x; see x.__class__.__doc__ for signature
Overrides: libprs500.errors.ProtocolError.__init__
```

```
__str__(self)
str(x)
Overrides: exceptions.BaseException.__str__ extit(inherited documentation)
```

```
__delattr__(...)
x.__delattr__('name') <==> del x.name
Overrides: object.__delattr__
```

```
__getattr__(...)
x.__getattr__('name') <==> x.name
Overrides: object.__getattr__
```

```
__getitem__(x, y)
x[y]
```

**`__hash__`**(*x*)`hash(x)`**`__new__`**(*T*, *S*, ...) 

---

**Return Value**a new object with type *S*, a subtype of *T*Overrides: `exceptions.BaseException.__new__`**`__reduce__`**(...)

helper for pickle

Overrides: `object.__reduce__` `exitit`(inherited documentation)**`__reduce_ex__`**(...)

helper for pickle

**`__repr__`**(*x*)`repr(x)`Overrides: `object.__repr__`**`__setattr__`**(...)`x.__setattr__('name', value) <==> x.name = value`Overrides: `object.__setattr__`**`__setstate__`**(...)

### 3.5.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>object</code> ' objects>
<code>args</code>	<b>Value:</b> <attribute ' <code>args</code> ' of ' <code>exceptions.BaseException</code> '-objects>

### 3.5.3 Class Variables

Name	Description
<code>message</code>	<b>Value:</b> <member ' <code>message</code> ' of ' <code>exceptions.BaseException</code> '-objects>

## 4 Module *libprs500.prstypes*

Defines the structure of packets that are sent to/received from the device.

Packet structure is defined using classes and inheritance. Each class is a view that imposes structure on the underlying data buffer. The data buffer is encoded in little-endian format, but you don't have to worry about that if you are using the classes. The classes have instance variables with getter/setter functions defined to take care of the encoding/decoding. The classes are intended to mimic C structs.

There are three kinds of packets. **Commands**, **Responses**, and **Answers**. **Commands** are sent to the device on the control bus, **Responses** are received from the device, also on the control bus. **Answers** and their sub-classes represent data packets sent to/received from the device via bulk transfers.

Commands are organized as follows: (GRAPH)

You will typically only use sub-classes of **Command**.

Responses are organized as follows: (GRAPH)

Responses inherit **Command** as they share header structure.

Answers are organized as follows: (GRAPH)

### 4.1 Variables

Name	Description
DWORD	Unsigned integer little endian encoded in 4 bytes <b>Value:</b> '<I'
DDWORD	Unsigned long long little endian encoded in 8 bytes <b>Value:</b> '<Q'

### 4.2 Class *PathResponseCodes*

object  **libprs500.prstypes.PathResponseCodes**

Known response commands to path related commands

#### 4.2.1 Methods

<b><code>__delattr__(...)</code></b>
<code>x.__delattr__('name') &lt;==&gt; del x.name</code>
<b><code>__getattr__(...)</code></b>
<code>x.__getattr__('name') &lt;==&gt; x.name</code>
<b><code>__hash__(x)</code></b>
<code>hash(x)</code>

<b><code>__init__</code></b> (...)
<code>x.__init__</code> (...) initializes x; see <code>x.__class__.__doc__</code> for signature
<b><code>__new__</code></b> ( <i>T</i> , <i>S</i> , ...)
<b>Return Value</b> a new object with type <i>S</i> , a subtype of <i>T</i>
<b><code>__reduce__</code></b> (...)
helper for pickle
<b><code>__reduce_ex</code></b> (...)
helper for pickle
<b><code>__repr__</code></b> ( <i>x</i> )
<code>repr</code> ( <i>x</i> )
<b><code>__setattr__</code></b> (...)
<code>x.__setattr__</code> ('name', value) <==> <code>x.name</code> = value
<b><code>__str__</code></b> ( <i>x</i> )
<code>str</code> ( <i>x</i> )

#### 4.2.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>

#### 4.2.3 Class Variables

Name	Description
NOT_FOUND	<b>Value:</b> 4294967255L
INVALID	<b>Value:</b> 4294967289L
IS_FILE	<b>Value:</b> 4294967250L
HAS_CHILDREN	<b>Value:</b> 4294967244L

### 4.3 Class `TransferBuffer`



**Known Subclasses:** `libprs500.prstypes.Command`, `libprs500.prstypes.Answer`

Represents raw (unstructured) data packets sent over the usb bus.

`TransferBuffer` is a wrapper around the tuples used by PyUSB for communication. It has convenience methods to read and write data from the underlying buffer. See `TransferBuffer.pack` and `TransferBuffer.unpack`.

#### 4.3.1 Methods

<code>__init__(self, packet)</code>
Create a <code>TransferBuffer</code> from <code>packet</code> or an empty buffer.
<b>Parameters</b>
<b>packet:</b> If <code>packet</code> is a list, it is copied into the <code>TransferBuffer</code> and then normalized (see <code>TransferBuffer.normalize</code> ). If it is an integer, a zero buffer of that length is created. ( <i>type=integer or listable object</i> )
Overrides: <code>list.__init__</code>

<code>__add__(self, tb)</code>
Return a <code>TransferBuffer</code> rather than a list as the sum
Overrides: <code>list.__add__</code>

<code>__getslice__(self, start, end)</code>
Return a <code>TransferBuffer</code> rather than a list as the slice
Overrides: <code>list.__getslice__</code>

<code>__str__(self)</code>
Return a string representation of this buffer.
Packets are represented as hex strings, in 2-byte pairs, $\leq 16$ bytes to a line. An ASCII representation is included. For example:
0700 0100 0000 0000 0000 0000 0c00 0000                   .....
0200 0000 0400 0000 4461 7461                   .....Data
Overrides: <code>object.__str__</code>



---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

Return decoded data from buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>  
**start:** Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

---



---

**pack**(*self*, *val*, *fmt*=DWORD, *start*=0)

---

Encode *val* and write it to buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>  
**start:** Position in buffer at which to write encoded data

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

---



---

**phex**(*cls*, *num*)

---

Return the hex representation of *num* without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in **TransferBuffer.\_\_str\_\_**.

---

**\_\_contains\_\_**(*x*, *y*)

---

*y* in *x*

---

**\_\_delattr\_\_**(...)

---

*x.\_\_delattr\_\_('name')* <==> del *x.name*

---

**\_\_delitem\_\_**(*x*, *y*)

---

del *x*[*y*]

---

**\_\_delslice\_\_**(*x*, *i*, *j*)

---

del *x*[*i*:*j*]

Use of negative indices is not supported.

---

**\_\_eq\_\_**(*x*, *y*)

---

*x*==*y*

---

**\_\_ge\_\_**(*x*, *y*)

---

*x*>=*y*

**`__getattr__`**(...)`x.__getattr__('name') <==> x.name`Overrides: `object.__getattr__`**`__getitem__`**(*x*, *y*)`x[y]`**`__gt__`**(*x*, *y*)`x>y`**`__hash__`**(*x*)`hash(x)`Overrides: `object.__hash__`**`__iadd__`**(*x*, *y*)`x+=y`**`__imul__`**(*x*, *y*)`x*=y`**`__iter__`**(*x*)`iter(x)`**`__le__`**(*x*, *y*)`x<=y`**`__len__`**(*x*)`len(x)`**`__lt__`**(*x*, *y*)`x<y`**`__mul__`**(*x*, *n*)`x*n`**`__ne__`**(*x*, *y*)`x!=y`

**`--new--`**(*T*, *S*, ...)

**Return Value**

a new object with type *S*, a subtype of *T*

Overrides: `object.__new__`

**`--reduce--`**(...)

helper for pickle

**`--reduce_ex--`**(...)

helper for pickle

**`--repr--`**(*x*)

`repr(x)`

Overrides: `object.__repr__`

**`--reversed--`**(*L*)

return a reverse iterator over the list

**`--rmul--`**(*x*, *n*)

`n*x`

**`--setattr--`**(...)

`x.__setattr__('name', value) <==> x.name = value`

**`--setitem--`**(*x*, *i*, *y*)

`x[i]=y`

**`--setslice--`**(*x*, *i*, *j*, *y*)

`x[i:j]=y`

Use of negative indices is not supported.

**`append`**(*L*, *object*)

append object to end

**`count`**(*L*, *value*)

return number of occurrences of value

**Return Value**

integer

**extend**(*L, iterable*)

extend list by appending elements from the iterable

**index**(...)*L.index*(value, [start, [stop]]) -> integer – return first index of value**insert**(*L, index, object*)

insert object before index

**pop**(*L, index=...*)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L, value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L, cmp=None, key=None, reverse=False*)stable sort \*IN PLACE\*; *cmp*(x, y) -> -1, 0, 1

### 4.3.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>

## 4.4 Class field

object  **libprs500.prstypes.field**

A Descriptor<sup>3</sup>, that implements access to protocol packets in a human readable way.

<sup>3</sup>[http://www.cafepy.com/article/python\\_attributes\\_and\\_methods/python\\_attributes\\_and\\_methods.html](http://www.cafepy.com/article/python_attributes_and_methods/python_attributes_and_methods.html)

#### 4.4.1 Methods

**`__init__`**(*self*, *start*=16, *fmt*=DWORD)

**Parameters**

**start**: The byte at which this field is stored in the buffer  
**fmt**: The packing format for this field. See struct<sup>a</sup>.

Overrides: `object.__init__`

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

**`__get__`**(*self*, *obj*, *typ*=None)

**`__set__`**(*self*, *obj*, *val*)

**`__repr__`**(*self*)

`repr(x)`

Overrides: `object.__repr__` `exitit`(inherited documentation)

**`__delattr__`**(...)

`x.__delattr__('name') <==> del x.name`

**`__getattr__`**(...)

`x.__getattr__('name') <==> x.name`

**`__hash__`**(*x*)

`hash(x)`

**`__new__`**(*T*, *S*, ...)

**Return Value**

a new object with type *S*, a subtype of *T*

**`__reduce__`**(...)

helper for pickle

**`__reduce_ex__`**(...)

helper for pickle

**`__setattr__`**(...)

`x.__setattr__('name', value) <==> x.name = value`

<b><code>__str__</code></b> ( <i>x</i> )
<code>str(x)</code>

#### 4.4.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>object</code> ' objects>

### 4.5 Class *stringfield*



A field storing a variable length string.

#### 4.5.1 Methods

<b><code>__init__</code></b> ( <i>self</i> , <i>length_field</i> , <i>start</i> =16)
<b>Parameters</b> <i>length_field</i> : A Descriptor <sup>a</sup> that returns the length of the string. <i>start</i> : The byte at which this field is stored in the buffer Overrides: <code>object.__init__</code>
<sup>a</sup> <a href="http://www.cafepy.com/article/python_attributes_and_methods/python_attributes_and_methods.html">http://www.cafepy.com/article/python_attributes_and_methods/python_attributes_and_methods.html</a>

<b><code>__get__</code></b> ( <i>self</i> , <i>obj</i> , <i>typ</i> =None)
--

<b><code>__set__</code></b> ( <i>self</i> , <i>obj</i> , <i>val</i> )
---

<b><code>__repr__</code></b> ( <i>self</i> )
<code>repr(x)</code>
Overrides: <code>object.__repr__</code> <code>exitit</code> (inherited documentation)

<b><code>__delattr__</code></b> (...)
<code>x.__delattr__('name') &lt;==&gt; del x.name</code>

<b><code>__getattr__</code></b> (...)
<code>x.__getattr__('name') &lt;==&gt; x.name</code>

<b><code>__hash__</code></b> ( <i>x</i> )
<code>hash(x)</code>

```
__new__(T, S, ...)
```

**Return Value**

a new object with type S, a subtype of T

```
__reduce__(...)
```

helper for pickle

```
__reduce_ex__(...)
```

helper for pickle

```
__setattr__(...)
```

x.\_\_setattr\_\_('name', value) <==> x.name = value

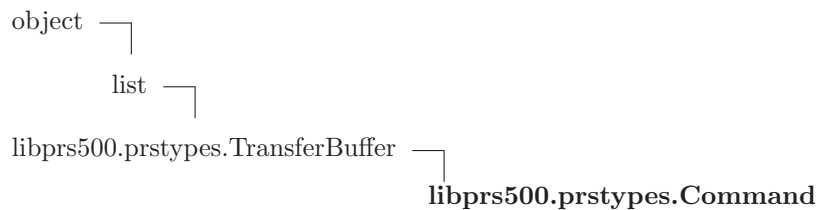
```
__str__(x)
```

str(x)

#### 4.5.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute <code>'__class__'</code> of <code>'object'</code> objects>

## 4.6 Class Command



**Known Subclasses:** `libprs500.prstypes.Response`, `libprs500.prstypes.LongCommand`, `libprs500.prstypes.DeviceInfoQuery`, `libprs500.prstypes.ShortCommand`, `libprs500.prstypes.PathCommand`, `libprs500.prstypes.FileIO`

Defines the structure of command packets sent to the device.

#### 4.6.1 Methods

```
__init__(self, packet)
```

**Parameters**

**packet:** `len(packet) > 15` or `packet > 15`

Overrides: `libprs500.prstypes.TransferBuffer.__init__`

**`--add--`**(*self*, *tb*)

Return a TransferBuffer rather than a list as the sum

Overrides: `list.__add__`

**`--contains--`**(*x*, *y*)

*y* in *x*

**`--delattr--`**(...)

*x*.`--delattr--`('name') <==> `del x.name`

**`--delitem--`**(*x*, *y*)

`del x[y]`

**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

*x*==*y*

**`--ge--`**(*x*, *y*)

*x*>=*y*

**`--getattribute--`**(...)

*x*.`--getattribute--`('name') <==> *x*.*name*

Overrides: `object.__getattribute__`

**`--getitem--`**(*x*, *y*)

*x*[*y*]

**`--getslice--`**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: `list.__getslice__`

**`--gt--`**(*x*, *y*)

*x*>*y*



---

`__hash__(x)`

---

`hash(x)``Overrides: object.__hash__`

---

`__iadd__(x, y)`

---

`x+=y`

---

`__imul__(x, y)`

---

`x*=y`

---

`__iter__(x)`

---

`iter(x)`

---

`__le__(x, y)`

---

`x<=y`

---

`__len__(x)`

---

`len(x)`

---

`__lt__(x, y)`

---

`x<y`

---

`__mul__(x, n)`

---

`x*n`

---

`__ne__(x, y)`

---

`x!=y`

---

`__new__(T, S, ...)`

---

**Return Value**`a new object with type S, a subtype of T``Overrides: object.__new__`

---

`__reduce__(...)`

---

`helper for pickle`

---

`__reduce_ex__(...)`

---

`helper for pickle`

**\_\_repr\_\_**(*x*)repr(*x*)

Overrides: object.\_\_repr\_\_

**\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x*, *n*)*n*\**x***\_\_setattr\_\_**(...)*x*.\_\_setattr\_\_('name', value) <==> *x*.name = value**\_\_setitem\_\_**(*x*, *i*, *y*)*x*[*i*]=*y***\_\_setslice\_\_**(*x*, *i*, *j*, *y*)*x*[*i*:*j*]=*y*

Use of negative indices is not supported.

**\_\_str\_\_**(*self*)

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs, ≤ 16 bytes to a line. An ASCII representation is included. For example:

0700 0100 0000 0000 0000 0000 0c00 0000 .....

0200 0000 0400 0000 4461 7461 .....Data

Overrides: object.\_\_str\_\_

**append**(*L*, *object*)

append object to end

**count**(*L*, *value*)

return number of occurrences of value

**Return Value**

integer

**extend**(*L*, *iterable*)

extend list by appending elements from the iterable

**index(...)**`L.index(value, [start, [stop]])` -> integer – return first index of value**insert**(*L*, *index*, *object*)

insert object before index

**pack**(*self*, *val*, *fmt*=DWORD, *start*=0)Encode *val* and write it to buffer.**Parameters****fmt:** See struct<sup>a</sup>**start:** Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>**phex**(*cls*, *num*)Return the hex representation of *num* without the 0x prefix.If the hex representation is only 1 digit it is padded to the left with a zero. Used in `TransferBuffer.__str__`.**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)stable sort \*IN PLACE\*; `cmp(x, y)` -> -1, 0, 1**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters****fmt:** See struct<sup>a</sup>**start:** Position in buffer from which to decode<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.6.2 Properties

Name	Description
data	<b>Value:</b> <property object at 0x832370c>
__class__	<b>Value:</b> <attribute '__class__' of 'object' objects>

#### 4.6.3 Class Variables

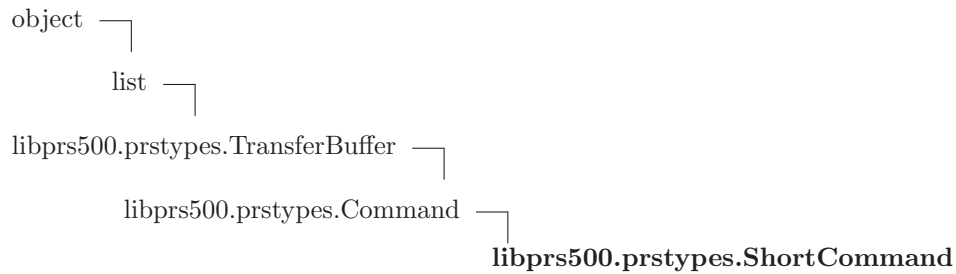
---

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Name	Description
Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

## 4.7 Class ShortCommand



**Known Subclasses:** `libprs500.prstypes.DirClose`, `libprs500.prstypes.DirRead`, `libprs500.prstypes.FileClose`, `libprs500.prstypes.GetUSBProtocolVersion`, `libprs500.prstypes.SetBulkSize`, `libprs500.prstypes.USBConnect`, `libprs500.prstypes.UnlockDevice`

A `Command` whose data section is 4 bytes long

### 4.7.1 Methods

<code>__init__(self, number=0x00, type=0x00, command=0x00)</code>
<b>Parameters</b> <code>number:</code> <code>Command.number</code> <code>type:</code> <code>Command.type</code> <code>command:</code> <code>ShortCommand.command</code> Overrides: <code>libprs500.prstypes.Command.__init__</code>
<code>__add__(self, tb)</code>
Return a <code>TransferBuffer</code> rather than a list as the sum Overrides: <code>list.__add__</code>
<code>__contains__(x, y)</code>
y in x
<code>__delattr__(...)</code>
x.__delattr__('name') <==> del x.name

**`--delitem--`**(*x*, *y*)

`del x[y]`

**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattr--`**(...)

`x._getattr_('name') <==> x.name`

Overrides: `object._getattr--`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a `TransferBuffer` rather than a list as the slice

Overrides: `list._getslice--`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object._hash--`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`



`__le__(x, y)``x<=y``__len__(x)``len(x)``__lt__(x, y)``x<y``__mul__(x, n)``x*n``__ne__(x, y)``x!=y``__new__(T, S, ...)`**Return Value**a new object with type `S`, a subtype of `T`Overrides: `object.__new__``__reduce__()`

helper for pickle

`__reduce_ex__()`

helper for pickle

`__repr__(x)``repr(x)`Overrides: `object.__repr__``__reversed__(L)`

return a reverse iterator over the list

`__rmul__(x, n)``n*x``__setattr__()``x.__setattr__('name', value) <==> x.name = value`

**\_\_setitem\_\_**(*x*, *i*, *y*)*x*[*i*]=*y***\_\_setslice\_\_**(*x*, *i*, *j*, *y*)*x*[*i*:*j*]=*y*

Use of negative indices is not supported.

**\_\_str\_\_**(*self*)

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

0700 0100 0000 0000 0000 0000 0c00 0000	.....
0200 0000 0400 0000 4461 7461	.....Data

Overrides: object.\_\_str\_\_

**append**(*L*, *object*)

append object to end

**count**(*L*, *value*)

return number of occurrences of value

**Return Value****integer****extend**(*L*, *iterable*)

extend list by appending elements from the iterable

**index**(...)*L.index*(*value*, [*start*, [*stop*]]) -> integer – return first index of value**insert**(*L*, *index*, *object*)

insert object before index

**pack**(*self*, *val*, *fmt*=DWORD, *start*=0)Encode *val* and write it to buffer.**Parameters****fmt**: See struct<sup>a</sup>**start**: Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>

**phex**(*cls*, *num*)

Return the hex representation of *num* without the 0x prefix.  
If the hex representation is only 1 digit it is padded to the left with a zero. Used in `TransferBuffer.__str__`.

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

*item*

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; `cmp(x, y) -> -1, 0, 1`

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt**: See struct<sup>a</sup>

**start**: Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.7.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>'object'</code> objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.7.3 Class Variables

Name	Description
<code>SIZE</code>	Packet size in bytes <b>Value:</b> 20
<code>command</code>	Usually carries additional information <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16

*continued on next page*

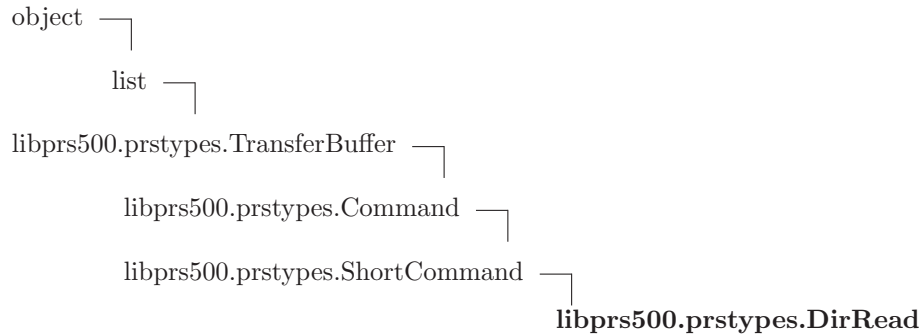
Name	Description
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.8 Class DirRead



The command that asks the device to send the next item in the list

### 4.8.1 Methods

<b>__init__(self, id)</b> <hr/> <b>Parameters</b> <b>id:</b> The identifier returned as a result of a <code>DirOpen</code> command Overrides: <code>libprs500.prstypes.ShortCommand.__init__</code>
<b>__add__(self, tb)</b> <hr/> Return a <code>TransferBuffer</code> rather than a list as the sum Overrides: <code>list.__add__</code>
<b>__contains__(x, y)</b> <hr/> y in x
<b>__delattr__(...)</b> <hr/> <code>x.__delattr__('name') &lt;==&gt; del x.name</code>
<b>__delitem__(x, y)</b> <hr/> <code>del x[y]</code>

**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattribute--`**(...)

`x.__getattribute__('name') <==> x.name`

Overrides: `object.__getattribute__`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a `TransferBuffer` rather than a list as the slice

Overrides: `list.__getslice__`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object.__hash__`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

<code>__len__(x)</code>
<code>len(x)</code>
<code>__lt__(x, y)</code>
<code>x &lt; y</code>
<code>__mul__(x, n)</code>
<code>x * n</code>
<code>__ne__(x, y)</code>
<code>x != y</code>
<code>__new__(T, S, ...)</code>
<b>Return Value</b> a new object with type <code>S</code> , a subtype of <code>T</code> Overrides: <code>object.__new__</code>
<code>__reduce__()</code>
helper for pickle
<code>__reduce_ex__()</code>
helper for pickle
<code>__repr__(x)</code>
<code>repr(x)</code>
Overrides: <code>object.__repr__</code>
<code>__reversed__(L)</code>
return a reverse iterator over the list
<code>__rmul__(x, n)</code>
<code>n * x</code>
<code>__setattr__()</code>
<code>x.__setattr__('name', value) &lt;==&gt; x.name = value</code>
<code>__setitem__(x, i, y)</code>
<code>x[i] = y</code>



---

**\_\_setslice\_\_**(*x, i, j, y*)
 

---

**x[i:j]=y**

Use of negative indices is not supported.

---

**\_\_str\_\_**(*self*)
 

---

Return a string representation of this buffer.

 Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

 Overrides: `object.__str__`


---

**append**(*L, object*)
 

---

append object to end

---

**count**(*L, value*)
 

---

return number of occurrences of value

**Return Value**

integer

---

**extend**(*L, iterable*)
 

---

extend list by appending elements from the iterable

---

**index**(...)
 

---

`L.index(value, [start, [stop]])` -> integer – return first index of value

---

**insert**(*L, index, object*)
 

---

insert object before index

---

**pack**(*self, val, fmt=DWORD, start=0*)
 

---

 Encode **val** and write it to buffer.

**Parameters**
**fmt:** See struct<sup>a</sup>
**start:** Position in buffer at which to write encoded data

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**phex**(*cls, num*)
 

---

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

**TransferBuffer.\_\_str\_\_**

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; *cmp*(*x*, *y*) -> -1, 0, 1

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

## 4.8.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

## 4.8.3 Class Variables

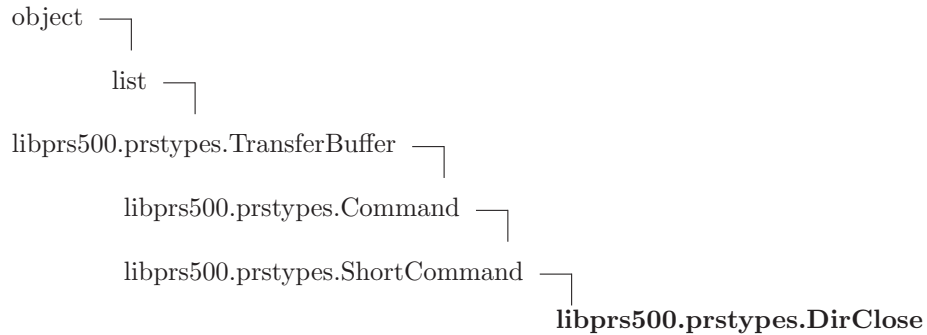
Name	Description
NUMBER	Command number <b>Value:</b> 53
SIZE	Packet size in bytes <b>Value:</b> 20
command	Usually carries additional information <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.9 Class DirClose



Close a previously opened directory

### 4.9.1 Methods

<b>__init__</b> ( <i>self</i> , <i>id</i> )
<b>Parameters</b> <i>id</i> : The identifier returned as a result of a <b>DirOpen</b> command Overrides: libprs500.prstypes.ShortCommand.__init__
<b>__add__</b> ( <i>self</i> , <i>tb</i> )
Return a TransferBuffer rather than a list as the sum Overrides: list.__add__
<b>__contains__</b> ( <i>x</i> , <i>y</i> )
<i>y</i> in <i>x</i>
<b>__delattr__</b> (...)
<i>x</i> .__delattr__('name') <==> del <i>x</i> .name
<b>__delitem__</b> ( <i>x</i> , <i>y</i> )
del <i>x</i> [ <i>y</i> ]

**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattr--`**(...)

`x._getattr_('name') <==> x.name`

Overrides: `object._getattr--`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: `list._getslice--`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object._hash--`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

<code>__len__(x)</code>
<code>len(x)</code>
<code>__lt__(x, y)</code>
<code>x &lt; y</code>
<code>__mul__(x, n)</code>
<code>x * n</code>
<code>__ne__(x, y)</code>
<code>x != y</code>
<code>__new__(T, S, ...)</code>
<b>Return Value</b> a new object with type <code>S</code> , a subtype of <code>T</code> Overrides: <code>object.__new__</code>
<code>__reduce__()</code>
helper for pickle
<code>__reduce_ex__()</code>
helper for pickle
<code>__repr__(x)</code>
<code>repr(x)</code>
Overrides: <code>object.__repr__</code>
<code>__reversed__(L)</code>
return a reverse iterator over the list
<code>__rmul__(x, n)</code>
<code>n * x</code>
<code>__setattr__()</code>
<code>x.__setattr__('name', value) &lt;==&gt; x.name = value</code>
<code>__setitem__(x, i, y)</code>
<code>x[i] = y</code>

---

**\_\_setslice\_\_**(*x, i, j, y*)
 

---

x[i:j]=y

Use of negative indices is not supported.

---

**\_\_str\_\_**(*self*)
 

---

Return a string representation of this buffer.

 Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

Overrides: object.\_\_str\_\_

---

**append**(*L, object*)
 

---

append object to end

---

**count**(*L, value*)
 

---

return number of occurrences of value

**Return Value**

integer

---

**extend**(*L, iterable*)
 

---

extend list by appending elements from the iterable

---

**index**(...)
 

---

L.index(value, [start, [stop]]) -&gt; integer – return first index of value

---

**insert**(*L, index, object*)
 

---

insert object before index

---

**pack**(*self, val, fmt=DWORD, start=0*)
 

---

 Encode **val** and write it to buffer.

**Parameters**
**fmt:** See struct<sup>a</sup>
**start:** Position in buffer at which to write encoded data

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**phex**(*cls, num*)
 

---

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

TransferBuffer.\_\_str\_\_

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; *cmp*(*x*, *y*) -> -1, 0, 1

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

## 4.9.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

## 4.9.3 Class Variables

Name	Description
NUMBER	Command number <b>Value:</b> 52
SIZE	Packet size in bytes <b>Value:</b> 20
command	Usually carries additional information <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

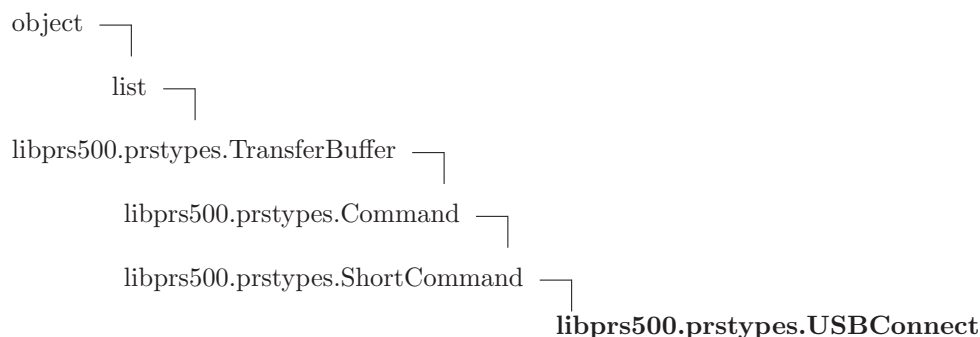
*continued on next page*



Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.10 Class USBConnect



Ask device to change status to 'USB connected' i.e., tell the device that the present sequence of commands is complete

### 4.10.1 Methods

<b><code>__init__(self)</code></b> Overrides: <code>libprs500.prstypes.ShortCommand.__init__</code> <code>exitit</code> (inherited documentation)
<b><code>__add__(self, tb)</code></b> Return a <code>TransferBuffer</code> rather than a list as the sum Overrides: <code>list.__add__</code>
<b><code>__contains__(x, y)</code></b> y in x
<b><code>__delattr__(...)</code></b> x. <code>__delattr__</code> ('name') <==> del x.name
<b><code>__delitem__(x, y)</code></b> del x[y]
<b><code>__delslice__(x, i, j)</code></b> del x[i:j] Use of negative indices is not supported.

