

USED LOADX (instead of loady, but result same)

uboot > loadx

Ready for binary (xmodem) download to 0x80800000 at 115200 bps...

CxyzModem - CRC mode, 38912(SOH)/0(STX)/0(CAN) packets, 2 retries

Total Size = 0x004c0000 = 4980736 Bytes

uboot > mmc write 0x80800000 0x208 0x2600

MMC write: dev # 1, block # 520, count 9728 ... 9728 blocks write in 526 msec: OK

Resetting CPU ...

resetting ...

U-Boot 2014.04 (Jun 04 2016 - 11:52:07)

CPU: Freescale i.MX6SL rev1.2 at 792 MHz

CPU: Temperature 34 C, calibration data: 0x5554d55f

Reset cause: POR

FRED::: EXTCSd177=0, 179=48FSL_SDHC: 0, FSL_SDHC: 1, FSL_SDHC: 2

Board: Heisenberg

Board Id: P0011807621201PA

S/N: G000K90xxxxxxxx

I2C: ready

DRAM: MR5=0x3,MR6=0x1 512 MiB

WARNING: Caches not enabled

MMC: FRED::: EXTCSd177=0, 179=48FSL_SDHC: 0, FSL_SDHC: 1, FSL_SDHC: 2

*** Warning - bad CRC, using default environment

In: serial

Out: serial

Err: serial

REBOOTMODE: 0

using default bootcmdNormal Boot

Hit any key to stop autoboot: 3 2 1 0

mmc1(part 0) is current device

FRED::: EXTCS177=0, 179=48BOOTing from mmc ...

mmc1(part 0) is current device

MMC read: dev # 1, block # 720, count 28672 ... 28672 blocks read in 320 msec: OK

MMC read: dev # 1, block # 520, count 256 ... 256 blocks read in 6 msec: OK

Booting kernel from Legacy Image at 80800000 ...

Image Name: Linux-3.10.53-lab126

Image Type: ARM Linux Kernel Image (uncompressed)

Data Size: 4786328 Bytes = 4.6 MiB

Load Address: 80008000

Entry Point: 80008000

Verifying Checksum ... OK

Flattened Device Tree blob at 83000000

Booting using the fdt blob at 0x83000000

Loading Kernel Image ... OK

Loading Device Tree to 9fcae000, end 9fcb85ef ... OK

Starting kernel ...

Uncompressing Linux... done, booting the kernel.

[0.000000] Booting Linux on physical CPU 0x0

[0.000000] Linux version 3.10.53-lab126 (jenkins-official@sjc10-jbuild09.sjc10.amazon.com)
(collect2: error: ld returned 1 exit status) #1 PREEMPT Sat Jun 4 12:16:28 PDT 2016

[0.000000] CPU: ARMv7 Processor [412fc09a] revision 10 (ARMv7), cr=10c53c7d

[0.000000] CPU: PIPT / VIPT nonaliasing data cache, VIPT aliasing instruction cache

[0.000000] Machine: Freescale i.MX6 SoloLite (Device Tree), model: Heisenberg P0

[0.000000] printk_reserve_buf:863 log_goal_location:0x8fff0000 log_worst_location:0x8fef0000
new_log_buf_len:32768

[0.000000] printk_reserve_buf:883 printk log placed at 8fff0000

[0.000000] cma: CMA: reserved 32 MiB at 9c000000

[0.000000] Memory policy: ECC disabled, Data cache writeback

[0.000000] CPU: All CPU(s) started in SVC mode.

[0.000000] Built 1 zonelists in Zone order, mobility grouping on. Total pages: 130048

[0.000000] Kernel command line: console=ttyMXC0,115200 root=/dev/mmcblk0p1 rootwait rw
uart_at_4M

[0.000000] Prink buffer will be relocated to physical address: 8fff0000 va: 00000000
new_log_buf_len:32768

[0.000000] Prink buffer will be relocated to physical address: 8fff0000 va: 8fff0000
new_log_buf_len:32768

[0.000000] log_buf_len: 32768

[0.000000] early log buf free: 30752(93%)

[0.000000] PID hash table entries: 2048 (order: 1, 8192 bytes)

