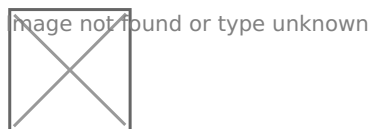


3.3 IMX6ULL

S3C2440				lcd.bin		Flash		lcd.bin	
IMX6ULL boot ROM				DDR	DDR	DDR	boot ROM		DDR bo
IMX6ULL		Nor Flash		boot ROM			Nor Flash		boot RC
“Device Configuration Data” (DCD)				DCD	bin	boot ROM			
ROM	DDR		bin	DDR					
EMMC		SD	TF	DCD					



(1). Image Vector Table(IVT)

IVT IVT boot ROM

IVT

image not found or type unknown



4

a. header

3 tag length version length IVT 32

b. entry

1

c. dcd

DCD

d. boot data

boot data

e. self

IVT

(2). Boot data

IVT

image not found or type unknown



a. start

IVT

IVT TF 1024 IVT 0x87000000 start=0x87000000-1024

start

boot ROM

IVT

b. length

0 (IVT)

c. plugin

1 "plugin"

boot ROM

CDROM

"plugin"

0

Boot data

boot ROM

(3). DCD

DCD

DCD

write data check data nop unlock

write data

check data

DCD

image not found or type unknown



DCD Header

TAG 0xD2

DCD

DCD

"CMD"

"CMD"

"write data command"

"write data command"

image not found or type unknown



TAG 0xCC

"write data command" Length

Parameter

" "

"Address Value/Mask"

Mask

Parameter

image not found or type unknown



Parameter b[2:0]

(2 byte)

(4 byte)

b[4] b[3] (write value) (clear bitmask) (set bitmask)

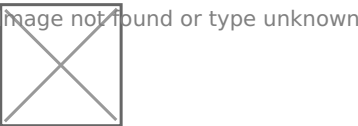
IMX6UL

(4). User code and data

<https://github.com/NXPmicro/mfgtools>

3.3.1

boot ROM



① entry

② start

boot ROM “initial load region” “initial load region” IVT Boot data DCD boot ROM DCD

“initial load region” “initial load region” “initial load region” k
- load_size

“initial load region” 0 IVT ()

③ IVT self

IVT ivt_offset

self = start + ivt_offset = entry - load_size + ivt_offset

④ Boot data boot_data

IVT 32 IVT Boot data IVT boot_data Boot data

$\text{boot_data} = \text{self} + 32 = \text{entry} - \text{load_size} + \text{ivt_offset} + 32$

⑤ DCD dcd

Boot data 12 Boot data DCD IVT dcd DCD

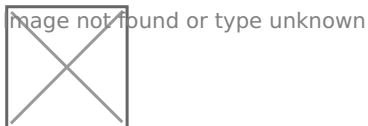
$\text{dcd} = \text{boot_data} + 12 = \text{entry} - \text{load_size} + \text{ivt_offset} + 44$

⑥ DCD

DCD DDR DDR

```
./tools/mkimage -n ./tools/imximage.cfg.cfgtmp -T imximage -e 0x80100000 -d led.bin led.img
```

imximage.cfg.cfgtmp



imximage.cfg.cfgtmp

mkimage u-boot imximage.cfg.cfgtmp DCD DCD

a. DDR

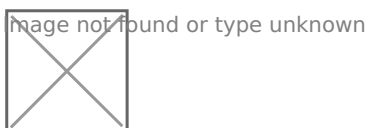
b. DDR

c. DDR Multi-mode DDR controller (MMDC)

⑦

⑧ 7

001_led led.img TF Hex Editor Neo led.img doble word



Revision #1

Created 3 March 2022 02:57:47 by

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