```
__eq__(x, y)
```

```
x==y
```

```
__ge__(x, y)
```

```
x>=y
```

```
__getattr__(...)
```

```
x.__getattr__('name') <==> x.name
```

```
Overrides: object.__getattr__
```

```
__getitem__(x, y)
```

```
x[y]
```

```
__getslice__(self, start, end)
```

```
Return a TransferBuffer rather than a list as the slice
```

```
Overrides: list.__getslice__
```

```
__gt__(x, y)
```

```
x>y
```

```
__hash__(x)
```

```
hash(x)
```

```
Overrides: object.__hash__
```

```
__iadd__(x, y)
```

```
x+=y
```

```
__imul__(x, y)
```

```
x*=y
```

```
__iter__(x)
```

```
iter(x)
```

```
__le__(x, y)
```

```
x<=y
```

```
__len__(x)
```

```
len(x)
```

**\_\_lt\_\_**(*x*, *y*)*x*<*y***\_\_mul\_\_**(*x*, *n*)*x*\**n***\_\_ne\_\_**(*x*, *y*)*x*!=*y***\_\_new\_\_**(*T*, *S*, ...)**Return Value**a new object with type *S*, a subtype of *T*Overrides: *object.\_\_new\_\_***\_\_reduce\_\_**(...)

helper for pickle

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)*repr*(*x*)Overrides: *object.\_\_repr\_\_***\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x*, *n*)*n*\**x***\_\_setattr\_\_**(...)*x.\_\_setattr\_\_('name', value)* <==> *x.name = value***\_\_setitem\_\_**(*x*, *i*, *y*)*x*[*i*]=*y***\_\_setslice\_\_**(*x*, *i*, *j*, *y*)*x*[*i*:*j*]=*y*

Use of negative indices is not supported.

**\_\_str\_\_(self)**

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```
0700 0100 0000 0000 0000 0000 0c00 0000      .....
0200 0000 0400 0000 4461 7461      .....Data
```

Overrides: object.\_\_str\_\_

**append(L, object)**

append object to end

**count(L, value)**

return number of occurrences of value

**Return Value**

integer

**extend(L, iterable)**

extend list by appending elements from the iterable

**index(...)**

L.index(value, [start, [stop]]) -> integer – return first index of value

**insert(L, index, object)**

insert object before index

**pack(self, val, fmt=DWORD, start=0)**

Encode **val** and write it to buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer at which to write encoded data

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

**phex(cls, num)**

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

**TransferBuffer.\_\_str\_\_**

**pop(L, index=...)**

remove and return item at index (default last)

**Return Value**

item

---

**remove**(*L*, *value*)

---

 remove first occurrence of value

---

**reverse**(*L*)

---

 reverse \*IN PLACE\*

---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

 stable sort \*IN PLACE\*; *cmp*(*x*, *y*) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

 Return decoded data from buffer.

**Parameters**

     *fmt*: See struct<sup>a</sup>

     *start*: Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.10.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.10.3 Class Variables

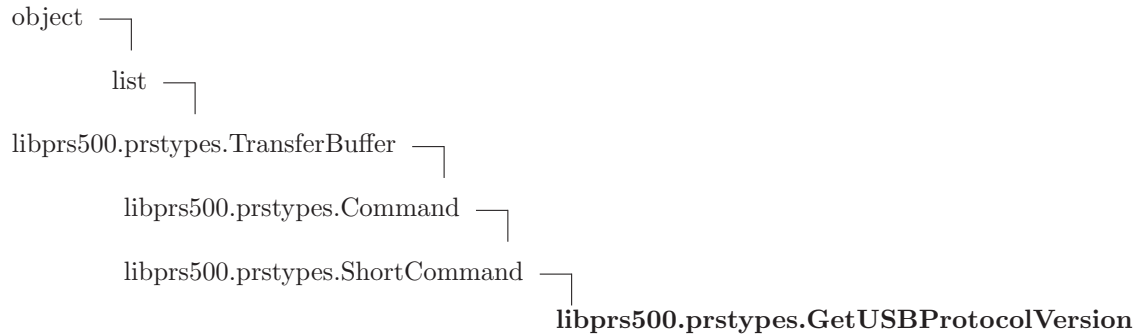
Name	Description
NUMBER	Command number <b>Value:</b> 1
SIZE	Packet size in bytes <b>Value:</b> 20
command	Usually carries additional information <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

#### 4.11 Class `GetUSBProtocolVersion`



Get USB Protocol version used by device

##### 4.11.1 Methods

<b><code>__init__(self)</code></b> Overrides: <code>libprs500.prstypes.ShortCommand.__init__</code> extit(inherited documentation)
<b><code>__add__(self, tb)</code></b> Return a <code>TransferBuffer</code> rather than a list as the sum Overrides: <code>list.__add__</code>
<b><code>__contains__(x, y)</code></b> y in x
<b><code>__delattr__(...)</code></b> x.__delattr__('name') <==> del x.name
<b><code>__delitem__(x, y)</code></b> del x[y]
<b><code>__delslice__(x, i, j)</code></b> del x[i:j] Use of negative indices is not supported.



```
__eq__(x, y)
```

```
x==y
```

```
__ge__(x, y)
```

```
x>=y
```

```
__getattr__(...)
```

```
x.__getattr__('name') <==> x.name
```

```
Overrides: object.__getattr__
```

```
__getitem__(x, y)
```

```
x[y]
```

```
__getslice__(self, start, end)
```

```
Return a TransferBuffer rather than a list as the slice
```

```
Overrides: list.__getslice__
```

```
__gt__(x, y)
```

```
x>y
```

```
__hash__(x)
```

```
hash(x)
```

```
Overrides: object.__hash__
```

```
__iadd__(x, y)
```

```
x+=y
```

```
__imul__(x, y)
```

```
x*=y
```

```
__iter__(x)
```

```
iter(x)
```

```
__le__(x, y)
```

```
x<=y
```

```
__len__(x)
```

```
len(x)
```

**\_\_lt\_\_**(*x, y*)*x*<*y***\_\_mul\_\_**(*x, n*)*x*\**n***\_\_ne\_\_**(*x, y*)*x*!=*y***\_\_new\_\_**(*T, S, ...*)**Return Value**a new object with type *S*, a subtype of *T*Overrides: *object.\_\_new\_\_***\_\_reduce\_\_**(...)

helper for pickle

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)*repr*(*x*)Overrides: *object.\_\_repr\_\_***\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x, n*)*n*\**x***\_\_setattr\_\_**(...)*x.\_\_setattr\_\_('name', value)* <==> *x.name = value***\_\_setitem\_\_**(*x, i, y*)*x*[*i*]=*y***\_\_setslice\_\_**(*x, i, j, y*)*x*[*i:j*]=*y*

Use of negative indices is not supported.

**\_\_str\_\_(self)**

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

Overrides: `object.__str__`**append**(*L*, *object*)

append object to end

**count**(*L*, *value*)

return number of occurrences of value

**Return Value****integer****extend**(*L*, *iterable*)

extend list by appending elements from the iterable

**index**(...)`L.index(value, [start, [stop]])` -> integer – return first index of value**insert**(*L*, *index*, *object*)

insert object before index

**pack**(*self*, *val*, *fmt*=DWORD, *start*=0)Encode *val* and write it to buffer.**Parameters****fmt:** See struct<sup>a</sup>**start:** Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>**phex**(*cls*, *num*)Return the hex representation of *num* without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value****item**

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)reverse *\*IN PLACE\****sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)stable sort *\*IN PLACE\**; *cmp*(*x*, *y*) -> -1, 0, 1**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters****fmt**: See struct<sup>a</sup>**start**: Position in buffer from which to decode<sup>a</sup><http://docs.python.org/lib/module-struct.html>**4.11.2 Properties**

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute <code>'__class__'</code> of <code>'object'</code> objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

**4.11.3 Class Variables**

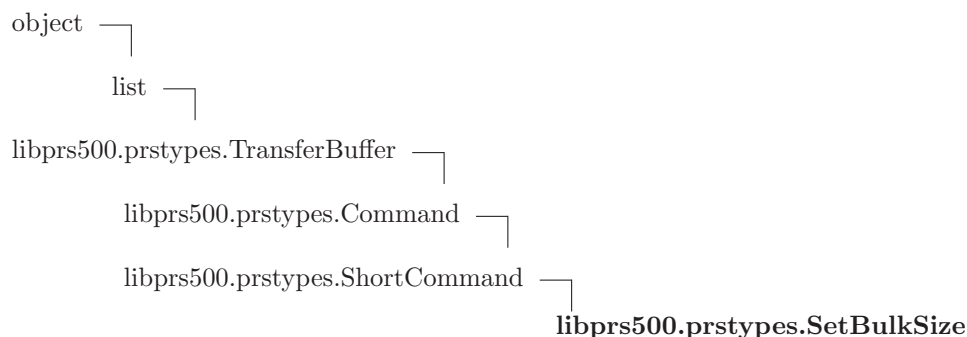
Name	Description
NUMBER	Command number <b>Value:</b> 0
SIZE	Packet size in bytes <b>Value:</b> 20
command	Usually carries additional information <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.12 Class SetBulkSize



### 4.12.1 Methods

**\_\_init\_\_**(*self*, *size*=0x028000)

Overrides: *libprs500.prstypes.ShortCommand.\_\_init\_\_* extit(inherited documentation)

**\_\_add\_\_**(*self*, *tb*)

Return a TransferBuffer rather than a list as the sum

Overrides: *list.\_\_add\_\_*

**\_\_contains\_\_**(*x*, *y*)

*y* in *x*

**\_\_delattr\_\_**(...)

*x.\_\_delattr\_\_('name')* <==> *del x.name*

**\_\_delitem\_\_**(*x*, *y*)

*del x[y]*

**\_\_delslice\_\_**(*x*, *i*, *j*)

*del x[i:j]*

Use of negative indices is not supported.

**\_\_eq\_\_**(*x*, *y*)

*x==y*

```
--ge--(x, y)
```

```
x >= y
```

```
--getattribute--(...)
```

```
x.__getattribute__('name') <==> x.name
```

```
Overrides: object.__getattribute__
```

```
--getitem--(x, y)
```

```
x[y]
```

```
--getslice--(self, start, end)
```

```
Return a TransferBuffer rather than a list as the slice
```

```
Overrides: list.__getslice__
```

```
--gt--(x, y)
```

```
x > y
```

```
--hash--(x)
```

```
hash(x)
```

```
Overrides: object.__hash__
```

```
--iadd--(x, y)
```

```
x += y
```

```
--imul--(x, y)
```

```
x * = y
```

```
--iter--(x)
```

```
iter(x)
```

```
--le--(x, y)
```

```
x <= y
```

```
--len--(x)
```

```
len(x)
```

```
--lt--(x, y)
```

```
x < y
```

**\_\_mul\_\_**(*x*, *n*)

*x*\**n*

**\_\_ne\_\_**(*x*, *y*)

*x*!=*y*

**\_\_new\_\_**(*T*, *S*, ...)

**Return Value**

a new object with type *S*, a subtype of *T*

Overrides: *object.\_\_new\_\_*

**\_\_reduce\_\_**(...)

helper for pickle

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)

*repr*(*x*)

Overrides: *object.\_\_repr\_\_*

**\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x*, *n*)

*n*\**x*

**\_\_setattr\_\_**(...)

*x.\_\_setattr\_\_('name', value)* <==> *x.name = value*

**\_\_setitem\_\_**(*x*, *i*, *y*)

*x*[*i*]=*y*

**\_\_setslice\_\_**(*x*, *i*, *j*, *y*)

*x*[*i*:*j*]=*y*

Use of negative indices is not supported.



**\_\_str\_\_(self)**

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```
0700 0100 0000 0000 0000 0000 0c00 0000      .....
0200 0000 0400 0000 4461 7461      .....Data
```

Overrides: `object.__str__`

**append(L, object)**

append object to end

**count(L, value)**

return number of occurrences of value

**Return Value**

integer

**extend(L, iterable)**

extend list by appending elements from the iterable

**index(...)**

`L.index(value, [start, [stop]])` -> integer – return first index of value

**insert(L, index, object)**

insert object before index

**pack(self, val, fmt=DWORD, start=0)**

Encode `val` and write it to buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer at which to write encoded data

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

**phex(cls, num)**

Return the hex representation of `num` without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`

**pop(L, index=...)**

remove and return item at index (default last)

**Return Value**

item

---

**remove**(*L*, *value*)

---

 remove first occurrence of value

---

**reverse**(*L*)

---

 reverse \*IN PLACE\*

---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

 stable sort \*IN PLACE\*; *cmp*(*x*, *y*) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

 Return decoded data from buffer.

**Parameters**

     *fmt*: See struct<sup>a</sup>

     *start*: Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.12.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.12.3 Class Variables

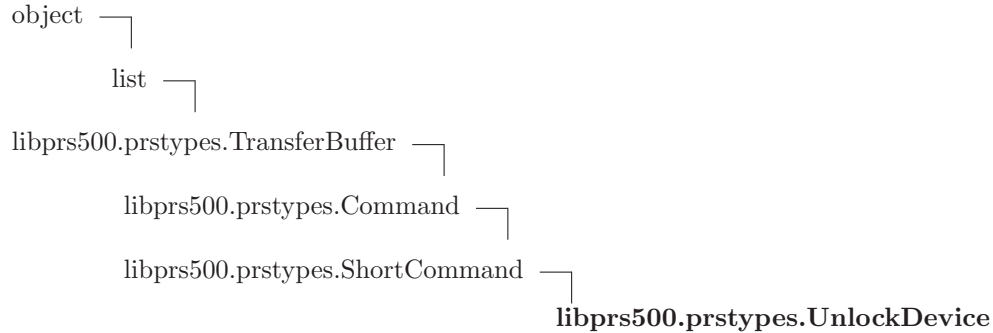
Name	Description
NUMBER	Command number <b>Value:</b> 263
SIZE	Packet size in bytes <b>Value:</b> 20
command	Usually carries additional information <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

### 4.13 Class *UnlockDevice*



#### 4.13.1 Methods

<b><code>__init__(self, key=0x312d)</code></b> Overrides: <code>libprs500.prstypes.ShortCommand.__init__</code> extit(inherited documentation)
<b><code>__add__(self, tb)</code></b> Return a <code>TransferBuffer</code> rather than a list as the sum Overrides: <code>list.__add__</code>
<b><code>__contains__(x, y)</code></b> y in x
<b><code>__delattr__(...)</code></b> x.__delattr__('name') <==> del x.name
<b><code>__delitem__(x, y)</code></b> del x[y]
<b><code>__delslice__(x, i, j)</code></b> del x[i:j] Use of negative indices is not supported.
<b><code>__eq__(x, y)</code></b> x==y

`--ge--(x, y)`

`x>=y`

`--getattribute--(...)`

`x.__getattribute__('name') <==> x.name`

Overrides: `object.__getattribute__`

`--getitem--(x, y)`

`x[y]`

`--getslice--(self, start, end)`

Return a `TransferBuffer` rather than a list as the slice

Overrides: `list.__getslice__`

`--gt--(x, y)`

`x>y`

`--hash--(x)`

`hash(x)`

Overrides: `object.__hash__`

`--iadd--(x, y)`

`x+=y`

`--imul--(x, y)`

`x*=y`

`--iter--(x)`

`iter(x)`

`--le--(x, y)`

`x<=y`

`--len--(x)`

`len(x)`

`--lt--(x, y)`

`x<y`

**`__mul__`**(*x*, *n*)*x*\**n***`__ne__`**(*x*, *y*)*x*!=*y***`__new__`**(*T*, *S*, ...)**Return Value**a new object with type *S*, a subtype of *T*Overrides: `object.__new__`**`__reduce__`**(...)

helper for pickle

**`__reduce_ex__`**(...)

helper for pickle

**`__repr__`**(*x*)`repr`(*x*)Overrides: `object.__repr__`**`__reversed__`**(*L*)

return a reverse iterator over the list

**`__rmul__`**(*x*, *n*)*n*\**x***`__setattr__`**(...)*x*.`__setattr__`('name', value) <==> *x*.name = value**`__setitem__`**(*x*, *i*, *y*)*x*[*i*]=*y***`__setslice__`**(*x*, *i*, *j*, *y*)*x*[*i*:*j*]=*y*

Use of negative indices is not supported.

**\_\_str\_\_(self)**

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```
0700 0100 0000 0000 0000 0000 0c00 0000      .....
0200 0000 0400 0000 4461 7461      .....Data
```

Overrides: object.\_\_str\_\_

**append(L, object)**

append object to end

**count(L, value)**

return number of occurrences of value

**Return Value**

integer

**extend(L, iterable)**

extend list by appending elements from the iterable

**index(...)**

L.index(value, [start, [stop]]) -> integer – return first index of value

**insert(L, index, object)**

insert object before index

**pack(self, val, fmt=DWORD, start=0)**

Encode *val* and write it to buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer at which to write encoded data

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

**phex(cls, num)**

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`

**pop(L, index=...)**

remove and return item at index (default last)

**Return Value**

item

---

**remove**(*L*, *value*)

---

 remove first occurrence of value

---

**reverse**(*L*)

---

 reverse \*IN PLACE\*

---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

 stable sort \*IN PLACE\*; cmp(*x*, *y*) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

 Return decoded data from buffer.