[0.000000] Dentry cache hash table entries: 65536 (order: 6, 262144 bytes)

[0.000000] Inode-cache hash table entries: 32768 (order: 5, 131072 bytes)

[0.000000] Memory: 512MB = 512MB total

[0.000000] Memory: 477608k/477608k available, 46680k reserved, 0k highmem

[0.000000] Virtual kernel memory layout:
vector : 0xffff0000 - 0xffff1000 (4 kB)
fixmap : 0xfff00000 - 0xfffe0000 (896 kB)
vmalloc : 0xa0800000 - 0xff000000 (1512 MB)
lowmem : 0x80000000 - 0xa0000000 (512 MB)
pkmap : 0x7fe00000 - 0x80000000 (2 MB)
modules : 0x7f000000 - 0x7fe00000 (14 MB)
.text : 0x80008000 - 0x80717760 (7230 kB)
.init : 0x80718000 - 0x808811fc (1445 kB)
.data : 0x80882000 - 0x808c7e80 (280 kB)
.bss : 0x808c7e80 - 0x808f0988 (163 kB)

[0.000000] SLUB: HWalign=64, Order=0-3, MinObjects=0, CPUs=1, Nodes=1

[0.000000] Preemptible hierarchical RCU implementation.

[0.000000] NR_IRQS:16 nr_irqs:16 16

[0.000000] L310 cache controller enabled

[0.000000] I2x0: 16 ways, CACHE_ID 0x410000c8, AUX_CTRL 0x32030000, Cache size: 262144 B

[0.000000] sched_clock: 32 bits at 24MHz, resolution 41ns, wraps every 178956ms

[0.000000] Console: colour dummy device 80x30
[0.000471] Calibrating delay loop... 789.70 BogoMIPS (lpj=3948544)
[0.040132] pid_max: default: 32768 minimum: 301
[0.040273] Mount-cache hash table entries: 512
[0.044636] CPU: Testing write buffer coherency: ok
[0.044865] Setting up static identity map for 0x80524150 - 0x805241a8
[0.045649] devtmpfs: initialized
[0.047393] pinctrl core: initialized pinctrl subsystem
[0.047644] regulator-dummy: no parameters
[0.049780] NET: Registered protocol family 16
[0.057071] DMA: preallocated 256 KiB pool for atomic coherent allocations
[0.057666] LAB126 Board id - P0011807621201PA
[0.057747] Use WDOG1 as reset source
[0.063176] syscon 20c8000.anatop: regmap [mem 0x020c8000-0x020c8fff] registered
[0.063425] vdd1p1: 800 <--> 1375 mV at 1100 mV
[0.063712] vdd3p0: 2625 <--> 3400 mV at 3000 mV
[0.063999] vdd2p5: 2100 <--> 2850 mV at 2500 mV
[0.064357] cpu: 725 <--> 1450 mV at 1100 mV
[0.064633] vddpu: 725 <--> 1450 mV
[0.064990] vddsoc: 725 <--> 1450 mV at 1175 mV
[0.066856] syscon 20e0000.iomuxc-gpr: regmap [mem 0x020e0000-0x020e0037] registered
[0.068896] syscon 21bc000.ocotp-ctrl: regmap [mem 0x021bc000-0x021bffff] registered
[0.070766] amp_boost_enable:iMX:MAX98090:BOARD
[0.070797] hw-breakpoint: found 5 (+1 reserved) breakpoint and 1 watchpoint registers.
[0.070806] hw-breakpoint: maximum watchpoint size is 4 bytes.
[0.074145] imx6sl-pinctrl 20e0000.iomuxc: initialized IMX pinctrl driver
[0.079193] bio: create slab <bio-0> at 0
[0.080386] SCSI subsystem initialized
[0.080604] usbcore: registered new interface driver usbfs
[0.080662] usbcore: registered new interface driver hub
[0.080787] usbcore: registered new device driver usb