**Parameters**

     *fmt*: See struct<sup>a</sup>

     *start*: Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.13.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.13.3 Class Variables

Name	Description
NUMBER	Command number <b>Value:</b> 262
SIZE	Packet size in bytes <b>Value:</b> 20
command	Usually carries additional information <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

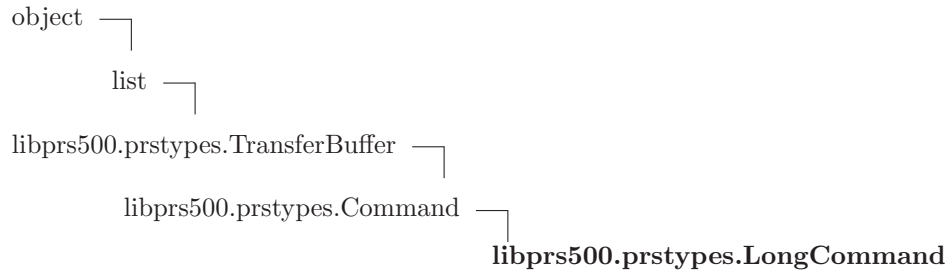
*continued on next page*



Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

#### 4.14 Class LongCommand



**Known Subclasses:** `libprs500.prstypes.AcknowledgeBulkRead`

A `Command` whose data section is 16 bytes long

##### 4.14.1 Methods

<b><code>__init__(self, number=0x00, type=0x00, command=0x00)</code></b> <hr/> <b>Parameters</b> <b>number:</b> <code>Command.number</code> <b>type:</b> <code>Command.type</code> <b>command:</b> <code>LongCommand.command</code> Overrides: <code>libprs500.prstypes.Command.__init__</code>
<b><code>__add__(self, tb)</code></b> <hr/> Return a <code>TransferBuffer</code> rather than a list as the sum Overrides: <code>list.__add__</code>
<b><code>__contains__(x, y)</code></b> <hr/> y in x
<b><code>__delattr__(...)</code></b> <hr/> <code>x.__delattr__('name') &lt;==&gt; del x.name</code>
<b><code>__delitem__(x, y)</code></b> <hr/> <code>del x[y]</code>

**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattr--`**(...)

`x._getattr_('name') <==> x.name`

Overrides: `object._getattr--`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: `list._getslice--`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object._hash--`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

`__len__(x)``len(x)``__lt__(x, y)``x<y``__mul__(x, n)``x*n``__ne__(x, y)``x!=y``__new__(T, S, ...)`**Return Value**a new object with type `S`, a subtype of `T`Overrides: `object.__new__``__reduce__()`

helper for pickle

`__reduce_ex__()`

helper for pickle

`__repr__(x)``repr(x)`Overrides: `object.__repr__``__reversed__(L)`

return a reverse iterator over the list

`__rmul__(x, n)``n*x``__setattr__()``x.__setattr__('name', value) <==> x.name = value``__setitem__(x, i, y)``x[i]=y`

---

**\_\_setslice\_\_**(*x, i, j, y*)
 

---

x[i:j]=y

Use of negative indices is not supported.

---

**\_\_str\_\_**(*self*)
 

---

Return a string representation of this buffer.

 Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

Overrides: object.\_\_str\_\_

---

**append**(*L, object*)
 

---

append object to end

---

**count**(*L, value*)
 

---

return number of occurrences of value

**Return Value**

integer

---

**extend**(*L, iterable*)
 

---

extend list by appending elements from the iterable

---

**index**(...)
 

---

L.index(value, [start, [stop]]) -&gt; integer – return first index of value

---

**insert**(*L, index, object*)
 

---

insert object before index

---

**pack**(*self, val, fmt=DWORD, start=0*)
 

---

 Encode **val** and write it to buffer.

**Parameters**
**fmt:** See struct<sup>a</sup>
**start:** Position in buffer at which to write encoded data

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**phex**(*cls, num*)
 

---

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

TransferBuffer.\_\_str\_\_

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; cmp(*x*, *y*) -> -1, 0, 1

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.14.2 Properties

Name	Description
command	<b>Value:</b> <property object at 0x832389c>
__class__	<b>Value:</b> <attribute '__class__' of 'object' objects>
data	<b>Value:</b> <property object at 0x832370c>

#### 4.14.3 Class Variables

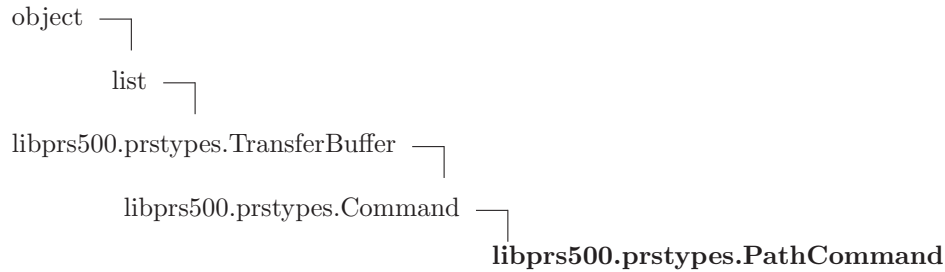
Name	Description
SIZE	Size in bytes of LongCommand packets <b>Value:</b> 32
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.15 Class PathCommand



**Known Subclasses:** `libprs500.prstypes.DirCreate`, `libprs500.prstypes.DirDelete`, `libprs500.prstypes.DirOpen`, `libprs500.prstypes.FileCreate`, `libprs500.prstypes.FileDelete`, `libprs500.prstypes.FileOpen`, `libprs500.prstypes.FreeSpaceQuery`, `libprs500.prstypes.PathQuery`, `libprs500.prstypes.SetFileInfo`

Abstract class that defines structure common to all path related commands.

### 4.15.1 Methods

**`__init__(self, path, number, path_len_at_byte=16)`**

Overrides: `libprs500.prstypes.Command.__init__` `exitit`(inherited documentation)

**`__add__(self, tb)`**

Return a `TransferBuffer` rather than a list as the sum

Overrides: `list.__add__`

**`__contains__(x, y)`**

y in x

**`__delattr__(...)`**

x.\_\_delattr\_\_('name') <==> del x.name

**`__delitem__(x, y)`**

del x[y]

**`__delslice__(x, i, j)`**

del x[i:j]

Use of negative indices is not supported.



```
__eq__(x, y)
```

```
x==y
```

```
__ge__(x, y)
```

```
x>=y
```

```
__getattr__(...)
```

```
x.__getattr__('name') <==> x.name
```

```
Overrides: object.__getattr__
```

```
__getitem__(x, y)
```

```
x[y]
```

```
__getslice__(self, start, end)
```

```
Return a TransferBuffer rather than a list as the slice
```

```
Overrides: list.__getslice__
```

```
__gt__(x, y)
```

```
x>y
```

```
__hash__(x)
```

```
hash(x)
```

```
Overrides: object.__hash__
```

```
__iadd__(x, y)
```

```
x+=y
```

```
__imul__(x, y)
```

```
x*=y
```

```
__iter__(x)
```

```
iter(x)
```

```
__le__(x, y)
```

```
x<=y
```

```
__len__(x)
```

```
len(x)
```

**\_\_lt\_\_**(*x, y*)*x*<*y***\_\_mul\_\_**(*x, n*)*x*\**n***\_\_ne\_\_**(*x, y*)*x*!=*y***\_\_new\_\_**(*T, S, ...*)**Return Value**a new object with type *S*, a subtype of *T*Overrides: *object.\_\_new\_\_***\_\_reduce\_\_**(...)

helper for pickle

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)*repr*(*x*)Overrides: *object.\_\_repr\_\_***\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x, n*)*n*\**x***\_\_setattr\_\_**(...)*x.\_\_setattr\_\_('name', value)* <==> *x.name = value***\_\_setitem\_\_**(*x, i, y*)*x*[*i*]=*y***\_\_setslice\_\_**(*x, i, j, y*)*x*[*i:j*]=*y*

Use of negative indices is not supported.

**\_\_str\_\_(self)**

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```
0700 0100 0000 0000 0000 0000 0c00 0000      .....
0200 0000 0400 0000 4461 7461      .....Data
```

Overrides: `object.__str__`

**append(L, object)**

append object to end

**count(L, value)**

return number of occurrences of value

**Return Value**

integer

**extend(L, iterable)**

extend list by appending elements from the iterable

**index(...)**

`L.index(value, [start, [stop]])` -> integer – return first index of value

**insert(L, index, object)**

insert object before index

**pack(self, val, fmt=DWORD, start=0)**

Encode `val` and write it to buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer at which to write encoded data

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

**phex(cls, num)**

Return the hex representation of `num` without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`

**pop(L, index=...)**

remove and return item at index (default last)

**Return Value**

item

---

**remove**(*L*, *value*)

---

 remove first occurrence of value

---

**reverse**(*L*)

---

 reverse \*IN PLACE\*

---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

 stable sort \*IN PLACE\*; cmp(x, y) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

 Return decoded data from buffer.

**Parameters**
**fmt:** See struct<sup>a</sup>
**start:** Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.15.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.15.3 Class Variables

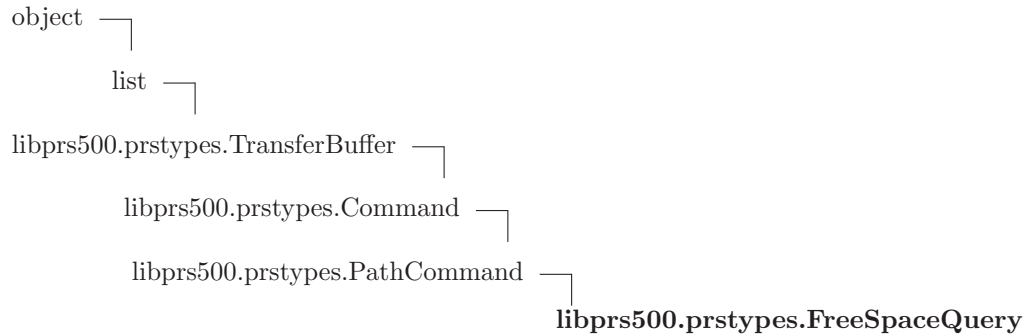
Name	Description
<code>path_length</code>	Length of the path to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
<code>path</code>	The path this query is about <b>Value:</b> A string starting at byte 20
<code>length</code>	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.16 Class FreeSpaceQuery



Query the free space available

### 4.16.1 Methods

**\_\_init\_\_**(*self*, *path*)

Overrides: `libprs500.prstypes.PathCommand.__init__`

**\_\_add\_\_**(*self*, *tb*)

Return a TransferBuffer rather than a list as the sum

Overrides: `list.__add__`

**\_\_contains\_\_**(*x*, *y*)

*y* in *x*

**\_\_delattr\_\_**(...)

`x.__delattr__('name') <==> del x.name`

**\_\_delitem\_\_**(*x*, *y*)

`del x[y]`

**\_\_delslice\_\_**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

```
__eq__(x, y)
```

```
x==y
```

```
__ge__(x, y)
```

```
x>=y
```

```
__getattr__(...)
```

```
x.__getattr__('name') <==> x.name
```

```
Overrides: object.__getattr__
```

```
__getitem__(x, y)
```

```
x[y]
```

```
__getslice__(self, start, end)
```

```
Return a TransferBuffer rather than a list as the slice
```

```
Overrides: list.__getslice__
```

```
__gt__(x, y)
```

```
x>y
```

```
__hash__(x)
```

```
hash(x)
```

```
Overrides: object.__hash__
```

```
__iadd__(x, y)
```

```
x+=y
```

```
__imul__(x, y)
```

```
x*=y
```

```
__iter__(x)
```

```
iter(x)
```

```
__le__(x, y)
```

```
x<=y
```

```
__len__(x)
```

```
len(x)
```

**\_\_lt\_\_**(*x*, *y*)*x* < *y***\_\_mul\_\_**(*x*, *n*)*x* \* *n***\_\_ne\_\_**(*x*, *y*)*x* != *y***\_\_new\_\_**(*T*, *S*, ...)

**Return Value**

a new object with type *S*, a subtype of *T*

Overrides: `object.__new__`

**\_\_reduce\_\_**(...)

helper for pickle

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)`repr(x)`Overrides: `object.__repr__`**\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x*, *n*)*n* \* *x***\_\_setattr\_\_**(...)*x*.`__setattr__`('name', value) <==> *x*.name = value**\_\_setitem\_\_**(*x*, *i*, *y*)*x*[*i*] = *y***\_\_setslice\_\_**(*x*, *i*, *j*, *y*)*x*[*i*:*j*] = *y*

Use of negative indices is not supported.



**\_\_str\_\_(self)**

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```
0700 0100 0000 0000 0000 0000 0c00 0000      .....
0200 0000 0400 0000 4461 7461      .....Data
```

Overrides: `object.__str__`

**append(L, object)**

append object to end

**count(L, value)**

return number of occurrences of value

**Return Value**

integer

**extend(L, iterable)**

extend list by appending elements from the iterable

**index(...)**

`L.index(value, [start, [stop]])` -> integer – return first index of value

**insert(L, index, object)**

insert object before index

**pack(self, val, fmt=DWORD, start=0)**

Encode `val` and write it to buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer at which to write encoded data

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

**phex(cls, num)**

Return the hex representation of `num` without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`

**pop(L, index=...)**

remove and return item at index (default last)

**Return Value**

item

---

**remove**(*L*, *value*)

---

 remove first occurrence of value

---

**reverse**(*L*)

---

 reverse \*IN PLACE\*

---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

 stable sort \*IN PLACE\*; cmp(*x*, *y*) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

 Return decoded data from buffer.

**Parameters**

     **fmt**: See struct<sup>a</sup>

     **start**: Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.16.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>'object'</code> objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.16.3 Class Variables

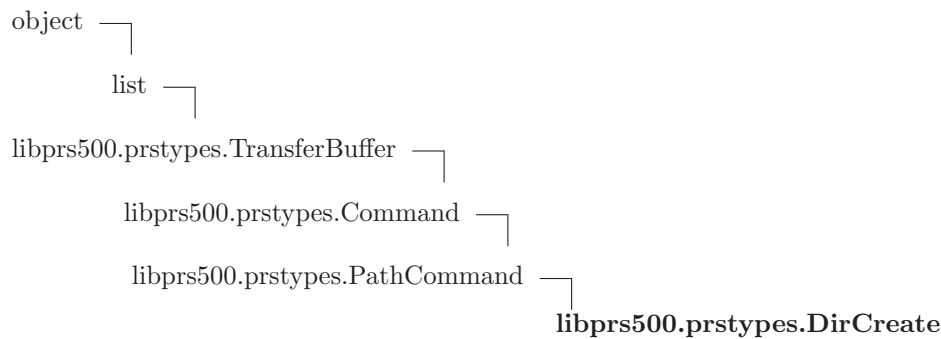
Name	Description
<code>NUMBER</code>	<b>Value:</b> 83
<code>length</code>	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver<sup>99</sup></li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
path	The path this query is about <b>Value:</b> A string starting at byte 20
path_length	Length of the path to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.17 Class DirCreate



Create a directory

### 4.17.1 Methods

**`__init__(self, path)`**

Overrides: `libprs500.prstypes.PathCommand.__init__`

**`__add__(self, tb)`**

Return a TransferBuffer rather than a list as the sum

Overrides: `list.__add__`

**`__contains__(x, y)`**

y in x

**`__delattr__(...)`**

x.\_\_delattr\_\_('name') <==> del x.name

**`__delitem__(x, y)`**

del x[y]

**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattribute--`**(...)

`x.__getattribute__('name') <==> x.name`

Overrides: `object.__getattribute__`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a `TransferBuffer` rather than a list as the slice

Overrides: `list.__getslice__`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object.__hash__`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

<code>__len__(x)</code>	<code>len(x)</code>
<code>__lt__(x, y)</code>	<code>x &lt; y</code>
<code>__mul__(x, n)</code>	<code>x * n</code>
<code>__ne__(x, y)</code>	<code>x != y</code>
<code>__new__(T, S, ...)</code> <b>Return Value</b> a new object with type S, a subtype of T Overrides: <code>object.__new__</code>	
<code>__reduce__()</code>	helper for pickle
<code>__reduce_ex__()</code>	helper for pickle
<code>__repr__(x)</code>	<code>repr(x)</code> Overrides: <code>object.__repr__</code>
<code>__reversed__(L)</code>	return a reverse iterator over the list
<code>__rmul__(x, n)</code>	<code>n * x</code>
<code>__setattr__()</code>	<code>x.__setattr__('name', value) &lt;==&gt; x.name = value</code>
<code>__setitem__(x, i, y)</code>	<code>x[i] = y</code>

---

**\_\_setslice\_\_**(*x, i, j, y*)
 

---

x[i:j]=y

Use of negative indices is not supported.

---

**\_\_str\_\_**(*self*)
 

---

Return a string representation of this buffer.

 Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data
  
```

Overrides: object.\_\_str\_\_

---

**append**(*L, object*)
 

---

append object to end

---

**count**(*L, value*)
 

---

return number of occurrences of value

**Return Value**

integer

---

**extend**(*L, iterable*)
 

---

extend list by appending elements from the iterable

---

**index**(...)
 

---

L.index(value, [start, [stop]]) -&gt; integer – return first index of value

---

**insert**(*L, index, object*)
 

---

insert object before index

---

**pack**(*self, val, fmt=DWORD, start=0*)
 

---

 Encode **val** and write it to buffer.

**Parameters**
**fmt:** See struct<sup>a</sup>
**start:** Position in buffer at which to write encoded data

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**phex**(*cls, num*)
 

---

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

TransferBuffer.\_\_str\_\_

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; cmp(x, y) -> -1, 0, 1

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.17.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.17.3 Class Variables

Name	Description
<code>NUMBER</code>	<b>Value:</b> 48
<code>length</code>	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

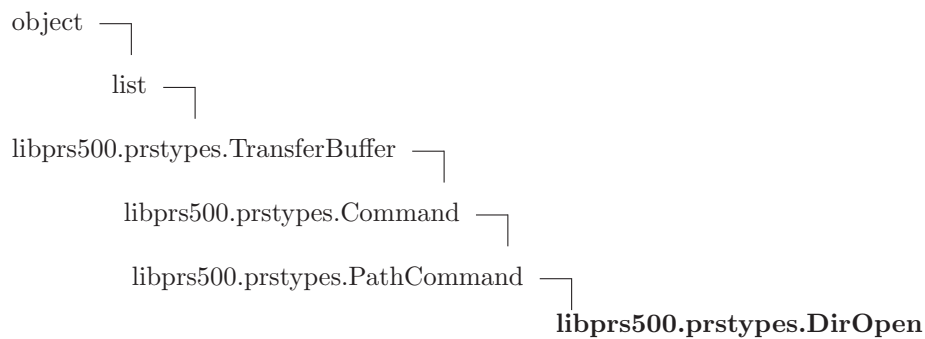
*continued on next page*



Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
path	The path this query is about <b>Value:</b> A string starting at byte 20
path_length	Length of the path to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.18 Class DirOpen



Open a directory for reading its contents

### 4.18.1 Methods

<b>__init__</b> ( <i>self</i> , <i>path</i> )
Overrides: <code>libprs500.prstypes.PathCommand.__init__</code>
<b>__add__</b> ( <i>self</i> , <i>tb</i> )
Return a TransferBuffer rather than a list as the sum
Overrides: <code>list.__add__</code>
<b>__contains__</b> ( <i>x</i> , <i>y</i> )
<i>y</i> in <i>x</i>
<b>__delattr__</b> (...)
<i>x</i> . <b>__delattr__</b> ('name') <==> del <i>x</i> .name
<b>__delitem__</b> ( <i>x</i> , <i>y</i> )
del <i>x</i> [ <i>y</i> ]

**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattribute--`**(...)

`x.__getattribute__('name') <==> x.name`

Overrides: `object.__getattribute__`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: `list.__getslice__`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object.__hash__`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

<code>__len__(x)</code>
<code>len(x)</code>
<code>__lt__(x, y)</code>
<code>x&lt;y</code>
<code>__mul__(x, n)</code>
<code>x*n</code>
<code>__ne__(x, y)</code>
<code>x!=y</code>
<code>__new__(T, S, ...)</code>
<b>Return Value</b> a new object with type <code>S</code> , a subtype of <code>T</code> Overrides: <code>object.__new__</code>
<code>__reduce__()</code>
helper for pickle
<code>__reduce_ex__()</code>
helper for pickle
<code>__repr__(x)</code>
<code>repr(x)</code>
Overrides: <code>object.__repr__</code>
<code>__reversed__(L)</code>
return a reverse iterator over the list
<code>__rmul__(x, n)</code>
<code>n*x</code>
<code>__setattr__()</code>
<code>x.__setattr__('name', value) &lt;==&gt; x.name = value</code>
<code>__setitem__(x, i, y)</code>
<code>x[i]=y</code>

---

**\_\_setslice\_\_**(*x, i, j, y*)
 

---

x[i:j]=y

Use of negative indices is not supported.

---

**\_\_str\_\_**(*self*)
 

---

Return a string representation of this buffer.

 Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data
  
```

Overrides: object.\_\_str\_\_

---

**append**(*L, object*)
 

---

append object to end

---

**count**(*L, value*)
 

---

return number of occurrences of value

**Return Value**

integer

---

**extend**(*L, iterable*)
 

---

extend list by appending elements from the iterable

---

**index**(...)
 

---

L.index(value, [start, [stop]]) -&gt; integer – return first index of value

---

**insert**(*L, index, object*)
 

---

insert object before index

---

**pack**(*self, val, fmt=DWORD, start=0*)
 

---

 Encode **val** and write it to buffer.