[0.082130] bd7181x 0-004b: IRQ 276 GPIO 116

[0.087135] buck1: 800 <--> 2000 mV at 1300 mV

[0.088320] buck2: 800 <--> 2000 mV at 1300 mV

[0.089136] buck3: 1200 <--> 2700 mV at 1800 mV

[0.089928] buck4: 1100 <--> 1850 mV at 1200 mV

[0.090756] buck5: 1800 <--> 3300 mV at 3200 mV

[0.091572] ldo1: 800 <--> 3300 mV at 3200 mV

[0.092357] ldo2: 800 <--> 3300 mV at 3200 mV

[0.093568] ldo3: 3000 mV

[0.094183] ldo4: 800 <--> 3300 mV at 3200 mV

[0.094757] ldo5: 800 <--> 3300 mV at 1800 mV

[0.095324] dvref: 3000 mV

[0.095457] lpsr: 1800 mV

[0.096030] wled: at 0 mV 0 <--> 25 mA at 0 mA

[0.096913] i2c i2c-0: IMX I2C adapter registered

[0.097535] i2c i2c-1: IMX I2C adapter registered

[0.097814] i2c i2c-2: IMX I2C adapter registered

[0.097929] pps_core: LinuxPPS API ver. 1 registered

[0.097939] pps_core: Software ver. 5.3.6 - Copyright 2005-2007 Rodolfo Giometti
<giometti@linux.it>

[0.097964] PTP clock support registered

[0.098312] MIPI CSI2 driver module loaded

[0.098387] Advanced Linux Sound Architecture Driver Initialized.

[0.099019] cfg80211: Calling CRDA to update world regulatory domain

[0.099053] cfg80211: World regulatory domain updated:

[0.099062] cfg80211: (start_freq - end_freq @ bandwidth), (max_antenna_gain, max_eirp)

[0.099073] cfg80211: (2402000 KHz - 2472000 KHz @ 40000 KHz), (300 mBi, 2000 mBm)

[0.099083] cfg80211: (2457000 KHz - 2482000 KHz @ 20000 KHz), (300 mBi, 2000 mBm)

[0.099092] cfg80211: (2474000 KHz - 2494000 KHz @ 20000 KHz), (300 mBi, 2000 mBm)

[0.099101] cfg80211: (5140000 KHz - 5360000 KHz @ 40000 KHz), (N/A, 3000 mBm)

[0.099109] cfg80211: (5460000 KHz - 5860000 KHz @ 40000 KHz), (N/A, 3000 mBm)

[0.100329] pureg-dummy: no parameters

[0.100981] Switching to clocksource mxc_timer1

[0.108832] NET: Registered protocol family 2

[0.109516] TCP established hash table entries: 4096 (order: 3, 32768 bytes)

[0.109597] TCP bind hash table entries: 4096 (order: 2, 16384 bytes)

[0.109648] TCP: Hash tables configured (established 4096 bind 4096)

[0.109699] TCP: reno registered

[0.109713] UDP hash table entries: 256 (order: 0, 4096 bytes)

[0.109731] UDP-Lite hash table entries: 256 (order: 0, 4096 bytes)

[0.109930] NET: Registered protocol family 1

[0.110184] RPC: Registered named UNIX socket transport module.

[0.110196] RPC: Registered udp transport module.

[0.110204] RPC: Registered tcp transport module.

[0.110211] RPC: Registered tcp NFSv4.1 backchannel transport module.

[0.116643] hw perfevents: enabled with ARMv7 Cortex-A9 PMU driver, 7 counters available

[0.117276] ldo2p5-dummy: no parameters

[0.118020] Bus freq driver module loaded

[0.118469] futex hash table entries: 256 (order: -1, 3072 bytes)

[0.123942] VFS: Disk quotas dquot_6.5.2

[0.124093] Dquot-cache hash table entries: 1024 (order 0, 4096 bytes)

[0.126402] NFS: Registering the id_resolver key type

[0.126443] Key type id_resolver registered

[0.126453] Key type id_legacy registered

[0.126495] jffs2: version 2.2. (NAND) c 2001-2006 Red Hat, Inc.