**Parameters**
**fmt:** See struct<sup>a</sup>
**start:** Position in buffer at which to write encoded data

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**phex**(*cls, num*)
 

---

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

TransferBuffer.\_\_str\_\_

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; *cmp*(*x*, *y*) -> -1, 0, 1

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.18.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.18.3 Class Variables

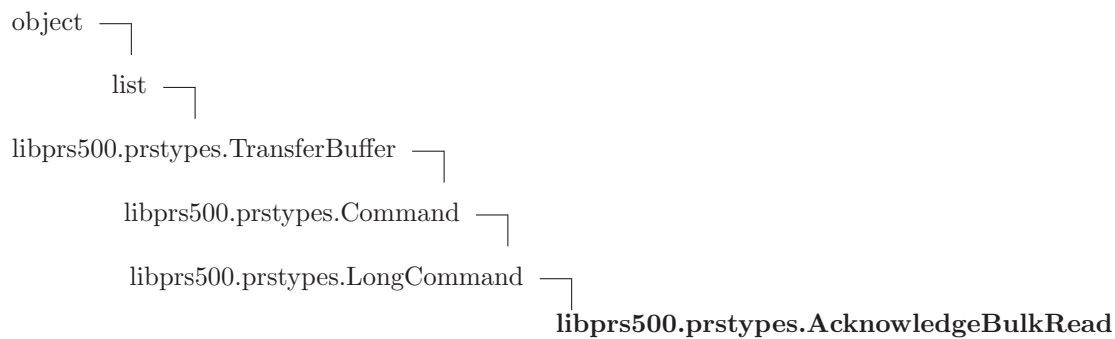
Name	Description
NUMBER	Command number <b>Value:</b> 51
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
path	The path this query is about <b>Value:</b> A string starting at byte 20
path_length	Length of the path to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.19 Class AcknowledgeBulkRead



Must be sent to device after a bulk read

### 4.19.1 Methods

<b>__init__</b> ( <i>self</i> , <i>bulk_read_id</i> )
<i>bulk_read_id</i> is an integer, the id of the bulk read we are acknowledging. See <b>Answer.id</b> Overrides: <i>libprs500.prstypes.LongCommand.__init__</i>
<b>__add__</b> ( <i>self</i> , <i>tb</i> )
Return a <i>TransferBuffer</i> rather than a list as the sum Overrides: <i>list.__add__</i>
<b>__contains__</b> ( <i>x</i> , <i>y</i> )
<i>y</i> in <i>x</i>
<b>__delattr__</b> (...)
<i>x.__delattr__('name')</i> <==> <i>del x.name</i>
<b>__delitem__</b> ( <i>x</i> , <i>y</i> )
<i>del x[y]</i>



**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattribute--`**(...)

`x._getattribute__('name') <==> x.name`

Overrides: `object._getattribute--`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a `TransferBuffer` rather than a list as the slice

Overrides: `list._getslice--`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object._hash--`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

<code>__len__(x)</code>	<code>len(x)</code>
<code>__lt__(x, y)</code>	<code>x &lt; y</code>
<code>__mul__(x, n)</code>	<code>x * n</code>
<code>__ne__(x, y)</code>	<code>x != y</code>
<code>__new__(T, S, ...)</code> <b>Return Value</b> a new object with type <code>S</code> , a subtype of <code>T</code> Overrides: <code>object.__new__</code>	
<code>__reduce__()</code>	helper for pickle
<code>__reduce_ex__()</code>	helper for pickle
<code>__repr__(x)</code>	<code>repr(x)</code> Overrides: <code>object.__repr__</code>
<code>__reversed__(L)</code>	return a reverse iterator over the list
<code>__rmul__(x, n)</code>	<code>n * x</code>
<code>__setattr__()</code>	<code>x.__setattr__('name', value) &lt;==&gt; x.name = value</code>
<code>__setitem__(x, i, y)</code>	<code>x[i] = y</code>

---

**`__setslice__`**(*x*, *i*, *j*, *y*)

---

`x[i:j]=y`

Use of negative indices is not supported.

---

**`__str__`**(*self*)

---

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

Overrides: `object.__str__`


---

**`append`**(*L*, *object*)

---

append object to end

---

**`count`**(*L*, *value*)

---

return number of occurrences of value

**Return Value****integer**


---

**`extend`**(*L*, *iterable*)

---

extend list by appending elements from the iterable

---

**`index`**(...)

---

`L.index(value, [start, [stop]])` -> integer – return first index of value

---

**`insert`**(*L*, *index*, *object*)

---

insert object before index

---

**`pack`**(*self*, *val*, *fmt*=`DWORD`, *start*=0)

---

Encode **val** and write it to buffer.**Parameters****fmt**: See struct<sup>a</sup>**start**: Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**`phex`**(*cls*, *num*)

---

Return the hex representation of *num* without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; *cmp*(*x*, *y*) -> -1, 0, 1

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt**: See struct<sup>a</sup>

**start**: Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.19.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>command</code>	<b>Value:</b> <property object at 0x832389c>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.19.3 Class Variables

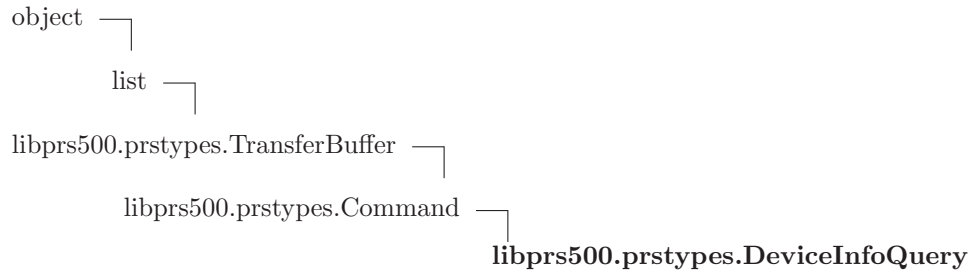
Name	Description
<code>SIZE</code>	Size in bytes of LongCommand packets <b>Value:</b> 32
<code>length</code>	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.20 Class *DeviceInfoQuery*



The command used to ask for device information

### 4.20.1 Methods

<b><code>__init__(self)</code></b> Overrides: <code>libprs500.prstypes.Command.__init__</code> <code>exitit</code> (inherited documentation)
<b><code>__add__(self, tb)</code></b> Return a <code>TransferBuffer</code> rather than a list as the sum Overrides: <code>list.__add__</code>
<b><code>__contains__(x, y)</code></b> y in x
<b><code>__delattr__(...)</code></b> x. <code>__delattr__</code> ('name') <==> del x.name
<b><code>__delitem__(x, y)</code></b> del x[y]
<b><code>__delslice__(x, i, j)</code></b> del x[i:j] Use of negative indices is not supported.
<b><code>__eq__(x, y)</code></b> x==y

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattribute--`**(...)

`x.__getattribute__('name') <==> x.name`

Overrides: `object.__getattribute__`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: `list.__getslice__`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object.__hash__`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

**`--len--`**(*x*)

`len(x)`

**`--lt--`**(*x*, *y*)

`x<y`

**`--mul--`**(*x*, *n*)

*x*\**n*

**`--ne--`**(*x*, *y*)

*x*!=*y*

**`--new--`**(*T*, *S*, ...)

**Return Value**

a new object with type *S*, a subtype of *T*

Overrides: `object.__new__`

**`--reduce--`**(...)

helper for pickle

**`--reduce_ex--`**(...)

helper for pickle

**`--repr--`**(*x*)

`repr(x)`

Overrides: `object.__repr__`

**`--reversed--`**(*L*)

return a reverse iterator over the list

**`--rmul--`**(*x*, *n*)

*n*\**x*

**`--setattr--`**(...)

*x*.`__setattr__`('name', value) <==> *x*.name = value

**`--setitem--`**(*x*, *i*, *y*)

*x*[*i*]=*y*

**`--setslice--`**(*x*, *i*, *j*, *y*)

*x*[*i*:*j*]=*y*

Use of negative indices is not supported.



**\_\_str\_\_(self)**

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

Overrides: `object.__str__`**append(L, object)**

append object to end

**count(L, value)**

return number of occurrences of value

**Return Value****integer****extend(L, iterable)**

extend list by appending elements from the iterable

**index(...)**

L.index(value, [start, [stop]]) -&gt; integer – return first index of value

**insert(L, index, object)**

insert object before index

**pack(self, val, fmt=DWORD, start=0)**Encode `val` and write it to buffer.**Parameters****fmt:** See struct<sup>a</sup>**start:** Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>**phex(cls, num)**Return the hex representation of `num` without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`**pop(L, index=...)**

remove and return item at index (default last)

**Return Value****item**

---

**remove**(*L*, *value*)

---

 remove first occurrence of value

---

**reverse**(*L*)

---

 reverse \*IN PLACE\*

---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

 stable sort \*IN PLACE\*; cmp(*x*, *y*) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

 Return decoded data from buffer.

**Parameters**

     **fmt**: See struct<sup>a</sup>

     **start**: Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.20.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>'object'</code> ' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.20.3 Class Variables

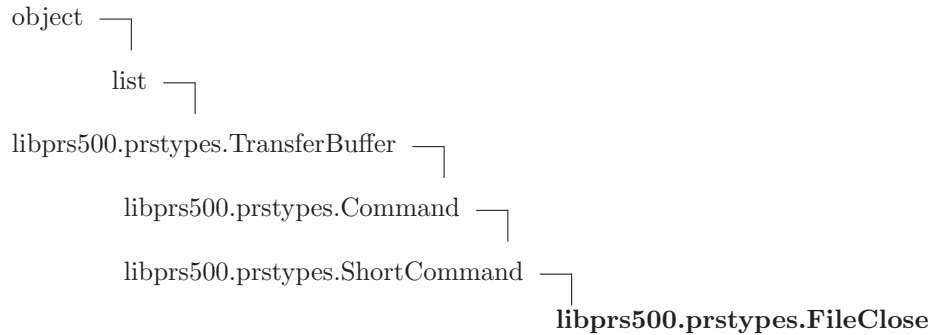
Name	Description
NUMBER	Command number <b>Value:</b> 257
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.21 Class FileClose



File close command

### 4.21.1 Methods

**\_\_init\_\_**(*self*, *id*)  
 Overrides: libprs500.prstypes.ShortCommand.\_\_init\_\_ extit(inherited documentation)

**\_\_add\_\_**(*self*, *tb*)  
 Return a TransferBuffer rather than a list as the sum  
 Overrides: list.\_\_add\_\_

**\_\_contains\_\_**(*x*, *y*)  
 y in x

**\_\_delattr\_\_**(...)  
 x.\_\_delattr\_\_('name') <==> del x.name

**\_\_delitem\_\_**(*x*, *y*)  
 del x[y]

**\_\_delslice\_\_**(*x*, *i*, *j*)  
 del x[i:j]  
 Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattr--`**(...)

`x._getattr_('name') <==> x.name`

Overrides: `object._getattr--`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a `TransferBuffer` rather than a list as the slice

Overrides: `list._getslice--`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object._hash--`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

**`--len--`**(*x*)

`len(x)`

**\_\_lt\_\_**(*x*, *y*)*x* < *y***\_\_mul\_\_**(*x*, *n*)*x* \* *n***\_\_ne\_\_**(*x*, *y*)*x* != *y***\_\_new\_\_**(*T*, *S*, ...)**Return Value**a new object with type *S*, a subtype of *T*Overrides: `object.__new__`**\_\_reduce\_\_**(...)

helper for pickle

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)`repr(x)`Overrides: `object.__repr__`**\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x*, *n*)*n* \* *x***\_\_setattr\_\_**(...)*x*.`__setattr__`('name', value) <==> *x*.name = value**\_\_setitem\_\_**(*x*, *i*, *y*)*x*[*i*] = *y***\_\_setslice\_\_**(*x*, *i*, *j*, *y*)*x*[*i*:*j*] = *y*

Use of negative indices is not supported.

**\_\_str\_\_(self)**

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

Overrides: `object.__str__`**append(L, object)**

append object to end

**count(L, value)**

return number of occurrences of value

**Return Value****integer****extend(L, iterable)**

extend list by appending elements from the iterable

**index(...)**

L.index(value, [start, [stop]]) -&gt; integer – return first index of value

**insert(L, index, object)**

insert object before index

**pack(self, val, fmt=DWORD, start=0)**Encode `val` and write it to buffer.**Parameters****fmt:** See struct<sup>a</sup>**start:** Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>**phex(cls, num)**Return the hex representation of `num` without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`**pop(L, index=...)**

remove and return item at index (default last)

**Return Value****item**

---

**remove**(*L*, *value*)

---

 remove first occurrence of value

---

**reverse**(*L*)

---

 reverse \*IN PLACE\*

---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

 stable sort \*IN PLACE\*; cmp(*x*, *y*) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

 Return decoded data from buffer.

**Parameters**

     *fmt*: See struct<sup>a</sup>

     *start*: Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.21.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute <code>'__class__'</code> of <code>'object'</code> objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.21.3 Class Variables

Name	Description
NUMBER	Command number <b>Value:</b> 17
SIZE	Packet size in bytes <b>Value:</b> 20
command	Usually carries additional information <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

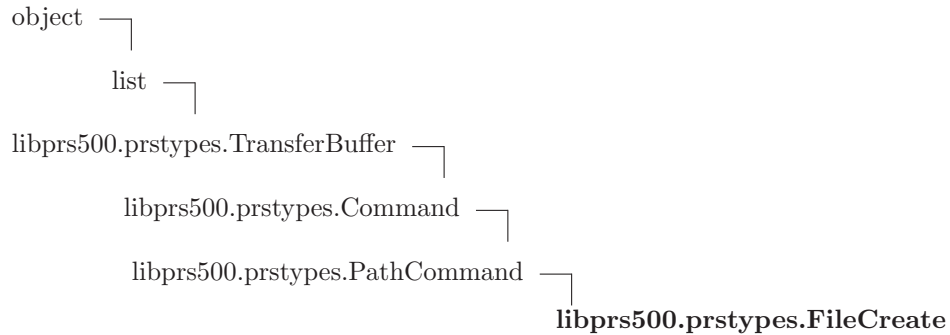
*continued on next page*



Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.22 Class FileCreate



Create a file

### 4.22.1 Methods

**\_\_init\_\_**(*self*, *path*)

Overrides: libprs500.prstypes.PathCommand.\_\_init\_\_

**\_\_add\_\_**(*self*, *tb*)

Return a TransferBuffer rather than a list as the sum

Overrides: list.\_\_add\_\_

**\_\_contains\_\_**(*x*, *y*)

y in x

**\_\_delattr\_\_**(...)

x.\_\_delattr\_\_('name') <==> del x.name

**\_\_delitem\_\_**(*x*, *y*)

del x[y]

**\_\_delslice\_\_**(*x*, *i*, *j*)

del x[i:j]

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattr--`**(...)

`x._getattr_('name') <==> x.name`

Overrides: `object._getattr--`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: `list._getslice--`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object._hash--`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

**`--len--`**(*x*)

`len(x)`

**\_\_lt\_\_**(*x*, *y*)*x* < *y***\_\_mul\_\_**(*x*, *n*)*x* \* *n***\_\_ne\_\_**(*x*, *y*)*x* != *y***\_\_new\_\_**(*T*, *S*, ...)**Return Value**a new object with type *S*, a subtype of *T*Overrides: `object.__new__`**\_\_reduce\_\_**(...)

helper for pickle

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)`repr(x)`Overrides: `object.__repr__`**\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x*, *n*)*n* \* *x***\_\_setattr\_\_**(...)*x*.`__setattr__`('name', value) <==> *x*.name = value**\_\_setitem\_\_**(*x*, *i*, *y*)*x*[*i*] = *y***\_\_setslice\_\_**(*x*, *i*, *j*, *y*)*x*[*i*:*j*] = *y*

Use of negative indices is not supported.

**\_\_str\_\_(self)**

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```
0700 0100 0000 0000 0000 0000 0c00 0000      .....
0200 0000 0400 0000 4461 7461      .....Data
```

Overrides: `object.__str__`

**append(L, object)**

append object to end

**count(L, value)**

return number of occurrences of value

**Return Value**

integer

**extend(L, iterable)**

extend list by appending elements from the iterable

**index(...)**

`L.index(value, [start, [stop]])` -> integer – return first index of value

**insert(L, index, object)**

insert object before index

**pack(self, val, fmt=DWORD, start=0)**

Encode `val` and write it to buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer at which to write encoded data

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

**phex(cls, num)**

Return the hex representation of `num` without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`

**pop(L, index=...)**

remove and return item at index (default last)

**Return Value**

item

---

**remove**(*L*, *value*)

---

 remove first occurrence of value

---

**reverse**(*L*)

---

 reverse \*IN PLACE\*

---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

 stable sort \*IN PLACE\*; cmp(x, y) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

 Return decoded data from buffer.

**Parameters**
**fmt:** See struct<sup>a</sup>
**start:** Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.22.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.22.3 Class Variables

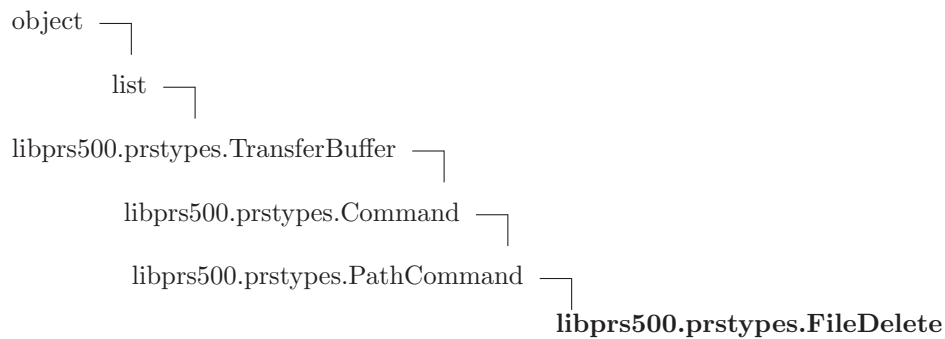
Name	Description
NUMBER	Command number <b>Value:</b> 26
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
path	The path this query is about <b>Value:</b> A string starting at byte 20
path_length	Length of the path to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.23 Class FileDelete



Delete a file

### 4.23.1 Methods

<b><code>__init__(self, path)</code></b> Overrides: <code>libprs500.prstypes.PathCommand.__init__</code>
<b><code>__add__(self, tb)</code></b> Return a TransferBuffer rather than a list as the sum Overrides: <code>list.__add__</code>
<b><code>__contains__(x, y)</code></b> y in x
<b><code>__delattr__(...)</code></b> x.__delattr__('name') <==> del x.name
<b><code>__delitem__(x, y)</code></b> del x[y]



**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattribute--`**(...)

`x.__getattribute__('name') <==> x.name`

Overrides: `object.__getattribute__`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a `TransferBuffer` rather than a list as the slice

Overrides: `list.__getslice__`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object.__hash__`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

<code>__len__(x)</code>
<code>len(x)</code>
<code>__lt__(x, y)</code>
<code>x &lt; y</code>
<code>__mul__(x, n)</code>
<code>x * n</code>
<code>__ne__(x, y)</code>
<code>x != y</code>
<code>__new__(T, S, ...)</code>
<b>Return Value</b> a new object with type <code>S</code> , a subtype of <code>T</code> Overrides: <code>object.__new__</code>
<code>__reduce__()</code>
helper for pickle
<code>__reduce_ex__()</code>
helper for pickle
<code>__repr__(x)</code>
<code>repr(x)</code>
Overrides: <code>object.__repr__</code>
<code>__reversed__(L)</code>
return a reverse iterator over the list
<code>__rmul__(x, n)</code>
<code>n * x</code>
<code>__setattr__()</code>
<code>x.__setattr__('name', value) &lt;==&gt; x.name = value</code>
<code>__setitem__(x, i, y)</code>
<code>x[i] = y</code>

---

**\_\_setslice\_\_**(*x, i, j, y*)

---

**x[i:j]=y**

Use of negative indices is not supported.

---

**\_\_str\_\_**(*self*)

---

Return a string representation of this buffer.

 Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

 Overrides: `object.__str__`


---

**append**(*L, object*)

---

append object to end

---

**count**(*L, value*)

---

return number of occurrences of value

**Return Value**

integer

---

**extend**(*L, iterable*)

---

extend list by appending elements from the iterable

---

**index**(...)

---

L.index(value, [start, [stop]]) -&gt; integer – return first index of value

---

**insert**(*L, index, object*)

---

insert object before index

---

**pack**(*self, val, fmt=DWORD, start=0*)

---

 Encode **val** and write it to buffer.

**Parameters**
**fmt:** See struct<sup>a</sup>
**start:** Position in buffer at which to write encoded data

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**phex**(*cls, num*)

---

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

**TransferBuffer.\_\_str\_\_**

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; cmp(x, y) -> -1, 0, 1

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.23.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.23.3 Class Variables

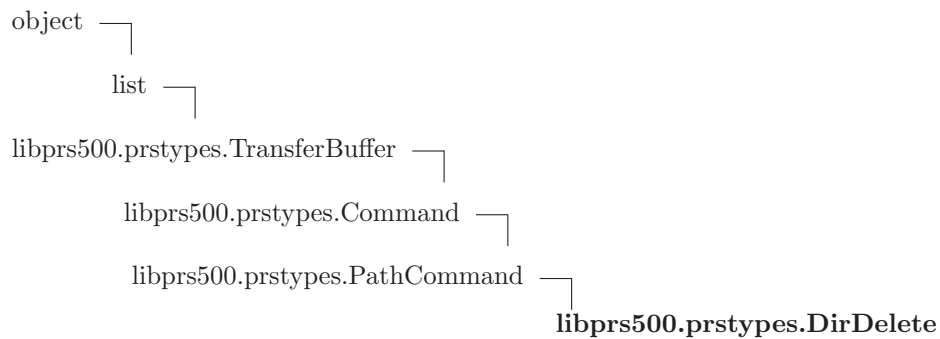
Name	Description
<code>NUMBER</code>	<b>Value:</b> 27
<code>length</code>	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
path	The path this query is about <b>Value:</b> A string starting at byte 20
path_length	Length of the path to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.24 Class DirDelete



Delete a directory

### 4.24.1 Methods

<b><code>__init__(self, path)</code></b> Overrides: <code>libprs500.prstypes.PathCommand.__init__</code>
<b><code>__add__(self, tb)</code></b> Return a TransferBuffer rather than a list as the sum Overrides: <code>list.__add__</code>
<b><code>__contains__(x, y)</code></b> y in x
<b><code>__delattr__(...)</code></b> x.__delattr__('name') <==> del x.name
<b><code>__delitem__(x, y)</code></b> del x[y]

**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattribute--`**(...)

`x.__getattribute__('name') <==> x.name`

Overrides: `object.__getattribute__`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: `list.__getslice__`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object.__hash__`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

<code>__len__(x)</code>
<code>len(x)</code>
<code>__lt__(x, y)</code>
<code>x &lt; y</code>
<code>__mul__(x, n)</code>
<code>x * n</code>
<code>__ne__(x, y)</code>
<code>x != y</code>
<code>__new__(T, S, ...)</code>
<b>Return Value</b> a new object with type <code>S</code> , a subtype of <code>T</code> Overrides: <code>object.__new__</code>
<code>__reduce__()</code>
helper for pickle
<code>__reduce_ex__()</code>
helper for pickle
<code>__repr__(x)</code>
<code>repr(x)</code>
Overrides: <code>object.__repr__</code>
<code>__reversed__(L)</code>
return a reverse iterator over the list
<code>__rmul__(x, n)</code>
<code>n * x</code>
<code>__setattr__()</code>
<code>x.__setattr__('name', value) &lt;==&gt; x.name = value</code>
<code>__setitem__(x, i, y)</code>
<code>x[i] = y</code>



---

**\_\_setslice\_\_**(*x, i, j, y*)
 

---

x[i:j]=y

Use of negative indices is not supported.

---

**\_\_str\_\_**(*self*)
 

---

Return a string representation of this buffer.

 Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data
  
```

Overrides: object.\_\_str\_\_

---

**append**(*L, object*)
 

---

append object to end

---

**count**(*L, value*)
 

---

return number of occurrences of value

**Return Value**

integer

---

**extend**(*L, iterable*)
 

---

extend list by appending elements from the iterable

---

**index**(...)
 

---

L.index(value, [start, [stop]]) -&gt; integer – return first index of value

---

**insert**(*L, index, object*)
 

---

insert object before index

---

**pack**(*self, val, fmt=DWORD, start=0*)
 

---

 Encode **val** and write it to buffer.