[0.127003] msgmni has been set to 996

[0.129919] io scheduler noop registered

[0.129934] io scheduler deadline registered

[0.129976] io scheduler cfq registered (default)

[0.136779] Serial: IMX driver

[0.137095] 2020000.serial: ttyMXC0 at MMIO 0x2020000 (irq = 58) is a IMX

[0.840649] console [ttyMXC0] enabled

[0.844795] 2034000.serial: ttyxc2 at MMIO 0x2034000 (irq = 60) is a IMX

[0.851997] imx6sl-pinctrl 20e0000.iomuxc: pin MX6SL_PAD_SD1_DAT4 already requested by 20e0000.iomuxc; cannot claim for 2038000.serial

[0.864133] imx6sl-pinctrl 20e0000.iomuxc: pin-145 (2038000.serial) status -22

[0.871386] imx6sl-pinctrl 20e0000.iomuxc: could not request pin 145 on device 20e0000.iomuxc

[0.879923] imx-uart 2038000.serial: Error applying setting, reverse things back

[0.887411] 2038000.serial: ttyxc3 at MMIO 0x2038000 (irq = 61) is a IMX

[0.894732] serial: Freescale lpuart driver

[0.899823] Registering Heisenberg hall sensor platform device

[0.906901] imx sema4 driver is registered.

[0.916079] brd: module loaded

[0.921847] loop: module loaded

bt_pwrctrl_init called..

[0.927376]

bt_reset pin obtained is 51

[0.931616]

bt_dev_wake pin obtained is 138

[0.935987]

bt_host_wake pin obtained is 93

[0.940363] IRQ# for BT HOST WAKE: 253

bt_pwrctrl_probe probe successful

[0.949327] ehci_hcd: USB 2.0 'Enhanced' Host Controller (EHCI) Driver

[0.956157] usbcore: registered new interface driver usb-storage

[0.963176] imx6sl-pinctrl 20e0000.iomuxc: pin MX6SL_PAD_EPDC_PWRCOM already requested by 20e0000.iomuxc; cannot claim for 2184000.usb

[0.975320] imx6sl-pinctrl 20e0000.iomuxc: pin-56 (2184000.usb) status -22

[0.982227] imx6sl-pinctrl 20e0000.iomuxc: could not request pin 56 on device 20e0000.iomuxc

[0.990677] imx_usb 2184000.usb: Error applying setting, reverse things back

[1.001964] usb_gadget_state_work: gadget state: not attached

[1.451037] imx_usb 2184000.usb: vbus is error

[1.455500] imx_usb 2184000.usb: Error occurs during detection: -22

[1.462281] mousedev: PS/2 mouse device common for all mice

[1.473828] bd7181x-rtc bd7181x-rtc: rtc core: registered bd7181x-rtc as rtc0
[1.481530] snvs_rtc 20cc034.snvs-rtc-lp: rtc core: registered 20cc034.snvs-rtc-lp as rtc1
[1.489920] i2c /dev entries driver
[1.494025] bd7181x-power bd7181x-power: battery_cycle = 0
[1.500144] Status Register 1 == 0x0
[1.504178] Status Register 2 == 0xe
[1.508182] Status Register 3 == 0x7f
[1.512281] Status Register 4 == 0x5
[1.516277] Status Register 5 == 0xf0
[1.520359] Status Register 6 == 0xa0
[1.524460] Status Register 7 == 0x10
[1.528541] Status Register 8 == 0x2
[1.532553] Status Register 9 == 0x6
[1.536548] Status Register 10 == 0x0
[1.540629] Status Register 11 == 0x0
[1.544730] Status Register 12 == 0x0
[1.551282] errflags = 6
[1.553824] bit1 is set
[RESET REASONS]: WATCHDOG_RST: Watchdog Triggered Reset

[1.561441] bit2 is set
[RESET REASONS]: PWRON_LONGPRESS: Power Button Long Press Battery Cut

[1.579075] hw_ocv1:3937000, hw_ocv2:3936000
[1.583548] coulomb_cnt:46137344, designed_cap:982,full_cap:982
[1.589474] vsys_min:0
[1.591858] Verify SOC with vcell off margin(500): curr_vcell_based_soc:0 soc_to_verify:1000
[1.613736] imx2-wdt 20bc000.wdog: IMX2+ Watchdog Timer enabled. timeout=60s (nowayout=0)
imx2_wdt.base=0xa0920000 base pa:0x20bc000 imx2_wdt.clk=0x9a00c100
[1.628328] cpuidle: using governor ladder
[1.632505] cpuidle: using governor menu