**Parameters**
**fmt:** See struct<sup>a</sup>
**start:** Position in buffer at which to write encoded data

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**phex**(*cls, num*)
 

---

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

**TransferBuffer.\_\_str\_\_**

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; cmp(*x*, *y*) -> -1, 0, 1

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt**: See struct<sup>a</sup>

**start**: Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.24.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>object</code> ' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.24.3 Class Variables

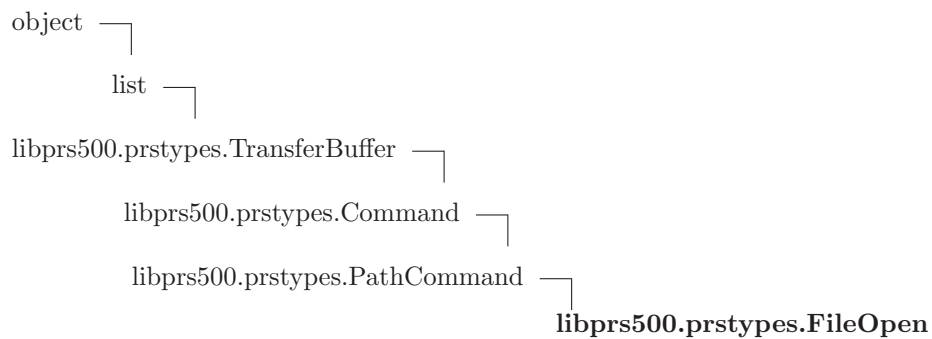
Name	Description
<code>NUMBER</code>	<b>Value:</b> 49
<code>length</code>	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
path	The path this query is about <b>Value:</b> A string starting at byte 20
path_length	Length of the path to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.25 Class FileOpen



File open command

### 4.25.1 Methods

```
__init__(self, path, mode=0x00)
```

Overrides: `libprs500.prstypes.PathCommand.__init__`

```
__add__(self, tb)
```

Return a TransferBuffer rather than a list as the sum

Overrides: `list.__add__`

```
__contains__(x, y)
```

y in x

```
__delattr__(...)
```

`x.__delattr__('name') <==> del x.name`

```
__delitem__(x, y)
```

`del x[y]`

**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattr--`**(...)

`x._getattr_('name') <==> x.name`

Overrides: `object._getattr--`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a `TransferBuffer` rather than a list as the slice

Overrides: `list._getslice--`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object._hash--`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

<code>__len__(x)</code>	<code>len(x)</code>
<code>__lt__(x, y)</code>	<code>x &lt; y</code>
<code>__mul__(x, n)</code>	<code>x * n</code>
<code>__ne__(x, y)</code>	<code>x != y</code>
<code>__new__(T, S, ...)</code> <b>Return Value</b> a new object with type <code>S</code> , a subtype of <code>T</code> Overrides: <code>object.__new__</code>	
<code>__reduce__()</code>	helper for pickle
<code>__reduce_ex__()</code>	helper for pickle
<code>__repr__(x)</code>	<code>repr(x)</code> Overrides: <code>object.__repr__</code>
<code>__reversed__(L)</code>	return a reverse iterator over the list
<code>__rmul__(x, n)</code>	<code>n * x</code>
<code>__setattr__()</code>	<code>x.__setattr__('name', value) &lt;==&gt; x.name = value</code>
<code>__setitem__(x, i, y)</code>	<code>x[i] = y</code>

---

**\_\_setslice\_\_**(*x, i, j, y*)
 

---

x[i:j]=y

Use of negative indices is not supported.

---

**\_\_str\_\_**(*self*)
 

---

Return a string representation of this buffer.

 Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data
  
```

Overrides: object.\_\_str\_\_

---

**append**(*L, object*)
 

---

append object to end

---

**count**(*L, value*)
 

---

return number of occurrences of value

**Return Value**

integer

---

**extend**(*L, iterable*)
 

---

extend list by appending elements from the iterable

---

**index**(...)
 

---

L.index(value, [start, [stop]]) -&gt; integer – return first index of value

---

**insert**(*L, index, object*)
 

---

insert object before index

---

**pack**(*self, val, fmt=DWORD, start=0*)
 

---

 Encode **val** and write it to buffer.

**Parameters**
**fmt:** See struct<sup>a</sup>
**start:** Position in buffer at which to write encoded data

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**phex**(*cls, num*)
 

---

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

**TransferBuffer.\_\_str\_\_**

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value***item***remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)stable sort \*IN PLACE\*; *cmp*(*x*, *y*) -> -1, 0, 1**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters****fmt**: See struct<sup>a</sup>**start**: Position in buffer from which to decode<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.25.2 Properties

Name	Description
mode	<b>Value:</b> <property object at 0x8323aa4>
__class__	<b>Value:</b> <attribute '__class__' of 'object' objects>
data	<b>Value:</b> <property object at 0x832370c>

#### 4.25.3 Class Variables

Name	Description
NUMBER	Command number <b>Value:</b> 16
READ	Open file in read mode <b>Value:</b> 0
WRITE	Open file in write mode <b>Value:</b> 1
path_length	Length of the path to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 20
path	The path this query is about <b>Value:</b> A string starting at byte 24

*continued on next page*



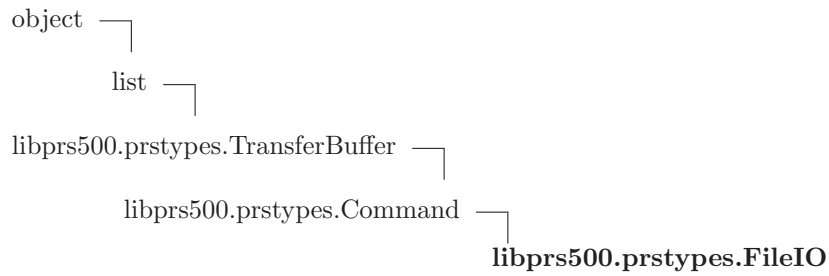
Name	Description
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.26 Class FileIO



Command to read/write from an open file

### 4.26.1 Methods

**\_\_init\_\_(self, id, offset, size, mode=0x16)**

#### Parameters

- id:** File identifier returned by a `FileOpen` command  
(type=*unsigned int*)
- offset:** Position in file at which to read  
(type=*unsigned long long*)
- size:** number of bytes to read  
(type=*unsigned int*)
- mode:** Either `FileIO.RNUMBER` or `File.WNUMBER`

Overrides: `libprs500.prstypes.Command.__init__`

**\_\_add\_\_(self, tb)**

Return a `TransferBuffer` rather than a list as the sum

Overrides: `list.__add__`

**\_\_contains\_\_(x, y)**

y in x

**\_\_delattr\_\_(...)**

x.\_\_delattr\_\_('name') <==> del x.name

**\_\_delitem\_\_(x, y)**

del x[y]

**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattribute--`**(...)

`x.__getattribute__('name') <==> x.name`

Overrides: `object.__getattribute__`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a `TransferBuffer` rather than a list as the slice

Overrides: `list.__getslice__`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object.__hash__`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

**\_\_len\_\_**(*x*)`len(x)`**\_\_lt\_\_**(*x*, *y*)`x<y`**\_\_mul\_\_**(*x*, *n*)`x*n`**\_\_ne\_\_**(*x*, *y*)`x!=y`**\_\_new\_\_**(*T*, *S*, ...)**Return Value**a new object with type *S*, a subtype of *T*Overrides: `object.__new__`**\_\_reduce\_\_**(...)

helper for pickle

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)`repr(x)`Overrides: `object.__repr__`**\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x*, *n*)`n*x`**\_\_setattr\_\_**(...)`x.__setattr__('name', value) <==> x.name = value`**\_\_setitem\_\_**(*x*, *i*, *y*)`x[i]=y`

---

**\_\_setslice\_\_**(*x, i, j, y*)
 

---

**x[i:j]=y**

Use of negative indices is not supported.

---

**\_\_str\_\_**(*self*)
 

---

Return a string representation of this buffer.

 Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data
  
```

 Overrides: `object.__str__`


---

**append**(*L, object*)
 

---

append object to end

---

**count**(*L, value*)
 

---

return number of occurrences of value

**Return Value**

integer

---

**extend**(*L, iterable*)
 

---

extend list by appending elements from the iterable

---

**index**(...)
 

---

`L.index(value, [start, [stop]])` -> integer – return first index of value

---

**insert**(*L, index, object*)
 

---

insert object before index

---

**pack**(*self, val, fmt=DWORD, start=0*)
 

---

 Encode **val** and write it to buffer.

**Parameters**
**fmt:** See struct<sup>a</sup>
**start:** Position in buffer at which to write encoded data

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**phex**(*cls, num*)
 

---

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; cmp(x, y) -&gt; -1, 0, 1

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters****fmt**: See struct<sup>a</sup>**start**: Position in buffer from which to decode<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.26.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.26.3 Class Variables

Name	Description
RNUMBER	Command number to read from a file <b>Value:</b> 22
WNUMBER	Command number to write to a file <b>Value:</b> 23
id	The file ID returned by a FileOpen command <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
offset	offset in the file at which to read <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 20
size	The number of bytes to reread from file. <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 28

*continued on next page*

Name	Description
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

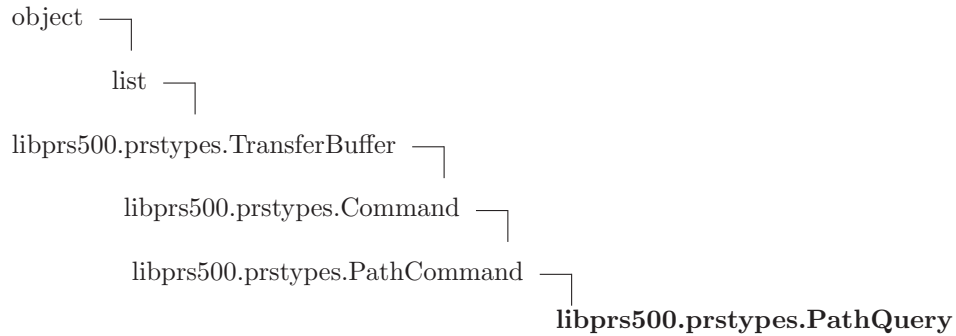
*continued on next page*



Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.27 Class PathQuery



Defines structure of command that requests information about a path

### 4.27.1 Methods

**\_\_init\_\_**(*self*, *path*)

Overrides: `libprs500.prstypes.PathCommand.__init__`

**\_\_add\_\_**(*self*, *tb*)

Return a TransferBuffer rather than a list as the sum

Overrides: `list.__add__`

**\_\_contains\_\_**(*x*, *y*)

*y* in *x*

**\_\_delattr\_\_**(...)

*x*.**\_\_delattr\_\_**('name') <==> `del x.name`

**\_\_delitem\_\_**(*x*, *y*)

`del x[y]`

**\_\_delslice\_\_**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

```
__eq__(x, y)
```

```
x==y
```

```
__ge__(x, y)
```

```
x>=y
```

```
__getattr__(...)
```

```
x.__getattr__('name') <==> x.name
```

```
Overrides: object.__getattr__
```

```
__getitem__(x, y)
```

```
x[y]
```

```
__getslice__(self, start, end)
```

```
Return a TransferBuffer rather than a list as the slice
```

```
Overrides: list.__getslice__
```

```
__gt__(x, y)
```

```
x>y
```

```
__hash__(x)
```

```
hash(x)
```

```
Overrides: object.__hash__
```

```
__iadd__(x, y)
```

```
x+=y
```

```
__imul__(x, y)
```

```
x*=y
```

```
__iter__(x)
```

```
iter(x)
```

```
__le__(x, y)
```

```
x<=y
```

```
__len__(x)
```

```
len(x)
```

**\_\_lt\_\_**(*x*, *y*)*x* < *y***\_\_mul\_\_**(*x*, *n*)*x* \* *n***\_\_ne\_\_**(*x*, *y*)*x* != *y***\_\_new\_\_**(*T*, *S*, ...)**Return Value**a new object with type *S*, a subtype of *T*Overrides: *object.\_\_new\_\_***\_\_reduce\_\_**(...)

helper for pickle

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)*repr*(*x*)Overrides: *object.\_\_repr\_\_***\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x*, *n*)*n* \* *x***\_\_setattr\_\_**(...)*x.\_\_setattr\_\_('name', value)* <==> *x.name = value***\_\_setitem\_\_**(*x*, *i*, *y*)*x*[*i*] = *y***\_\_setslice\_\_**(*x*, *i*, *j*, *y*)*x*[*i*:*j*] = *y*

Use of negative indices is not supported.

**\_\_str\_\_**(*self*)

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

Overrides: `object.__str__`**append**(*L*, *object*)

append object to end

**count**(*L*, *value*)

return number of occurrences of value

**Return Value****integer****extend**(*L*, *iterable*)

extend list by appending elements from the iterable

**index**(...)`L.index(value, [start, [stop]])` -> integer – return first index of value**insert**(*L*, *index*, *object*)

insert object before index

**pack**(*self*, *val*, *fmt*=`DWORD`, *start*=0)Encode *val* and write it to buffer.**Parameters****fmt**: See struct<sup>a</sup>**start**: Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>**phex**(*cls*, *num*)Return the hex representation of *num* without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value****item**

---

**remove**(*L*, *value*)

---

 remove first occurrence of value

---

**reverse**(*L*)

---

 reverse *\*IN PLACE\**


---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

 stable sort *\*IN PLACE\**; *cmp*(*x*, *y*) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

 Return decoded data from buffer.

**Parameters**

     *fmt*: See struct<sup>a</sup>

     *start*: Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.27.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>'object'</code> objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.27.3 Class Variables

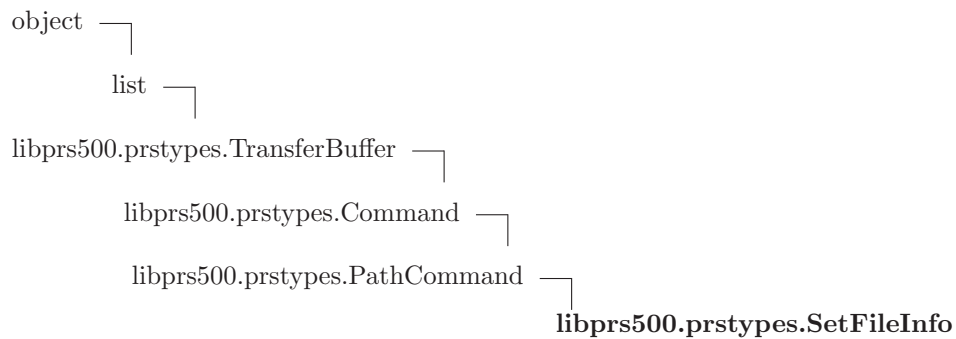
Name	Description
NUMBER	Command number <b>Value:</b> 24
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
path	The path this query is about <b>Value:</b> A string starting at byte 20
path_length	Length of the path to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.28 Class SetFileInfo



Set File information

### 4.28.1 Methods

<b><code>__init__(self, path)</code></b> Overrides: <code>libprs500.prstypes.PathCommand.__init__</code>
<b><code>__add__(self, tb)</code></b> Return a TransferBuffer rather than a list as the sum Overrides: <code>list.__add__</code>
<b><code>__contains__(x, y)</code></b> y in x
<b><code>__delattr__(...)</code></b> x.__delattr__('name') <==> del x.name
<b><code>__delitem__(x, y)</code></b> del x[y]



**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattribute--`**(...)

`x.__getattribute__('name') <==> x.name`

Overrides: `object.__getattribute__`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a `TransferBuffer` rather than a list as the slice

Overrides: `list.__getslice__`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object.__hash__`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

`__len__(x)``len(x)``__lt__(x, y)``x<y``__mul__(x, n)``x*n``__ne__(x, y)``x!=y``__new__(T, S, ...)`**Return Value**a new object with type `S`, a subtype of `T`Overrides: `object.__new__``__reduce__()`

helper for pickle

`__reduce_ex__()`

helper for pickle

`__repr__(x)``repr(x)`Overrides: `object.__repr__``__reversed__(L)`

return a reverse iterator over the list

`__rmul__(x, n)``n*x``__setattr__()``x.__setattr__('name', value) <==> x.name = value``__setitem__(x, i, y)``x[i]=y`

---

**\_\_setslice\_\_**(*x, i, j, y*)
 

---

x[i:j]=y

Use of negative indices is not supported.

---

**\_\_str\_\_**(*self*)
 

---

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

Overrides: object.\_\_str\_\_

---

**append**(*L, object*)
 

---

append object to end

---

**count**(*L, value*)
 

---

return number of occurrences of value

**Return Value****integer**


---

**extend**(*L, iterable*)
 

---

extend list by appending elements from the iterable

---

**index**(...)
 

---

L.index(value, [start, [stop]]) -&gt; integer – return first index of value

---

**insert**(*L, index, object*)
 

---

insert object before index

---

**pack**(*self, val, fmt=DWORD, start=0*)
 

---

Encode **val** and write it to buffer.**Parameters****fmt:** See struct<sup>a</sup>**start:** Position in buffer at which to write encoded data

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**phex**(*cls, num*)
 

---

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

**TransferBuffer.\_\_str\_\_**

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; *cmp*(*x*, *y*) -> -1, 0, 1

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.28.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>
<code>data</code>	<b>Value:</b> <property object at 0x832370c>

#### 4.28.3 Class Variables

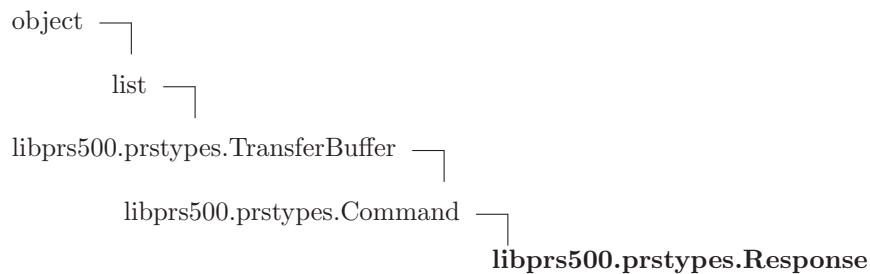
Name	Description
NUMBER	Command number <b>Value:</b> 25
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
<code>path</code>	The path this query is about <b>Value:</b> A string starting at byte 20
<code>path_length</code>	Length of the path to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
<code>type</code>	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

## 4.29 Class Response



**Known Subclasses:** `libprs500.prstypes.ListResponse`

Defines the structure of response packets received from the device.

`Response` inherits from `Command` as the first 16 bytes have the same structure.

### 4.29.1 Methods

<code>__init__(self, packet)</code>
<code>len(packet) == Response.SIZE</code>
Overrides: <code>libprs500.prstypes.Command.__init__</code>
<code>__add__(self, tb)</code>
Return a <code>TransferBuffer</code> rather than a list as the sum
Overrides: <code>list.__add__</code>
<code>__contains__(x, y)</code>
<code>y in x</code>
<code>__delattr__(...)</code>
<code>x.__delattr__('name') &lt;==&gt; del x.name</code>
<code>__delitem__(x, y)</code>
<code>del x[y]</code>

**`--delslice--`**(*x, i, j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x, y*)

`x==y`

**`--ge--`**(*x, y*)

`x>=y`

**`--getattribute--`**(...)

`x.__getattribute__('name') <==> x.name`

Overrides: `object.__getattribute__`

**`--getitem--`**(*x, y*)

`x[y]`

**`--getslice--`**(*self, start, end*)

Return a TransferBuffer rather than a list as the slice

Overrides: `list.__getslice__`

**`--gt--`**(*x, y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object.__hash__`

**`--iadd--`**(*x, y*)

`x+=y`

**`--imul--`**(*x, y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x, y*)

`x<=y`

`__len__(x)``len(x)``__lt__(x, y)``x < y``__mul__(x, n)``x * n``__ne__(x, y)``x != y``__new__(T, S, ...)`**Return Value**a new object with type `S`, a subtype of `T`Overrides: `object.__new__``__reduce__()`

helper for pickle

`__reduce_ex__()`

helper for pickle

`__repr__(x)``repr(x)`Overrides: `object.__repr__``__reversed__(L)`

return a reverse iterator over the list

`__rmul__(x, n)``n * x``__setattr__()``x.__setattr__('name', value) <==> x.name = value``__setitem__(x, i, y)``x[i] = y`



---

**`__setslice__`**(*x, i, j, y*)

---

`x[i:j]=y`

Use of negative indices is not supported.

---

**`__str__`**(*self*)

---

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

Overrides: `object.__str__`


---

**`append`**(*L, object*)

---

append object to end

---

**`count`**(*L, value*)

---

return number of occurrences of value

**Return Value****integer**


---

**`extend`**(*L, iterable*)

---

extend list by appending elements from the iterable

---

**`index`**(...)

---

`L.index(value, [start, [stop]])` -> integer – return first index of value

---

**`insert`**(*L, index, object*)

---

insert object before index

---

**`pack`**(*self, val, fmt=DWORD, start=0*)

---

Encode `val` and write it to buffer.**Parameters****fmt:** See struct<sup>a</sup>**start:** Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**`phex`**(*cls, num*)

---

Return the hex representation of `num` without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; *cmp*(*x*, *y*) -> -1, 0, 1

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt**: See struct<sup>a</sup>

**start**: Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.29.2 Properties

Name	Description
data	<b>Value:</b> <property object at 0x8323b6c>
__class__	<b>Value:</b> <attribute '__class__' of 'object' objects>

#### 4.29.3 Class Variables

Name	Description
SIZE	Size of response packets in the SONY protocol <b>Value:</b> 32
rnumber	Response number, the command number of a command packet sent sometime before this packet was received <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
code	Used to indicate error conditions. A value of 0 means there was no error <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 20
data_size	Used to indicate the size of the next bulk read <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 28

*continued on next page*

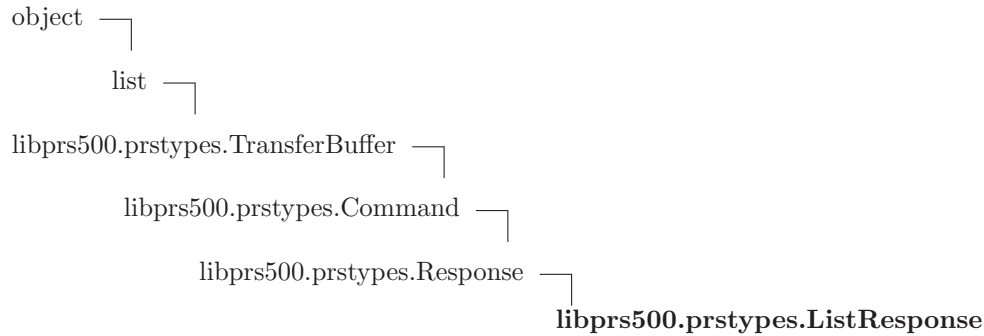
Name	Description
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

### 4.30 Class ListResponse



Defines the structure of response packets received during list (ll) queries. See [PathQuery](#).