[1.636600] sdhci: Secure Digital Host Controller Interface driver
[1.642823] sdhci: Copyright(c) Pierre Ossman
[1.647201] sdhci-pltfm: SDHCI platform and OF driver helper
[1.657800] mmc1: no vqmmc regulator found
[1.661946] mmc1: Not allowing HS200
[1.665538] mmc1: no vmmc regulator found
[1.711037] mmc1: SDHCI controller on 2190000.usdhc [2190000.usdhc] using DMA
[1.721672] mmc0: no vqmmc regulator found
[1.725783] mmc0: Not allowing HS200
[1.729369] mmc0: no vmmc regulator found
[1.771031] mmc0: SDHCI controller on 2194000.usdhc [2194000.usdhc] using DMA
[1.780312] usbcore: registered new interface driver usbhid
[1.785942] usbhid: USB HID core driver
[1.790810] NET: Registered protocol family 26
[1.797525] TCP: cubic registered
[1.800856] IPv6: Loaded, but administratively disabled, reboot required to enable
[1.808483] sit: IPv6 over IPv4 tunneling driver
[1.813617] NET: Registered protocol family 17
[1.820182] 8021q: 802.1Q VLAN Support v1.8
[1.828506] Key type dns_resolver registered
VFP support v0.3: implementor 41 architecture 3 part 30 variant 9 rev 4
[1.865341] ldo5: disabling
[1.874113] ldo4: disabling
[1.877326] regulator-dummy: disabling
[1.881340] imx mcc test is registered.
[1.886008] bd7181x-rtc bd7181x-rtc: setting system clock to 2000-01-01 03:38:39 UTC
(946697919)
[1.898390] ALSA device list:
[1.903484] No soundcards found.
[1.908101] Freeing unused kernel memory: 1444K (80718000 - 80881000)

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[ 2.128095] mmc0: BKOPS_EN bit is not set
[ 2.153081] mmc0: new high speed DDR MMC card at address 0001
[ 2.159140] mmcblk0: mmc0:0001 P1J94H 3.64 GiB
[ 2.163817] mmcblk0boot0: mmc0:0001 P1J94H partition 1 1.00 MiB
[ 2.169820] mmcblk0boot1: mmc0:0001 P1J94H partition 2 1.00 MiB
[ 2.175845] mmcblk0rpmc: mmc0:0001 P1J94H partition 3 1.00 MiB
[ 2.182493] mmcblk0: p1 p2 p3 p4
[ 2.188654] mmcblk0boot1: unknown partition table
[ 2.195645] mmcblk0boot0: unknown partition table
[ 2.219241] FAT-fs (loop1): bogus number of reserved sectors
[ 2.225009] FAT-fs (loop1): Can't find a valid FAT filesystem
[ 2.230845] ERROR:/dev/loop1:error 22(22)
[ 2.236374] INFO:child exited with status 00000000
[ 2.241381] ERROR:find_file: Failed to open /mnt/wfm/waveform_to_use: error 2
ERROR:wfm_count=0
[ 2.250219] mxc_epdc_eink: module license 'proprietary' taints kernel.
[ 2.256979] Disabling lock debugging due to kernel taint
[ 2.262728] INFO:Loaded module /lib/modules/mxc_epdc_eink.ko (11172 bytes)
Panel VCOM string: 2810
[ 2.273951] imx_epdc_fb 20f4000.epdc: vcom_steps 131
[ 2.279106] imx_epdc_fb 20f4000.epdc: Memory override detected TotalMem:512M X:800 Y:600
FBMem:6M
[ 2.295046] imx_epdc_fb 20f4000.epdc: EPDC version = 2.1.0
[ 2.366535] wv_file->wdh.luts & 0xC =4
[ 3.999475] INFO:Loaded module /lib/modules/mxc_epdc_fb.ko builtin_firmware=y (79696 bytes)