#### 4.30.1 Methods

<b>__add__</b> ( <i>self</i> , <i>tb</i> )
Return a TransferBuffer rather than a list as the sum Overrides: list.__add__
<b>__contains__</b> ( <i>x</i> , <i>y</i> )
<i>y</i> in <i>x</i>
<b>__delattr__</b> (...)
<i>x</i> .__delattr__('name') <==> del <i>x</i> .name
<b>__delitem__</b> ( <i>x</i> , <i>y</i> )
del <i>x</i> [ <i>y</i> ]
<b>__delslice__</b> ( <i>x</i> , <i>i</i> , <i>j</i> )
del <i>x</i> [ <i>i</i> : <i>j</i> ] Use of negative indices is not supported.
<b>__eq__</b> ( <i>x</i> , <i>y</i> )
<i>x</i> == <i>y</i>

---

**`--ge--`***(x, y)*

---

`x>=y`

---

**`--getattr--`***(...)*

---

`x.--getattr--('name') <==> x.name`Overrides: `object.--getattr--`

---

**`--getitem--`***(x, y)*

---

`x[y]`

---

**`--getslice--`***(self, start, end)*

---

Return a TransferBuffer rather than a list as the slice

Overrides: `list.--getslice--`

---

**`--gt--`***(x, y)*

---

`x>y`

---

**`--hash--`***(x)*

---

`hash(x)`Overrides: `object.--hash--`

---

**`--iadd--`***(x, y)*

---

`x+=y`

---

**`--imul--`***(x, y)*

---

`x*=y`

---

**`--init--`***(self, packet)*

---

`len(packet) == Response.SIZE`Overrides: `libprs500.prstypes.Command.--init--`

---

**`--iter--`***(x)*

---

`iter(x)`

---

**`--le--`***(x, y)*

---

`x<=y`

---

**`--len--`***(x)*

---

`len(x)`

**`__lt__`**(*x*, *y*)

*x* < *y*

**`__mul__`**(*x*, *n*)

*x* \* *n*

**`__ne__`**(*x*, *y*)

*x* != *y*

**`__new__`**(*T*, *S*, ...)

**Return Value**

a new object with type *S*, a subtype of *T*

Overrides: `object.__new__`

**`__reduce__`**(...)

helper for pickle

**`__reduce_ex__`**(...)

helper for pickle

**`__repr__`**(*x*)

`repr(x)`

Overrides: `object.__repr__`

**`__reversed__`**(*L*)

return a reverse iterator over the list

**`__rmul__`**(*x*, *n*)

*n* \* *x*

**`__setattr__`**(...)

*x*.`__setattr__`('name', value) <==> *x*.name = value

**`__setitem__`**(*x*, *i*, *y*)

*x*[*i*] = *y*

**`__setslice__`**(*x*, *i*, *j*, *y*)

*x*[*i*:*j*] = *y*

Use of negative indices is not supported.

**\_\_str\_\_**(*self*)

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

Overrides: `object.__str__`**append**(*L*, *object*)

append object to end

**count**(*L*, *value*)

return number of occurrences of value

**Return Value****integer****extend**(*L*, *iterable*)

extend list by appending elements from the iterable

**index**(...)`L.index(value, [start, [stop]])` -> integer – return first index of value**insert**(*L*, *index*, *object*)

insert object before index

**pack**(*self*, *val*, *fmt*=`DWORD`, *start*=0)Encode *val* and write it to buffer.**Parameters****fmt**: See struct<sup>a</sup>**start**: Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>**phex**(*cls*, *num*)Return the hex representation of *num* without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value****item**



---

**remove**(*L*, *value*)

---

 remove first occurrence of value

---

**reverse**(*L*)

---

 reverse \*IN PLACE\*

---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

 stable sort \*IN PLACE\*; cmp(*x*, *y*) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

 Return decoded data from buffer.

**Parameters**
**fmt**: See struct<sup>a</sup>
**start**: Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.30.2 Properties

Name	Description
is_file	<b>Value:</b> <property object at 0x8323bbc>
is_invalid	<b>Value:</b> <property object at 0x8323be4>
path_not_found	<b>Value:</b> <property object at 0x8323c0c>
is_unmounted	<b>Value:</b> <property object at 0x8323c34>
is_eol	<b>Value:</b> <property object at 0x8323c5c>
__class__	<b>Value:</b> <attribute '__class__' of 'object' objects>
data	<b>Value:</b> <property object at 0x8323b6c>

#### 4.30.3 Class Variables

Name	Description
IS_FILE	Queried path is a file <b>Value:</b> 4294967250L
IS_INVALID	Queried path is malformed/invalid <b>Value:</b> 4294967289L
IS_UNMOUNTED	Queried path is not mounted (i.e. a removed storage card/stick) <b>Value:</b> 4294967240L
IS_EOL	There are no more entries in the list <b>Value:</b> 4294967290L
PATH_NOT_FOUND	Queried path is not found <b>Value:</b> 4294967255L
SIZE	Size of response packets in the SONY protocol <b>Value:</b> 32

*continued on next page*

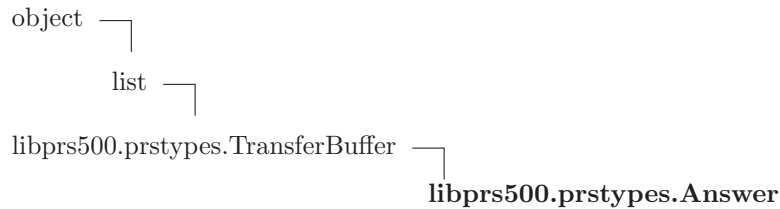
Name	Description
code	Used to indicate error conditions. A value of 0 means there was no error <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 20
data_size	Used to indicate the size of the next bulk read <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 28
length	Length of the data part of this packet <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	<p>Command number. C{unsigned int} stored in 4 bytes at byte 0.</p> <p>Command numbers are:</p> <ul style="list-style-type: none"> <li>0 GetUsbProtocolVersion</li> <li>1 ReqUsbConnect</li> <li>10 FskFileOpen</li> <li>11 FskFileClose</li> <li>12 FskGetSize</li> <li>13 FskSetSize</li> <li>14 FskFileSetPosition</li> <li>15 FskGetPosition</li> <li>16 FskFileRead</li> <li>17 FskFileWrite</li> <li>18 FskFileGetFileInfo</li> <li>19 FskFileSetFileInfo</li> <li>1A FskFileCreate</li> <li>1B FskFileDelete</li> <li>1C FskFileRename</li> <li>30 FskFileCreateDirectory</li> <li>31 FskFileDeleteDirectory</li> <li>32 FskFileRenameDirectory</li> <li>33 FskDirectoryIteratorNew</li> <li>34 FskDirectoryIteratorDispose</li> <li>35 FskDirectoryIteratorGetNext</li> <li>52 FskVolumeGetInfo</li> <li>53 FskVolumeGetInfoFromPath</li> <li>80 FskFileTerminate</li> <li>100 ConnectDevice</li> <li>101 GetProperty</li> <li>102 GetMediaInfo</li> <li>103 GetFreeSpace</li> <li>104 SetTime</li> <li>105 DeviceBeginEnd</li> <li>106 UnlockDevice</li> <li>107 SetBulkSize</li> <li>110 GetHttpRequest</li> <li>111 SetHttpResponse</li> <li>112 Needregistration</li> <li>114 GetMarlinState</li> <li>200 ReqDiwStart</li> <li>201 SetDiwPersonalkey</li> <li>202 GetDiwPersonalkey</li> <li>203 SetDiwDhkey</li> <li>204 GetDiwDhkey</li> <li>205 SetDiwChallengeserver</li> <li>206 GetDiwChallengeserver</li> <li>207 GetDiwChallengeclient</li> <li>208 SetDiwChallengeclient</li> <li>209 GetDiwVersion</li> </ul>

Name	Description
rnumber	Response number, the command number of a command packet sent sometime before this packet was received <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 16
type	Known types are 0x00 and 0x01. Acknowledge commands are always type 0x00 <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 4

### 4.31 Class Answer



**Known Subclasses:** `libprs500.prstypes.DeviceInfo`, `libprs500.prstypes.FileProperties`, `libprs500.prstypes.FreeSpaceAnswer`, `libprs500.prstypes.IdAnswer`, `libprs500.prstypes.ListAnswer`, `libprs500.prstypes.USBProtocolVersion`

Defines the structure of packets sent to host via a bulk transfer (i.e., bulk reads)

#### 4.31.1 Methods

<b><code>__init__(self, packet)</code></b>
<b>Parameters</b> <code>packet</code> : <code>len(packet) ≥ 16</code> Overrides: <code>libprs500.prstypes.TransferBuffer.__init__</code>
<b><code>__add__(self, tb)</code></b>
Return a <code>TransferBuffer</code> rather than a list as the sum Overrides: <code>list.__add__</code>
<b><code>__contains__(x, y)</code></b>
<code>y in x</code>
<b><code>__delattr__(...)</code></b>
<code>x.__delattr__('name') &lt;==&gt; del x.name</code>
<b><code>__delitem__(x, y)</code></b>
<code>del x[y]</code>

**`--delslice--`**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**`--eq--`**(*x*, *y*)

`x==y`

**`--ge--`**(*x*, *y*)

`x>=y`

**`--getattr--`**(...)

`x._getattr_('name') <==> x.name`

Overrides: `object._getattr--`

**`--getitem--`**(*x*, *y*)

`x[y]`

**`--getslice--`**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: `list._getslice--`

**`--gt--`**(*x*, *y*)

`x>y`

**`--hash--`**(*x*)

`hash(x)`

Overrides: `object._hash--`

**`--iadd--`**(*x*, *y*)

`x+=y`

**`--imul--`**(*x*, *y*)

`x*=y`

**`--iter--`**(*x*)

`iter(x)`

**`--le--`**(*x*, *y*)

`x<=y`

`__len__(x)``len(x)``__lt__(x, y)``x < y``__mul__(x, n)``x * n``__ne__(x, y)``x != y``__new__(T, S, ...)`**Return Value**a new object with type `S`, a subtype of `T`Overrides: `object.__new__``__reduce__()`

helper for pickle

`__reduce_ex__()`

helper for pickle

`__repr__(x)``repr(x)`Overrides: `object.__repr__``__reversed__(L)`

return a reverse iterator over the list

`__rmul__(x, n)``n * x``__setattr__()``x.__setattr__('name', value) <==> x.name = value``__setitem__(x, i, y)``x[i] = y`

---

**`__setslice__`**(*x, i, j, y*)

---

`x[i:j]=y`

Use of negative indices is not supported.

---

**`__str__`**(*self*)

---

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

0700 0100 0000 0000 0000 0000 0c00 0000	.....
0200 0000 0400 0000 4461 7461	.....Data

Overrides: `object.__str__`


---

**`append`**(*L, object*)

---

append object to end

---

**`count`**(*L, value*)

---

return number of occurrences of value

**Return Value****integer**


---

**`extend`**(*L, iterable*)

---

extend list by appending elements from the iterable

---

**`index`**(...)

---

`L.index(value, [start, [stop]])` -> integer – return first index of value

---

**`insert`**(*L, index, object*)

---

insert object before index

---

**`pack`**(*self, val, fmt=DWORD, start=0*)

---

Encode `val` and write it to buffer.**Parameters****fmt:** See struct<sup>a</sup>**start:** Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>


---

**`phex`**(*cls, num*)

---

Return the hex representation of `num` without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

item

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; *cmp*(*x*, *y*) -> -1, 0, 1

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.31.2 Properties

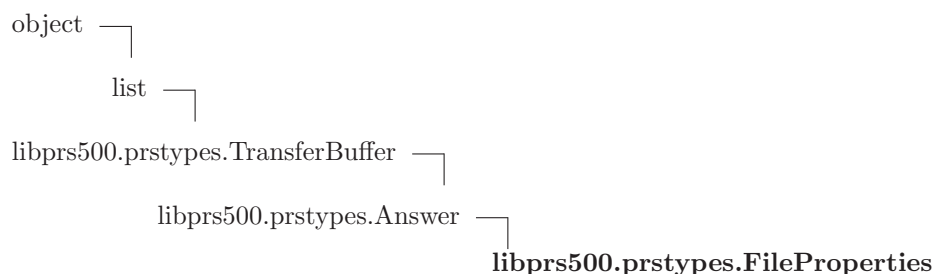
Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>

#### 4.31.3 Class Variables

Name	Description
number	Answer identifier <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 0
length	Length of data to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12



## 4.32 Class *FileProperties*



Defines the structure of packets that contain size, date and permissions information about files/directories.

### 4.32.1 Methods

**`__add__(self, tb)`**

Return a *TransferBuffer* rather than a list as the sum

Overrides: *list.\_\_add\_\_*

**`__contains__(x, y)`**

y in x

**`__delattr__(...)`**

x.\_\_delattr\_\_('name') <==> del x.name

**`__delitem__(x, y)`**

del x[y]

**`__delslice__(x, i, j)`**

del x[i:j]

Use of negative indices is not supported.

**`__eq__(x, y)`**

x==y

**`__ge__(x, y)`**

x>=y

**`__getattr__(...)`**

x.\_\_getattr\_\_('name') <==> x.name

Overrides: *object.\_\_getattr\_\_*

**\_\_getitem\_\_**(*x*, *y*)*x*[*y*]**\_\_getslice\_\_**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: list.\_\_getslice\_\_

**\_\_gt\_\_**(*x*, *y*)*x*>*y***\_\_hash\_\_**(*x*)hash(*x*)

Overrides: object.\_\_hash\_\_

**\_\_iadd\_\_**(*x*, *y*)*x*+=*y***\_\_imul\_\_**(*x*, *y*)*x*\*=*y***\_\_init\_\_**(*self*, *packet*)**Parameters***packet*: len(*packet*) ≥ 16

Overrides: libprs500.prstypes.TransferBuffer.\_\_init\_\_

**\_\_iter\_\_**(*x*)iter(*x*)**\_\_le\_\_**(*x*, *y*)*x*<=*y***\_\_len\_\_**(*x*)len(*x*)**\_\_lt\_\_**(*x*, *y*)*x*<*y*

**\_\_mul\_\_**(*x*, *n*)*x*\**n***\_\_ne\_\_**(*x*, *y*)*x*!=*y***\_\_new\_\_**(*T*, *S*, ...)**Return Value**a new object with type *S*, a subtype of *T*Overrides: *object.\_\_new\_\_***\_\_reduce\_\_**(...)

helper for pickle

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)*repr*(*x*)Overrides: *object.\_\_repr\_\_***\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x*, *n*)*n*\**x***\_\_setattr\_\_**(...)*x.\_\_setattr\_\_('name', value)* <==> *x.name = value***\_\_setitem\_\_**(*x*, *i*, *y*)*x*[*i*]=*y***\_\_setslice\_\_**(*x*, *i*, *j*, *y*)*x*[*i*:*j*]=*y*

Use of negative indices is not supported.

**\_\_str\_\_(self)**

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```

    0700 0100 0000 0000 0000 0000 0c00 0000      .....
    0200 0000 0400 0000 4461 7461                .....Data

```

Overrides: `object.__str__`**append(L, object)**

append object to end

**count(L, value)**

return number of occurrences of value

**Return Value****integer****extend(L, iterable)**

extend list by appending elements from the iterable

**index(...)**

L.index(value, [start, [stop]]) -&gt; integer – return first index of value

**insert(L, index, object)**

insert object before index

**pack(self, val, fmt=DWORD, start=0)**Encode `val` and write it to buffer.**Parameters****fmt:** See struct<sup>a</sup>**start:** Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>**phex(cls, num)**Return the hex representation of `num` without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`**pop(L, index=...)**

remove and return item at index (default last)

**Return Value****item**

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)reverse *\*IN PLACE\****sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)stable sort *\*IN PLACE\**; *cmp*(*x*, *y*) -> -1, 0, 1**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters****fmt**: See struct<sup>a</sup>**start**: Position in buffer from which to decode<sup>a</sup><http://docs.python.org/lib/module-struct.html>**4.32.2 Properties**

Name	Description
<code>is_dir</code>	<b>Value:</b> <property object at 0x8323cd4>
<code>is_readonly</code>	<b>Value:</b> <property object at 0x8323cfc>
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>object</code> ' objects>

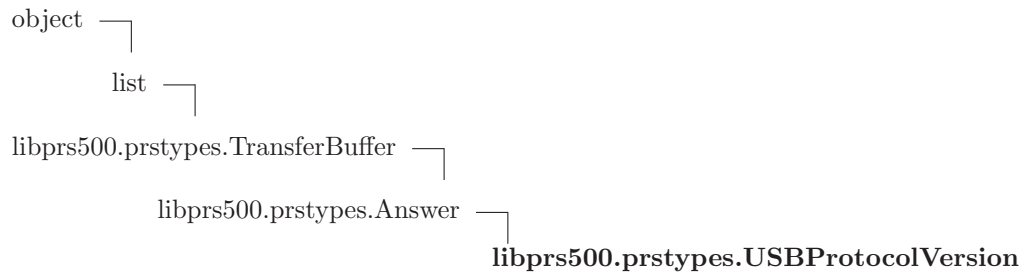
**4.32.3 Class Variables**

Name	Description
<code>file_size</code>	Size in bytes of the file <b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 16
<code>file_type</code>	1 == file, 2 == dir <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 24
<code>ctime</code>	Creation time <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 28
<code>wtime</code>	Modification time <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 32
<code>permissions</code>	0 = default permissions, 4 = read only <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 36
<code>length</code>	Length of data to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*

Name	Description
number	Answer identifier <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 0

### 4.33 Class USBProtocolVersion



#### 4.33.1 Methods

<b><code>__add__(self, tb)</code></b>
Return a TransferBuffer rather than a list as the sum Overrides: list.__add__
<b><code>__contains__(x, y)</code></b>
y in x
<b><code>__delattr__(...)</code></b>
x.__delattr__('name') <==> del x.name
<b><code>__delitem__(x, y)</code></b>
del x[y]
<b><code>__delslice__(x, i, j)</code></b>
del x[i:j] Use of negative indices is not supported.
<b><code>__eq__(x, y)</code></b>
x==y
<b><code>__ge__(x, y)</code></b>
x>=y

**\_\_getattr\_\_**(...)`x.__getattr__('name') <==> x.name`Overrides: `object.__getattr__`**\_\_getitem\_\_**(*x*, *y*)`x[y]`**\_\_getslice\_\_**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: `list.__getslice__`**\_\_gt\_\_**(*x*, *y*)`x>y`**\_\_hash\_\_**(*x*)`hash(x)`Overrides: `object.__hash__`**\_\_iadd\_\_**(*x*, *y*)`x+=y`**\_\_imul\_\_**(*x*, *y*)`x*=y`**\_\_init\_\_**(*self*, *packet*)**Parameters**`packet: len(packet) ≥ 16`Overrides: `libprs500.prstypes.TransferBuffer.__init__`**\_\_iter\_\_**(*x*)`iter(x)`**\_\_le\_\_**(*x*, *y*)`x<=y`**\_\_len\_\_**(*x*)`len(x)`

**\_\_lt\_\_**(*x*, *y*)*x*<*y***\_\_mul\_\_**(*x*, *n*)*x*\**n***\_\_ne\_\_**(*x*, *y*)*x*!=*y***\_\_new\_\_**(*T*, *S*, ...)**Return Value**a new object with type *S*, a subtype of *T*Overrides: *object.\_\_new\_\_***\_\_reduce\_\_**(...)

helper for pickle

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)*repr*(*x*)Overrides: *object.\_\_repr\_\_***\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x*, *n*)*n*\**x***\_\_setattr\_\_**(...)*x.\_\_setattr\_\_('name', value)* <==> *x.name = value***\_\_setitem\_\_**(*x*, *i*, *y*)*x*[*i*]=*y***\_\_setslice\_\_**(*x*, *i*, *j*, *y*)*x*[*i*:*j*]=*y*

Use of negative indices is not supported.



**\_\_str\_\_(self)**

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```
0700 0100 0000 0000 0000 0000 0c00 0000      .....
0200 0000 0400 0000 4461 7461      .....Data
```

Overrides: object.\_\_str\_\_

**append(L, object)**

append object to end

**count(L, value)**

return number of occurrences of value

**Return Value**

integer

**extend(L, iterable)**

extend list by appending elements from the iterable

**index(...)**

L.index(value, [start, [stop]]) -> integer – return first index of value

**insert(L, index, object)**

insert object before index

**pack(self, val, fmt=DWORD, start=0)**

Encode **val** and write it to buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer at which to write encoded data

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

**phex(cls, num)**

Return the hex representation of num without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

**TransferBuffer.\_\_str\_\_**

**pop(L, index=...)**

remove and return item at index (default last)

**Return Value**

item

---

**remove**(*L*, *value*)

---

 remove first occurrence of value

---

**reverse**(*L*)

---

 reverse *\*IN PLACE\**


---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

 stable sort *\*IN PLACE\**; *cmp*(*x*, *y*) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

 Return decoded data from buffer.

**Parameters**

     *fmt*: See struct<sup>a</sup>

     *start*: Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

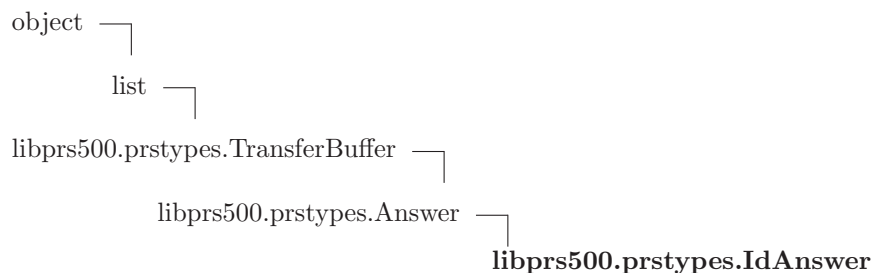
#### 4.33.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute <code>'__class__'</code> of <code>'object'</code> objects>

#### 4.33.3 Class Variables

Name	Description
<code>version</code>	<b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 16
<code>length</code>	Length of data to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12
<code>number</code>	Answer identifier <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 0

### 4.34 Class *IdAnswer*



Defines the structure of packets that contain identifiers for queries.

#### 4.34.1 Methods

**`--add--(self, tb)`**

Return a TransferBuffer rather than a list as the sum

Overrides: list.`--add--`

**`--contains--(x, y)`**

y in x

**`--delattr--(...)`**

x.`--delattr--`('name') <==> del x.name

**`--delitem--(x, y)`**

del x[y]

**`--delslice--(x, i, j)`**

del x[i:j]

Use of negative indices is not supported.

**`--eq--(x, y)`**

x==y

**`--ge--(x, y)`**

x>=y

**`--getattribute--(...)`**

x.`--getattribute--`('name') <==> x.name

Overrides: object.`--getattribute--`

**`--getitem--(x, y)`**

x[y]

**`--getslice--(self, start, end)`**

Return a TransferBuffer rather than a list as the slice

Overrides: list.`--getslice--`

**`--gt--(x, y)`**

x>y

`__hash__(x)``hash(x)`Overrides: `object.__hash__``__iadd__(x, y)``x+=y``__imul__(x, y)``x*=y``__init__(self, packet)`**Parameters**`packet: len(packet) ≥ 16`Overrides: `libprs500.prstypes.TransferBuffer.__init__``__iter__(x)``iter(x)``__le__(x, y)``x<=y``__len__(x)``len(x)``__lt__(x, y)``x<y``__mul__(x, n)``x*n``__ne__(x, y)``x!=y``__new__(T, S, ...)`**Return Value**a new object with type `S`, a subtype of `T`Overrides: `object.__new__`

**`__reduce__`**(...)

helper for pickle

**`__reduce_ex`**(...)

helper for pickle

**`__repr__`**(*x*)`repr(x)`Overrides: `object.__repr__`**`__reversed__`**(*L*)

return a reverse iterator over the list

**`__rmul__`**(*x*, *n*)`n*x`**`__setattr__`**(...)`x.__setattr__('name', value) <==> x.name = value`**`__setitem__`**(*x*, *i*, *y*)`x[i]=y`**`__setslice__`**(*x*, *i*, *j*, *y*)`x[i:j]=y`

Use of negative indices is not supported.

**`__str__`**(*self*)

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

0700 0100 0000 0000 0000 0000 0c00 0000	.....
0200 0000 0400 0000 4461 7461	.....Data

Overrides: `object.__str__`**`append`**(*L*, *object*)

append object to end

**count**(*L*, *value*)

return number of occurrences of value

**Return Value**  
integer**extend**(*L*, *iterable*)

extend list by appending elements from the iterable

**index**(...)*L.index*(value, [start, [stop]]) -> integer – return first index of value**insert**(*L*, *index*, *object*)

insert object before index

**pack**(*self*, *val*, *fmt*=`DWORD`, *start*=0)Encode *val* and write it to buffer.**Parameters****fmt**: See struct<sup>a</sup>**start**: Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>**phex**(*cls*, *num*)Return the hex representation of *num* without the 0x prefix.If the hex representation is only 1 digit it is padded to the left with a zero. Used in `TransferBuffer.__str__`.**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**  
item**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)stable sort \*IN PLACE\*; *cmp*(*x*, *y*) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

Return decoded data from buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>  
**start:** Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

---

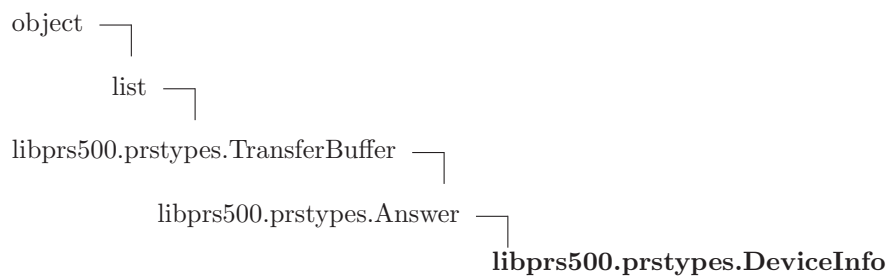
#### 4.34.2 Properties

Name	Description
id	<b>Value:</b> <property object at 0x8323d74>
__class__	<b>Value:</b> <attribute '__class__' of 'object' objects>

#### 4.34.3 Class Variables

Name	Description
length	Length of data to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12
number	Answer identifier <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 0

### 4.35 Class DeviceInfo



Defines the structure of the packet containing information about the device

#### 4.35.1 Methods

---

**\_\_add\_\_**(*self*, *tb*)

---

Return a TransferBuffer rather than a list as the sum

Overrides: list.\_\_add\_\_

---



---

**\_\_contains\_\_**(*x*, *y*)

---

y in x

---

**\_\_delattr\_\_**(...)

`x.__delattr__('name') <==> del x.name`

**\_\_delitem\_\_**(*x*, *y*)

`del x[y]`

**\_\_delslice\_\_**(*x*, *i*, *j*)

`del x[i:j]`

Use of negative indices is not supported.

**\_\_eq\_\_**(*x*, *y*)

`x==y`

**\_\_ge\_\_**(*x*, *y*)

`x>=y`

**\_\_getattr\_\_**(...)

`x.__getattr__('name') <==> x.name`

Overrides: `object.__getattr__`

**\_\_getitem\_\_**(*x*, *y*)

`x[y]`

**\_\_getslice\_\_**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: `list.__getslice__`

**\_\_gt\_\_**(*x*, *y*)

`x>y`

**\_\_hash\_\_**(*x*)

`hash(x)`

Overrides: `object.__hash__`

**\_\_iadd\_\_**(*x*, *y*)

`x+=y`

**\_\_imul\_\_**(*x*, *y*)

`x*=y`



**`__init__`**(*self*, *packet*)

**Parameters**

**packet**: `len(packet) ≥ 16`

Overrides: `libprs500.prstypes.TransferBuffer.__init__`

**`__iter__`**(*x*)

`iter(x)`

**`__le__`**(*x*, *y*)

`x ≤ y`

**`__len__`**(*x*)

`len(x)`

**`__lt__`**(*x*, *y*)

`x < y`

**`__mul__`**(*x*, *n*)

`x * n`

**`__ne__`**(*x*, *y*)

`x != y`

**`__new__`**(*T*, *S*, ...)

**Return Value**

a new object with type *S*, a subtype of *T*

Overrides: `object.__new__`

**`__reduce__`**(...)

helper for pickle

**`__reduce_ex__`**(...)

helper for pickle

**`__repr__`**(*x*)

`repr(x)`

Overrides: `object.__repr__`

**\_\_reversed\_\_**(*L*)

return a reverse iterator over the list

**\_\_rmul\_\_**(*x*, *n*)*n*\**x***\_\_setattr\_\_**(...)*x*.**\_\_setattr\_\_**('name', value) <==> *x*.name = value**\_\_setitem\_\_**(*x*, *i*, *y*)*x*[*i*]=*y***\_\_setslice\_\_**(*x*, *i*, *j*, *y*)*x*[*i*:*j*]=*y*

Use of negative indices is not supported.

**\_\_str\_\_**(*self*)

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs, ≤ 16 bytes to a line. An ASCII representation is included. For example:

0700 0100 0000 0000 0000 0000 0c00 0000	.....
0200 0000 0400 0000 4461 7461	.....Data

Overrides: *object.\_\_str\_\_***append**(*L*, *object*)

append object to end

**count**(*L*, *value*)

return number of occurrences of value

**Return Value****integer****extend**(*L*, *iterable*)

extend list by appending elements from the iterable

**index**(...)*L*.index(value, [start, [stop]]) -> integer – return first index of value**insert**(*L*, *index*, *object*)

insert object before index

---

**pack**(*self*, *val*, *fmt*=DWORD, *start*=0)

---

Encode *val* and write it to buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>  
**start:** Position in buffer at which to write encoded data

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

---



---

**phex**(*cls*, *num*)

---

Return the hex representation of *num* without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in `TransferBuffer.__str__`.

---



---

**pop**(*L*, *index*=...)

---

remove and return item at index (default last)

**Return Value**

item

---



---

**remove**(*L*, *value*)

---

remove first occurrence of value

---



---

**reverse**(*L*)

---

reverse \*IN PLACE\*

---



---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

stable sort \*IN PLACE\*; *cmp*(*x*, *y*) -> -1, 0, 1

---



---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

Return decoded data from buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>  
**start:** Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

---

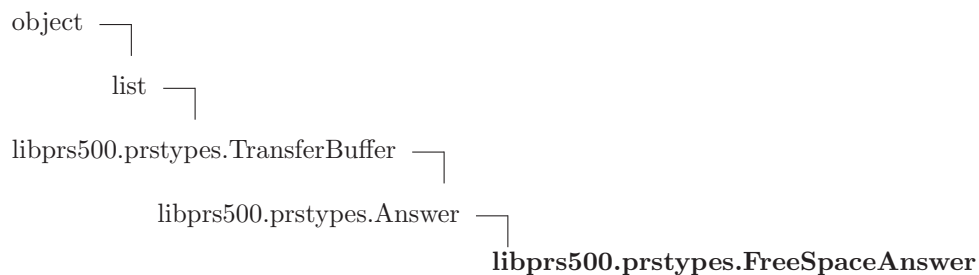
#### 4.35.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute <code>'__class__'</code> of <code>'object'</code> objects>

#### 4.35.3 Class Variables

Name	Description
device_name	<b>Value:</b> field(start= 16, fmt= "<32s")
device_version	<b>Value:</b> field(start= 48, fmt= "<32s")
software_version	<b>Value:</b> field(start= 80, fmt= "<24s")
mime_type	<b>Value:</b> field(start= 104, fmt= "<32s")
length	Length of data to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12
number	Answer identifier <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 0

## 4.36 Class *FreeSpaceAnswer*



### 4.36.1 Methods

**\_\_add\_\_**(*self*, *tb*)

Return a TransferBuffer rather than a list as the sum

Overrides: list.\_\_add\_\_

**\_\_contains\_\_**(*x*, *y*)

y in x

**\_\_delattr\_\_**(...)

x.\_\_delattr\_\_('name') <==> del x.name

**\_\_delitem\_\_**(*x*, *y*)

del x[y]

**\_\_delslice\_\_**(*x*, *i*, *j*)

del x[i:j]

Use of negative indices is not supported.

**\_\_eq\_\_**(*x*, *y*)*x*==*y***\_\_ge\_\_**(*x*, *y*)*x*>=*y***\_\_getattr\_\_**(...)*x*.\_\_getattr\_\_('name') <==> *x*.name

Overrides: object.\_\_getattr\_\_

**\_\_getitem\_\_**(*x*, *y*)*x*[*y*]**\_\_getslice\_\_**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: list.\_\_getslice\_\_

**\_\_gt\_\_**(*x*, *y*)*x*>*y***\_\_hash\_\_**(*x*)hash(*x*)

Overrides: object.\_\_hash\_\_

**\_\_iadd\_\_**(*x*, *y*)*x*+=*y***\_\_imul\_\_**(*x*, *y*)*x*\*=*y***\_\_init\_\_**(*self*, *packet*)**Parameters****packet**: len(packet) ≥ 16

Overrides: libprs500.prstypes.TransferBuffer.\_\_init\_\_

**\_\_iter\_\_**(*x*)iter(*x*)

`__le__(x, y)`

`x<=y`

`__len__(x)`

`len(x)`

`__lt__(x, y)`

`x<y`

`__mul__(x, n)`

`x*n`

`__ne__(x, y)`

`x!=y`

`__new__(T, S, ...)`

**Return Value**

a new object with type S, a subtype of T

Overrides: `object.__new__`

`__reduce__()`

helper for pickle

`__reduce_ex__()`

helper for pickle

`__repr__(x)`

`repr(x)`

Overrides: `object.__repr__`

`__reversed__(L)`

return a reverse iterator over the list

`__rmul__(x, n)`

`n*x`

`__setattr__()`

`x.__setattr__('name', value) <==> x.name = value`

**\_\_setitem\_\_**(*x*, *i*, *y*)*x*[*i*]=*y***\_\_setslice\_\_**(*x*, *i*, *j*, *y*)*x*[*i*:*j*]=*y*

Use of negative indices is not supported.

**\_\_str\_\_**(*self*)

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

0700 0100 0000 0000 0000 0000 0c00 0000	.....
0200 0000 0400 0000 4461 7461	.....Data

Overrides: object.\_\_str\_\_

**append**(*L*, *object*)

append object to end

**count**(*L*, *value*)

return number of occurrences of value

**Return Value****integer****extend**(*L*, *iterable*)

extend list by appending elements from the iterable

**index**(...)*L.index*(*value*, [*start*, [*stop*]]) -> integer – return first index of value**insert**(*L*, *index*, *object*)

insert object before index

**pack**(*self*, *val*, *fmt*=DWORD, *start*=0)Encode *val* and write it to buffer.**Parameters****fmt**: See struct<sup>a</sup>**start**: Position in buffer at which to write encoded data<sup>a</sup><http://docs.python.org/lib/module-struct.html>

**phex**(*cls*, *num*)

Return the hex representation of *num* without the 0x prefix.  
If the hex representation is only 1 digit it is padded to the left with a zero. Used in `TransferBuffer.__str__`.

**pop**(*L*, *index*=...)

remove and return item at index (default last)

**Return Value**

*item*

**remove**(*L*, *value*)

remove first occurrence of value

**reverse**(*L*)

reverse \*IN PLACE\*

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

stable sort \*IN PLACE\*; `cmp(x, y) -> -1, 0, 1`

**unpack**(*self*, *fmt*=DWORD, *start*=0)

Return decoded data from buffer.

**Parameters**

**fmt**: See struct<sup>a</sup>

**start**: Position in buffer from which to decode

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

#### 4.36.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>object</code> ' objects>

#### 4.36.3 Class Variables

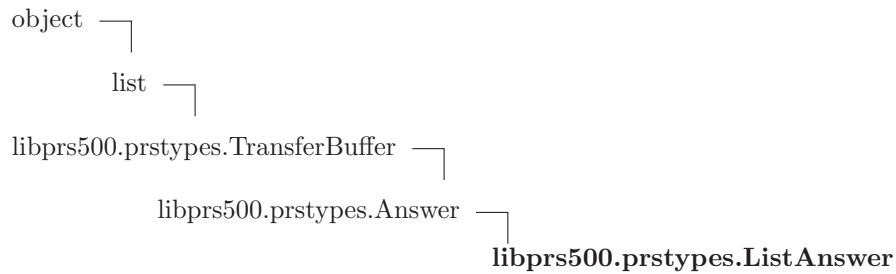
Name	Description
<code>total</code>	<b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 24
<code>free_space</code>	<b>Value:</b> An unsigned long long stored in 8 bytes starting at byte 32
<code>length</code>	Length of data to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12

*continued on next page*



Name	Description
number	Answer identifier <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 0

### 4.37 Class *ListAnswer*



Defines the structure of packets that contain items in a list.

#### 4.37.1 Methods

<b><code>__add__(self, tb)</code></b>
Return a TransferBuffer rather than a list as the sum Overrides: <code>list.__add__</code>
<b><code>__contains__(x, y)</code></b>
<code>y in x</code>
<b><code>__delattr__(...)</code></b>
<code>x.__delattr__('name') &lt;==&gt; del x.name</code>
<b><code>__delitem__(x, y)</code></b>
<code>del x[y]</code>
<b><code>__delslice__(x, i, j)</code></b>
<code>del x[i:j]</code> Use of negative indices is not supported.
<b><code>__eq__(x, y)</code></b>
<code>x==y</code>
<b><code>__ge__(x, y)</code></b>
<code>x&gt;=y</code>

**\_\_getattr\_\_**(...)`x.__getattr__('name') <==> x.name`Overrides: `object.__getattr__`**\_\_getitem\_\_**(*x*, *y*)`x[y]`**\_\_getslice\_\_**(*self*, *start*, *end*)

Return a TransferBuffer rather than a list as the slice

Overrides: `list.__getslice__`**\_\_gt\_\_**(*x*, *y*)`x>y`**\_\_hash\_\_**(*x*)`hash(x)`Overrides: `object.__hash__`**\_\_iadd\_\_**(*x*, *y*)`x+=y`**\_\_imul\_\_**(*x*, *y*)`x*=y`**\_\_init\_\_**(*self*, *packet*)**Parameters**`packet: len(packet) ≥ 16`Overrides: `libprs500.prstypes.TransferBuffer.__init__`**\_\_iter\_\_**(*x*)`iter(x)`**\_\_le\_\_**(*x*, *y*)`x<=y`**\_\_len\_\_**(*x*)`len(x)`

**`__lt__`**(*x*, *y*)

*x* < *y*

**`__mul__`**(*x*, *n*)

*x* \* *n*

**`__ne__`**(*x*, *y*)

*x* != *y*

**`__new__`**(*T*, *S*, ...)

**Return Value**

a new object with type *S*, a subtype of *T*

Overrides: `object.__new__`

**`__reduce__`**(...)

helper for pickle

**`__reduce_ex__`**(...)

helper for pickle

**`__repr__`**(*x*)

`repr(x)`

Overrides: `object.__repr__`

**`__reversed__`**(*L*)

return a reverse iterator over the list

**`__rmul__`**(*x*, *n*)

*n* \* *x*

**`__setattr__`**(...)

*x*.`__setattr__`('name', value) <==> *x*.name = value

**`__setitem__`**(*x*, *i*, *y*)

*x*[*i*] = *y*

**`__setslice__`**(*x*, *i*, *j*, *y*)

*x*[*i*:*j*] = *y*

Use of negative indices is not supported.

**\_\_str\_\_(self)**

Return a string representation of this buffer.

Packets are represented as hex strings, in 2-byte pairs,  $\leq 16$  bytes to a line. An ASCII representation is included. For example:

```
0700 0100 0000 0000 0000 0000 0c00 0000      .....
0200 0000 0400 0000 4461 7461      .....Data
```

Overrides: `object.__str__`

**append(L, object)**

append object to end

**count(L, value)**

return number of occurrences of value

**Return Value**

integer

**extend(L, iterable)**

extend list by appending elements from the iterable

**index(...)**

`L.index(value, [start, [stop]])` -> integer – return first index of value

**insert(L, index, object)**

insert object before index

**pack(self, val, fmt=DWORD, start=0)**

Encode `val` and write it to buffer.

**Parameters**

**fmt:** See struct<sup>a</sup>

**start:** Position in buffer at which to write encoded data

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

**phex(cls, num)**

Return the hex representation of `num` without the 0x prefix.

If the hex representation is only 1 digit it is padded to the left with a zero. Used in

`TransferBuffer.__str__`

**pop(L, index=...)**

remove and return item at index (default last)

**Return Value**

item

---

**remove**(*L*, *value*)

---

 remove first occurrence of value

---

**reverse**(*L*)

---

 reverse \*IN PLACE\*

---

**sort**(*L*, *cmp*=None, *key*=None, *reverse*=False)

---

 stable sort \*IN PLACE\*; cmp(*x*, *y*) -> -1, 0, 1

---

**unpack**(*self*, *fmt*=DWORD, *start*=0)

---

 Return decoded data from buffer.

**Parameters**
**fmt**: See struct<sup>a</sup>
**start**: Position in buffer from which to decode

---

<sup>a</sup><http://docs.python.org/lib/module-struct.html>

### 4.37.2 Properties

Name	Description
<code>is_dir</code>	<b>Value:</b> <property object at 0x8323e14>
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>

### 4.37.3 Class Variables

Name	Description
<code>name_length</code>	<b>Value:</b> An unsigned int stored in 4 bytes starting at byte 20
<code>name</code>	<b>Value:</b> A string starting at byte 24
<code>length</code>	Length of data to follow <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 12
<code>number</code>	Answer identifier <b>Value:</b> An unsigned int stored in 4 bytes starting at byte 0

## 5 Module `libprs500.terminfo`

### 5.1 Class `TerminalController`

A class that can be used to portably generate formatted output to a terminal.

‘`TerminalController`’ defines a set of instance variables whose values are initialized to the control sequence necessary to perform a given action. These can be simply included in normal output to the terminal:

```
>>> term = TerminalController()
>>> print 'This is '+term.GREEN+'green'+term.NORMAL
```

Alternatively, the ‘`render()`’ method can be used, which replaces ‘`${action}`’ with the string required to perform ‘`action`’:

```
>>> term = TerminalController()
>>> print term.render('This is ${GREEN}green${NORMAL}')
```

If the terminal doesn’t support a given action, then the value of the corresponding instance variable will be set to “”. As a result, the above code will still work on terminals that do not support color, except that their output will not be colored. Also, this means that you can test whether the terminal supports a given action by simply testing the truth value of the corresponding instance variable:

```
>>> term = TerminalController()
>>> if term.CLEAR_SCREEN:
...     print 'This terminal supports clearing the screen.'
```

Finally, if the width and height of the terminal are known, then they will be stored in the ‘`COLS`’ and ‘`LINES`’ attributes.

#### 5.1.1 Methods

<b><code>__init__(self, term_stream=sys.stdout)</code></b>
Create a ‘ <code>TerminalController</code> ’ and initialize its attributes with appropriate values for the current terminal. ‘ <code>term_stream</code> ’ is the stream that will be used for terminal output; if this stream is not a tty, then the terminal is assumed to be a dumb terminal (i.e., have no capabilities).
<b><code>render(self, template)</code></b>
Replace each \$-substitutions in the given template string with the corresponding terminal control string (if it’s defined) or “” (if it’s not).

#### 5.1.2 Class Variables

Name	Description
BOL	Move the cursor to the beginning of the line <b>Value:</b> “”
UP	Move the cursor up one line <b>Value:</b> “”
DOWN	Move the cursor down one line <b>Value:</b> “”

*continued on next page*

Name	Description
LEFT	Move the cursor left one char <b>Value:</b> ''
RIGHT	Move the cursor right one char <b>Value:</b> ''
CLEAR_SCREEN	Clear the screen and move to home position <b>Value:</b> ''
CLEAR_EOL	Clear to the end of the line. <b>Value:</b> ''
CLEAR_BOL	Clear to the beginning of the line. <b>Value:</b> ''
CLEAR_EOS	Clear to the end of the screen <b>Value:</b> ''
BOLD	Turn on bold mode <b>Value:</b> ''
BLINK	Turn on blink mode <b>Value:</b> ''
DIM	Turn on half-bright mode <b>Value:</b> ''
REVERSE	Turn on reverse-video mode <b>Value:</b> ''
NORMAL	Turn off all modes <b>Value:</b> ''
HIDE_CURSOR	Make the cursor invisible <b>Value:</b> ''
SHOW_CURSOR	Make the cursor visible <b>Value:</b> ''
COLS	Width of the terminal (None for unknown) <b>Value:</b> None
LINES	Height of the terminal (None for unknown) <b>Value:</b> None
WHITE	<b>Value:</b> ''
YELLOW	<b>Value:</b> ''
MAGENTA	<b>Value:</b> ''
RED	<b>Value:</b> ''
CYAN	<b>Value:</b> ''
GREEN	<b>Value:</b> ''
BLUE	<b>Value:</b> ''
BLACK	<b>Value:</b> ''
BG_CYAN	<b>Value:</b> ''
BG_GREEN	<b>Value:</b> ''
BG_BLUE	<b>Value:</b> ''
BG_BLACK	<b>Value:</b> ''
BG_WHITE	<b>Value:</b> ''
BG_YELLOW	<b>Value:</b> ''
BG_MAGENTA	<b>Value:</b> ''
BG_RED	<b>Value:</b> ''

## 5.2 Class `ProgressBar`

A 3-line progress bar, which looks like:

```

                                Header
20% [=====-----]
                                progress message

```

The progress bar is colored, if the terminal supports color output; and adjusts to the width of the terminal.

### 5.2.1 Methods

```
__init__(self, term, header)
```

```
update(self, percent, message)
```

```
clear(self)
```

### 5.2.2 Class Variables

Name	Description
BAR	<b>Value:</b> <code>'%3d%% \${GREEN} [\${BOLD}%s\${NORMAL}\${GREEN}] \${NORMAL}\n'</code>
HEADER	<b>Value:</b> <code>'\${BOLD}\${CYAN}%s\${NORMAL}\n\n'</code>

### 5.2.3 Instance Variables

Name	Description
cleared	true if we haven't drawn the bar yet.



## 6 Module *prs500*

Provides a command-line interface to the SONY Reader PRS-500.

For usage information run the script.

### 6.1 Functions

<b>human_readable</b> ( <i>size</i> )
---------------------------------------

Convert a size in bytes into a human readable form
--

<b>info</b> ( <i>dev</i> )
----------------------------

<b>ls</b> ( <i>dev, path, term, recurse=False, color=False, human_readable_size=False, ll=False, cols=0</i> )
---

<b>main</b> ()
----------------

### 6.2 Variables

Name	Description
MINIMUM_COL_WIDTH	Minimum width of columns in ls output <b>Value:</b> 12

### 6.3 Class *FileFormatter*

```

object └─
        prs500.FileFormatter
  
```

#### 6.3.1 Methods

<b>__init__</b> ( <i>self, file, term</i> )
<i>x.__init__</i> (...) initializes <i>x</i> ; see <i>x.__class__.__doc__</i> for signature
Overrides: <i>object.__init__</i> <i>exitit</i> (inherited documentation)

<b>__delattr__</b> (...)
<i>x.__delattr__</i> ('name') <==> del <i>x.name</i>

<b>__getattr__</b> (...)
<i>x.__getattr__</i> ('name') <==> <i>x.name</i>

<b>__hash__</b> ( <i>x</i> )
hash( <i>x</i> )

**`--new--`**(*T*, *S*, ...)

**Return Value**

a new object with type *S*, a subtype of *T*

**`--reduce--`**(...)

helper for pickle

**`--reduce_ex--`**(...)

helper for pickle

**`--repr--`**(*x*)

`repr(x)`

**`--setattr--`**(...)

`x.__setattr__('name', value) <==> x.name = value`

**`--str--`**(*x*)

`str(x)`

### 6.3.2 Properties

Name	Description
<code>mode_string</code>	<b>Value:</b> <property object at 0x843d324>
<code>name_in_color</code>	<b>Value:</b> <property object at 0x843d34c>
<code>human_readable_size</code>	<b>Value:</b> <property object at 0x843d374>
<code>modification_time</code>	<b>Value:</b> <property object at 0x843d39c>
<code>creation_time</code>	<b>Value:</b> <property object at 0x843d3c4>
<code>--class--</code>	<b>Value:</b> <attribute ' <code>--class--</code> ' of 'object' objects>

## 7 Module struct

Functions to convert between Python values and C structs.  
Python strings are used to hold the data representing the C struct  
and also as format strings to describe the layout of data in the C struct.