[ 4.188794] INFO:eink initialized... (486400 bytes)
Press [ENTER] for recovery menu... 0/[ 4.212213] INFO:!!! Checking MBR /dev/mmcblk0 !!!!
[ 4.226355] INFO:partition 2, start sector is 987136
[ 4.231629] INFO:partition 3, start sector is 1118208
[ 4.236854] INFO:partition 4, start sector is 1249280
```

[4.242088] INFO:maximizing partition 6402048 sectors
[4.247280] INFO:*** Partition table verified for /dev/mmcblk0 ***
[4.257723] INFO:Loaded module /lib/modules/libcomposite.ko (45708 bytes)
[4.265990] g_mass_storage gadget: Mass Storage Function, version: 2009/09/11
[4.273237] g_mass_storage gadget: Number of LUNs=1
[4.278122] lun0: LUN: removable file: (no medium)
[4.283052] fsg_bind:3212
[4.285688] g_mass_storage gadget: Internal Storage, version: 2009/09/11
[4.292413] g_mass_storage gadget: userspace failed to provide iSerialNumber
[4.299465] g_mass_storage gadget: g_mass_storage ready
[4.304809] INFO:Loaded module /lib/modules/g_mass_storage.ko removable=1 idVendor=0x1949
idProduct=0x0004 recovery_mode=1 (41112 bytes)
Charge: 56% [#####:.....]

Menu

====

- 3. Load MMC0 over USB storage
 - 4. Erase MMC0
 - I. Initialize Partition Table (fdisk) and format FAT
 - O. Format and overwrite FAT partition
 - E. Export FAT partition
 - U. Update using update*.bin file on FAT partition
 - M. Update using update*.bin file on FAT partition of second MMC port
 - D. dmesg / kernel printk ring buffer.
 - Q. quit
- Choose: 10 / 9 - 8 \ 7 | 6 / 5 - 4 \ 3 | 2 / 0 1 -

Menu timeout

[15.095341] fsg_unbind:3175
[15.099406]
send_offline_uevent:407 fsg_0x0 unsafe 1 recovery_mode:1

```
[ 15.106361] usb_gadget_state_work: gadget state: not attached
[ 15.115253] INFO:storage_shutdown: done with g_mass_storage
[ 15.120968] INFO:storage_shutdown: done with libcomposite
[ 15.299952] INFO:Couldn't find localized image at /mnt/wfm/images/splash.raw.gz
[ 15.896896] ERROR:/mnt/wfm:error 22(22)
[ 15.900787] ERROR:Trouble unmounting waveform partition
BOOTING DEFAULT.
IP-Config: no devices to configure
kinit: Unable to mount root fs on device dev(179,1)
kinit: init not found!
[ 15.941476] Kernel panic - not syncing: Attempted to kill init! exitcode=0x00000200
```

AND IN RECOVERY MENU:

Menu

====

- 3. Load MMC0 over USB storage
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- D. dmesg / kernel printk ring buffer.
- Q. quit

Choose: 10 / 9 - 8 \e 7 | 6 /E 5 -

```
[ 25.035397] INFO:storage_export(/dev/mmcblk0p4): exporting
[ 25.217024] INFO:Couldn't find localized image at /mnt/wfm/images/repair.raw.gz
Charge: 100% [#####]
```

[FAT32]

- 1. done
- R. reboot

Choose: /-\|/\-[152.492036] usb_gadget_state_work: gadget state: powered
|/\-[155.168520] usb_gadget_state_work: gadget state: not attached
\|/\|/\-[164.811034] imx_usb 2184000.usb: VBUS is coming from a dedicated power supply.
[164.818353] imx_usb 2184000.usb: Error occurs during detection: -6
[164.824649] usb_gadget_state_work: gadget state: powered
[164.830150] usb_gadget_state_work: gadget state: not attached
|/\|/\|/\-still alive...
Charge: 99% [#####]

TRIED FASTBOOT:

bist > fastboot
fastboot is in init.....USB Mini b cable Connected!
fastboot initialized
USB_SUSPEND
USB_SUSPEND
USB_SUSPEND
USB_SUSPEND
USB_RESET
USB_PORT_CHANGE 0x4
USB_SUSPEND