The optional first format char indicates byte order, size and alignment:

@: native order, size & alignment (default)  
=: native order, std. size & alignment  
<: little-endian, std. size & alignment  
>: big-endian, std. size & alignment  
!: same as >

The remaining chars indicate types of args and must match exactly;  
these can be preceded by a decimal repeat count:

x: pad byte (no data); c:char; b:signed byte; B:unsigned byte;  
h:short; H:unsigned short; i:int; I:unsigned int;  
l:long; L:unsigned long; f:float; d:double.

Special cases (preceding decimal count indicates length):

s:string (array of char); p: pascal string (with count byte).

Special case (only available in native format):

P:an integer type that is wide enough to hold a pointer.

Special case (not in native mode unless 'long long' in platform C):

q:long long; Q:unsigned long long

Whitespace between formats is ignored.

The variable struct.error is an exception raised on errors.

### 7.1 Functions

<b>calcsize(<i>fmt</i>)</b>
Return size of C struct described by format string <i>fmt</i> . See struct.__doc__ for more on format strings.

<b>pack(<i>fmt</i>, *<i>args</i>)</b>
Return string containing values <i>v1</i> , <i>v2</i> , ... packed according to <i>fmt</i> . See struct.__doc__ for more on format strings.

<b>pack_into(<i>fmt</i>, <i>buf</i>, <i>offset</i>, *<i>args</i>)</b>
Pack the values <i>v1</i> , <i>v2</i> , ... according to <i>fmt</i> , write the packed bytes into the writable buffer <i>buf</i> starting at <i>offset</i> . See struct.__doc__ for more on format strings.

<b>unpack(<i>fmt</i>, <i>s</i>)</b>
Unpack the string, containing packed C structure data, according to <i>fmt</i> . Requires len(string)==calcsize( <i>fmt</i> ). See struct.__doc__ for more on format strings.

**unpack\_from**(*fmt*, *buf*, *offset*=0)

Unpack the buffer, containing packed C structure data, according to *fmt* starting at *offset*. Requires `len(buffer[offset:]) >= calcsize(fmt)`. See `struct.__doc__` for more on format strings.

## 7.2 Variables

Name	Description
<code>__version__</code>	<b>Value:</b> <code>'0.1'</code>

## 8 Module *usb*

USB access module

### 8.1 Functions

**busses(...)**

Returns a tuple with the usb busses

### 8.2 Variables

Name	Description
CLASS_AUDIO	Value: 1
CLASS_COMM	Value: 2
CLASS_DATA	Value: 10
CLASS_HID	Value: 3
CLASS_HUB	Value: 9
CLASS_MASS_STORAGE	Value: 8
CLASS_PER_INTERFACE	Value: 0
CLASS_PRINTER	Value: 7
CLASS_VENDOR_SPEC	Value: 255
DT_CONFIG	Value: 2
DT_CONFIG_SIZE	Value: 9
DT_DEVICE	Value: 1
DT_DEVICE_SIZE	Value: 18
DT_ENDPOINT	Value: 5
DT_ENDPOINT_AUDIO_SIZE	Value: 9
DT_ENDPOINT_SIZE	Value: 7
DT_HID	Value: 33
DT_HUB	Value: 41
DT_HUB_NONVAR_SIZE	Value: 7
DT_INTERFACE	Value: 4
DT_INTERFACE_SIZE	Value: 9
DT_PHYSICAL	Value: 35
DT_REPORT	Value: 34
DT_STRING	Value: 3
ENDPOINT_ADDRESS_MASK	Value: 15
ENDPOINT_DIR_MASK	Value: 128
ENDPOINT_IN	Value: 128
ENDPOINT_OUT	Value: 0
ENDPOINT_TYPE_BULK	Value: 2
ENDPOINT_TYPE_CONTROL	Value: 0
ENDPOINT_TYPE_INTERRUPT	Value: 3
ENDPOINT_TYPE_ISOCHRONOUS	Value: 1

*continued on next page*

Name	Description
ENDPOINT_TYPE_MASK	Value: 3
ERROR_BEGIN	Value: 500000
MAXALTSETTING	Value: 128
MAXCONFIG	Value: 8
MAXENDPOINTS	Value: 32
MAXINTERFACES	Value: 32
RECIP_DEVICE	Value: 0
RECIP_ENDPOINT	Value: 2
RECIP_INTERFACE	Value: 1
RECIP_OTHER	Value: 3
REQ_CLEAR_FEATURE	Value: 1
REQ_GET_CONFIGURATIO- N	Value: 8
REQ_GET_DESCRIPTOR	Value: 6
REQ_GET_INTERFACE	Value: 10
REQ_GET_STATUS	Value: 0
REQ_SET_ADDRESS	Value: 5
REQ_SET_CONFIGURATIO- N	Value: 9
REQ_SET_DESCRIPTOR	Value: 7
REQ_SET_FEATURE	Value: 3
REQ_SET_INTERFACE	Value: 11
REQ_SYNCH_FRAME	Value: 12
TYPE_CLASS	Value: 32
TYPE_RESERVED	Value: 96
TYPE_STANDARD	Value: 0
TYPE_VENDOR	Value: 64

### 8.3 Class Bus

```

object └─
         usb.Bus

```

Bus object

#### 8.3.1 Methods

```

__delattr__(...)
x.__delattr__('name') <==> del x.name

```

```

__getattr__(...)
x.__getattr__('name') <==> x.name

```

```

__hash__(x)
hash(x)

```

<b><code>__init__</code></b> (...)
<code>x.__init__</code> (...) initializes <code>x</code> ; see <code>x.__class__.__doc__</code> for signature

<b><code>__new__</code></b> ( <i>T</i> , <i>S</i> , ...)
<b>Return Value</b> a new object with type <i>S</i> , a subtype of <i>T</i>
Overrides: <code>object.__new__</code>

<b><code>__reduce__</code></b> (...)
helper for pickle

<b><code>__reduce_ex__</code></b> (...)
helper for pickle

<b><code>__repr__</code></b> ( <i>x</i> )
<code>repr</code> ( <i>x</i> )

<b><code>__setattr__</code></b> (...)
<code>x.__setattr__</code> ('name', value) <==> <code>x.name</code> = value

<b><code>__str__</code></b> ( <i>x</i> )
<code>str</code> ( <i>x</i> )

### 8.3.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>

### 8.3.3 Class Variables

Name	Description
<code>devices</code>	<b>Value:</b> <member ' <code>devices</code> ' of ' <code>usb.Bus</code> ' objects>
<code>dirname</code>	<b>Value:</b> <member ' <code>dirname</code> ' of ' <code>usb.Bus</code> ' objects>
<code>location</code>	<b>Value:</b> <member ' <code>location</code> ' of ' <code>usb.Bus</code> ' objects>

## 8.4 Class Configuration

```

object └─
          usb.Configuration
Configuration descriptor object

```

### 8.4.1 Methods

<code>--delattr--(...)</code>
<code>x._delattr_('name') &lt;==&gt; del x.name</code>

<code>--getattr--(...)</code>
<code>x._getattr_('name') &lt;==&gt; x.name</code>

<code>--hash--(x)</code>
<code>hash(x)</code>

<code>--init--(...)</code>
<code>x._init_...</code> initializes x; see <code>x._class_...doc_</code> for signature

<code>--new--(T, S, ...)</code>
<b>Return Value</b> a new object with type S, a subtype of T
Overrides: <code>object._new_</code>

<code>--reduce--(...)</code>
helper for pickle

<code>--reduce_ex--(...)</code>
helper for pickle

<code>--repr--(x)</code>
<code>repr(x)</code>

<code>--setattr--(...)</code>
<code>x._setattr_('name', value) &lt;==&gt; x.name = value</code>

<code>--str--(x)</code>
<code>str(x)</code>

### 8.4.2 Properties

Name	Description
<code>_class_</code>	<b>Value:</b> <attribute <code>'_class_'</code> of <code>'object'</code> objects>



### 8.4.3 Class Variables

Name	Description
<code>iConfiguration</code>	<b>Value:</b> <member 'iConfiguration' of 'usb.Configuration' objects>
<code>interfaces</code>	<b>Value:</b> <member 'interfaces' of 'usb.Configuration' objects>
<code>maxPower</code>	<b>Value:</b> <member 'maxPower' of 'usb.Configuration' objects>
<code>remoteWakeup</code>	<b>Value:</b> <member 'remoteWakeup' of 'usb.Configuration' objects>
<code>selfPowered</code>	<b>Value:</b> <member 'selfPowered' of 'usb.Configuration' objects>
<code>totalLength</code>	<b>Value:</b> <member 'totalLength' of 'usb.Configuration' objects>
<code>value</code>	<b>Value:</b> <member 'value' of 'usb.Configuration' objects>

## 8.5 Class Device

```

object └─
         └─ usb.Device

```

Device descriptor object

### 8.5.1 Methods

<b><code>__delattr__(...)</code></b>
<code>x.__delattr__('name') &lt;==&gt; del x.name</code>
<b><code>__getattr__(...)</code></b>
<code>x.__getattr__('name') &lt;==&gt; x.name</code>
<b><code>__hash__(x)</code></b>
<code>hash(x)</code>
<b><code>__init__(...)</code></b>
<code>x.__init__(...)</code> initializes x; see <code>x.__class__.__doc__</code> for signature
<b><code>__new__(T, S, ...)</code></b>
<b>Return Value</b>
a new object with type S, a subtype of T
Overrides: <code>object.__new__</code>

**\_\_reduce\_\_**(...)

helper for pickle

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)repr(*x*)**\_\_setattr\_\_**(...)*x*.\_\_setattr\_\_('name', value) <==> *x*.name = value**\_\_str\_\_**(*x*)str(*x*)**open**()

Open the device for use. Returns a DeviceHandle object.

**Return Value**

DeviceHandle

**8.5.2 Properties**

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>object</code> ' objects>

**8.5.3 Class Variables**

Name	Description
<code>configurations</code>	<b>Value:</b> <member ' <code>configurations</code> ' of ' <code>usb.Device</code> ' objects>
<code>deviceClass</code>	<b>Value:</b> <member ' <code>deviceClass</code> ' of ' <code>usb.Device</code> ' objects>
<code>deviceProtocol</code>	<b>Value:</b> <member ' <code>deviceProtocol</code> ' of ' <code>usb.Device</code> ' objects>
<code>deviceSubClass</code>	<b>Value:</b> <member ' <code>deviceSubClass</code> ' of ' <code>usb.Device</code> ' objects>
<code>deviceVersion</code>	<b>Value:</b> <member ' <code>deviceVersion</code> ' of ' <code>usb.Device</code> ' objects>
<code>filename</code>	<b>Value:</b> <member ' <code>filename</code> ' of ' <code>usb.Device</code> ' objects>
<code>iManufacturer</code>	<b>Value:</b> <member ' <code>iManufacturer</code> ' of ' <code>usb.Device</code> ' objects>
<code>iProduct</code>	<b>Value:</b> <member ' <code>iProduct</code> ' of ' <code>usb.Device</code> ' objects>
<code>iSerialNumber</code>	<b>Value:</b> <member ' <code>iSerialNumber</code> ' of ' <code>usb.Device</code> ' objects>

*continued on next page*

Name	Description
idProduct	<b>Value:</b> <member 'idProduct' of 'usb.Device' objects>
idVendor	<b>Value:</b> <member 'idVendor' of 'usb.Device' objects>
maxPacketSize	<b>Value:</b> <member 'maxPacketSize' of 'usb.Device' objects->
usbVersion	<b>Value:</b> <member 'usbVersion' of 'usb.Device' objects>

## 8.6 Class DeviceHandle



DeviceHandle object

### 8.6.1 Methods

<b>__delattr__</b> (...)
x.__delattr__('name') <==> del x.name

<b>__getattr__</b> (...)
x.__getattr__('name') <==> x.name

<b>__hash__</b> (x)
hash(x)

<b>__init__</b> (...)
x.__init__() initializes x; see x.__class__.__doc__ for signature

<b>__new__</b> (T, S, ...)
<b>Return Value</b>
a new object with type S, a subtype of T
Overrides: object.__new__

<b>__reduce__</b> (...)
helper for pickle

<b>__reduce_ex__</b> (...)
helper for pickle

<b>__repr__</b> (x)
repr(x)

---

**\_\_setattr\_\_**(...)

---

 x.\_\_setattr\_\_('name', value) <==> x.name = value

---

**\_\_str\_\_**(x)

---

 str(x)

---

**bulkRead**(*endpoint*, *size*, *timeout*=100)

---

 Performs a bulk read request to the endpoint specified.

Arguments:

*endpoint*: endpoint number.

     *size*: number of bytes to read.

     *timeout*: operation timeout in milliseconds. (default: 100)

Returns a tuple with the data read.

**Return Value**

buffer

---

**bulkWrite**(*endpoint*, *buffer*, *timeout*=100)

---

 Performs a bulk write request to the endpoint specified.

Arguments:

*endpoint*: endpoint number.

     *buffer*: sequence data buffer to write.

This parameter can be any sequence type

*timeout*: operation timeout in milliseconds. (default: 100)

Returns the number of bytes written.

**Return Value**

bytesWritten

---

**claimInterface**(*interface*)

---

 Claims the interface with the Operating System.

Arguments:

*interface*: interface number or an Interface object.

**Return Value**

None

---

**clearHalt**(*endpoint*)

---

 Clears any halt status on the specified endpoint.

Arguments:

*endpoint*: endpoint number.

**Return Value**

None

---

**controlMsg**(*requestType*, *request*, *buffer*, *value*=0, *index*=0, *timeout*=100)

Performs a control request to the default control pipe on a device.

Arguments:

*requestType*: specifies the direction of data flow, the type of request, and the recipient.  
*request*: specifies the request.  
*buffer*: if the transfer is a write transfer, *buffer* is a sequence with the transfer data, otherwise, *buffer* is the number of bytes to read.  
*value*: specific information to pass to the device. (default: 0)  
*index*: specific information to pass to the device. (default: 0)  
*timeout*: operation timeout in miliseconds. (default: 100)

Returns the number of bytes written.

**Return Value**

*bytesWritten*|*buffer*

---

**getDescriptor**(...)

**getDescriptor**(*type*, *index*, *len*, *endpoint* = -1) -> *descriptor*

Retrieves a descriptor from the device identified by the *type* and *index* of the descriptor.

Arguments:

*type*: descriptor type.  
*index*: index of the descriptor.  
*len*: descriptor length.  
*endpoint*: endpoint number from descriptor is read. If it is omitted, the descriptor is read from default control pipe.

---

**getString**(...)

**getString**(*index*, *len*, *langid* = -1) -> *string*

Retrieves the string descriptor specified by *index* and *langid* from a device.

Arguments:

*index*: index of descriptor in the device.  
*len*: number of bytes of the string  
*langid*: Language ID. If it is omitted, will be used the first language.

**interruptRead**(*endpoint*, *size*, *timeout*=100)

Performs a interrupt read request to the endpoint specified.

Arguments:

*endpoint*: endpoint number.  
    *size*: number of bytes to read.  
    *timeout*: operation timeout in milliseconds. (default: 100)

Returns a tuple with the data read.

**Return Value**

*buffer*

**interruptWrite**(*endpoint*, *buffer*, *timeout*=100)

Performs a interrupt write request to the endpoint specified.

Arguments:

*endpoint*: endpoint number.  
    *buffer*: sequence data buffer to write.  
        This parameter can be any sequence type  
    *timeout*: operation timeout in milliseconds. (default: 100)

Returns the number of bytes written.

**Return Value**

*bytesWritten*

**releaseInterface**()

Releases an interface previously claimed with *claimInterface*.

**Return Value**

    None

**reset**()

Resets the specified device by sending a RESET down the port it is connected to.

**Return Value**

    None

**resetEndpoint**(*endpoint*)

Resets all state (like toggles) for the specified endpoint.

Arguments:

*endpoint*: endpoint number.

**Return Value**

    None

**setAltInterface**(*alternate*)

Sets the active alternate setting of the current interface.

Arguments:

*alternate*: an alternate setting number or an Interface object.

**Return Value**

    None

<b>setConfiguration</b> ( <i>configuration</i> )
Sets the active configuration of a device.
Arguments:
<i>configuration</i> : a configuration value or a Configuration object.
<b>Return Value</b>
None

### 8.6.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>

## 8.7 Class Endpoint



Endpoint descriptor object

### 8.7.1 Methods

<b>__delattr__</b> (...)
<code>x.__delattr__('name')</code> <==> <code>del x.name</code>
<b>__getattr__</b> (...)
<code>x.__getattr__('name')</code> <==> <code>x.name</code>
<b>__hash__</b> ( <i>x</i> )
<code>hash(x)</code>
<b>__init__</b> (...)
<code>x.__init__()</code> initializes <code>x</code> ; see <code>x.__class__.__doc__</code> for signature
<b>__new__</b> ( <i>T, S, ...</i> )
<b>Return Value</b>
a new object with type <code>S</code> , a subtype of <code>T</code>
Overrides: <code>object.__new__</code>
<b>__reduce__</b> (...)
helper for pickle

<code>__reduce_ex__(...)</code>
---------------------------------

helper for pickle
-------------------

<code>__repr__(x)</code>
--------------------------

<code>repr(x)</code>
----------------------

<code>__setattr__(...)</code>
-------------------------------

<code>x.__setattr__('name', value) &lt;==&gt; x.name = value</code>
---

<code>__str__(x)</code>
-------------------------

<code>str(x)</code>
---------------------

### 8.7.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute <code>'__class__'</code> of <code>'object'</code> objects>

### 8.7.3 Class Variables

Name	Description
<code>address</code>	<b>Value:</b> <member <code>'address'</code> of <code>'usb.Endpoint'</code> objects>
<code>interval</code>	<b>Value:</b> <member <code>'interval'</code> of <code>'usb.Endpoint'</code> objects>
<code>maxPacketSize</code>	<b>Value:</b> <member <code>'maxPacketSize'</code> of <code>'usb.Endpoint'</code> objects>
<code>type</code>	<b>Value:</b> <member <code>'type'</code> of <code>'usb.Endpoint'</code> objects>

## 8.8 Class Interface

```

object ┌
      │ usb.Interface

```

Interface descriptor object

### 8.8.1 Methods

<code>__delattr__(...)</code>
-------------------------------

<code>x.__delattr__('name') &lt;==&gt; del x.name</code>
--

<code>__getattr__(...)</code>
-------------------------------

<code>x.__getattr__('name') &lt;==&gt; x.name</code>
--



<b><code>__hash__</code></b> ( <i>x</i> )
<code>hash(x)</code>
<b><code>__init__</code></b> (...)
<code>x.__init__(...)</code> initializes <code>x</code> ; see <code>x.__class__.__doc__</code> for signature
<b><code>__new__</code></b> ( <i>T</i> , <i>S</i> , ...)
<b>Return Value</b> a new object with type <i>S</i> , a subtype of <i>T</i> Overrides: <code>object.__new__</code>
<b><code>__reduce__</code></b> (...)
helper for pickle
<b><code>__reduce_ex__</code></b> (...)
helper for pickle
<b><code>__repr__</code></b> ( <i>x</i> )
<code>repr(x)</code>
<b><code>__setattr__</code></b> (...)
<code>x.__setattr__('name', value) &lt;==&gt; x.name = value</code>
<b><code>__str__</code></b> ( <i>x</i> )
<code>str(x)</code>

### 8.8.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of 'object' objects>

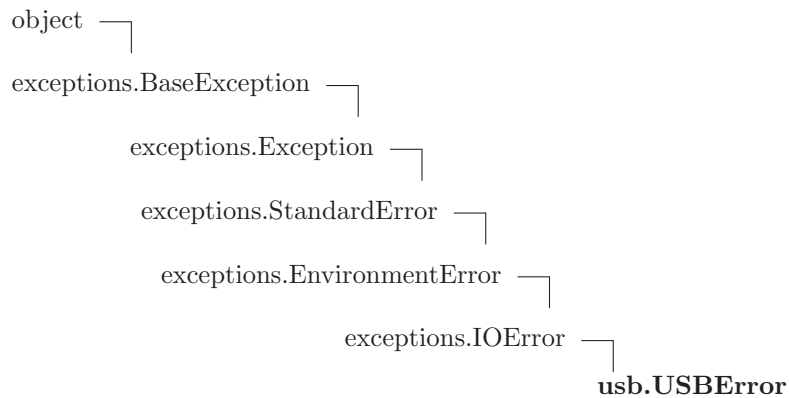
### 8.8.3 Class Variables

Name	Description
<code>alternateSetting</code>	<b>Value:</b> <member ' <code>alternateSetting</code> ' of ' <code>usb.Interface</code> ' objects>
<code>endpoints</code>	<b>Value:</b> <member ' <code>endpoints</code> ' of ' <code>usb.Interface</code> ' objects>
<code>interfaceClass</code>	<b>Value:</b> <member ' <code>interfaceClass</code> ' of ' <code>usb.Interface</code> ' objects>

*continued on next page*

Name	Description
<code>interfaceNumber</code>	<b>Value:</b> <member 'interfaceNumber' of 'usb.Interface' objects>
<code>interfaceProtocol</code>	<b>Value:</b> <member 'interfaceProtocol' of 'usb.Interface' - objects>
<code>interfaceSubClass</code>	<b>Value:</b> <member 'interfaceSubClass' of 'usb.Interface' - objects>

## 8.9 Class `USBError`



### 8.9.1 Methods

<b><code>__delattr__</code></b> (...)
<code>x.__delattr__('name')</code> <==> <code>del x.name</code>
Overrides: <code>object.__delattr__</code>

<b><code>__getattr__</code></b> (...)
<code>x.__getattr__('name')</code> <==> <code>x.name</code>
Overrides: <code>object.__getattr__</code>

<b><code>__getitem__</code></b> ( <i>x</i> , <i>y</i> )
<code>x[y]</code>

<b><code>__hash__</code></b> ( <i>x</i> )
<code>hash(x)</code>

<b><code>__init__</code></b> (...)
<code>x.__init__(...)</code> initializes <code>x</code> ; see <code>x.__class__.__doc__</code> for signature
Overrides: <code>exceptions.EnvironmentError.__init__</code>

**\_\_new\_\_**(*T, S, ...*)

**Return Value**

a new object with type *S*, a subtype of *T*

Overrides: `exceptions.EnvironmentError.__new__`

**\_\_reduce\_\_**(...)

helper for pickle

Overrides: `exceptions.BaseException.__reduce__`

**\_\_reduce\_ex\_\_**(...)

helper for pickle

**\_\_repr\_\_**(*x*)

`repr(x)`

Overrides: `object.__repr__`

**\_\_setattr\_\_**(...)

`x.__setattr__('name', value) <==> x.name = value`

Overrides: `object.__setattr__`

**\_\_setstate\_\_**(...)

**\_\_str\_\_**(*x*)

`str(x)`

Overrides: `exceptions.BaseException.__str__`

### 8.9.2 Properties

Name	Description
<code>__class__</code>	<b>Value:</b> <attribute ' <code>__class__</code> ' of ' <code>object</code> ' objects>
<code>args</code>	<b>Value:</b> <attribute ' <code>args</code> ' of ' <code>exceptions.BaseException</code> '-objects>

### 8.9.3 Class Variables

Name	Description
<code>errno</code>	<b>Value:</b> <member ' <code>errno</code> ' of ' <code>exceptions.EnvironmentError</code> ' objects>
<code>filename</code>	<b>Value:</b> <member ' <code>filename</code> ' of ' <code>exceptions.EnvironmentError</code> ' objects>
<code>message</code>	<b>Value:</b> <member ' <code>message</code> ' of ' <code>exceptions.EnvironmentError</code> ' objects>

*continued on next page*

Name	Description
strerror	<b>Value:</b> <member 'strerror' of 'exceptions.EnvironmentError' objects>

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