

# **ARM926EJ-S S3C2450**

## **Mango24R2 Wince 6.0 Fusing**

<http://www.mangoboard.com/>

<http://cafe.naver.com/embeddedcrazyboys>

**Crazy Embedded Laboratory**

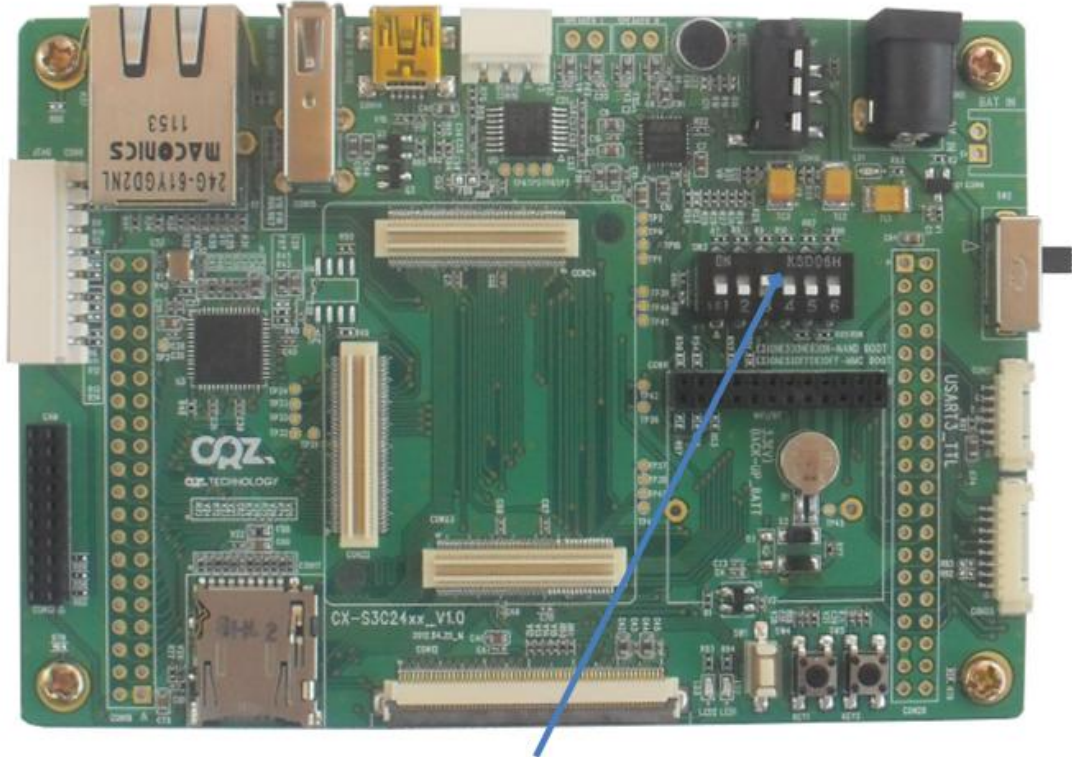
# Document History

Revision	Date	Change note

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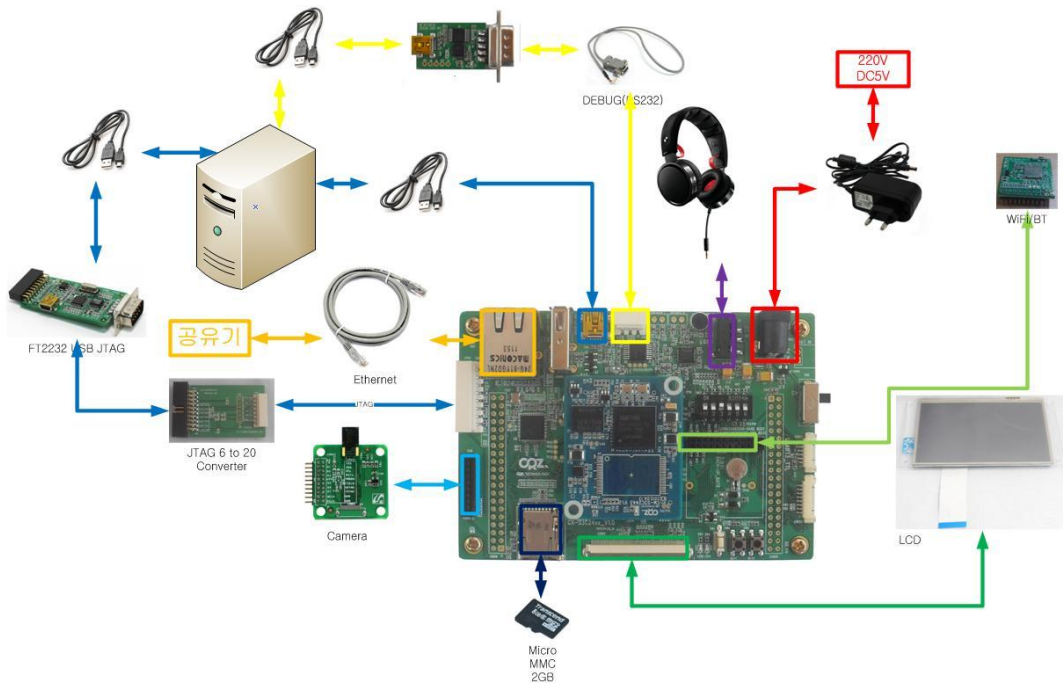
# 1. How to Wince 6.0 Fusing

NAND Mode Booting을 설정을 합니다.



**[3] ON [5] ON [6] ON -> NAND BOOT**  
**[3] ON [5] OFF [6] OFF -> MMC BOOT**  
**[1] ON [4] ON -> NOR Flash Boot**

전체 연결도는 아래와 같습니다. (FT2232 usb jtag , usb cable, 3핀 시리얼, 어댑터 연결)



### 1.1. Openocd JTAG 으로 Eboot 실행

부팅 모드 (SD Boot) : 3번 ON

드라이버 설치 ( FT2232 usb jtag )

Driver Download : [http://www.ftdichip.com/Drivers/CDM/CDM20814\\_WHQL\\_Certified.zip](http://www.ftdichip.com/Drivers/CDM/CDM20814_WHQL_Certified.zip)

소스는 Mango24R2\_OpenOCD\_S3C2450\_120723\_eboot 압축을 풉니다.

```
>openocd.exe -f m24.cfg
```

실행 결과

```
Open On-Chip Debugger 1.0 (2009-04-30-01:48) svn:1547
```

```
BUGS? Read http://svn.berlios.de/svnroot/repos/openocd/trunk/BUGS
```

```
$URL: svn://svn.berlios.de/openocd/trunk/src/openocd.c $
```

```
Info : JTAG tap: s3c2450.cpu tap/device found: 0x07926f0f (Manufacturer: 0x787,
```

```
Part: 0x7926, Version: 0x0)
```

```
Info : JTAG Tap/device matched
```

```
Warn : no telnet port specified, using default port 4444
```

```
Warn : no gdb port specified, using default port 3333
```

Openocd.exe 파일이 있는 디렉토리에서 또 다른 도스 창을 실행 합니다.

```
$ telnet localhost 4444
```

Connect 되었다는 메시지를 확인 후

```
$ script m24.tcl
```

터미널 창에서 아래와 같이 메시지가 출력됩니다.

```
CLKOUT0:MPLL in, CLKOUT1:RTC clock.
```

```
+-----+  
| S3C2450X USB Downloader ver R0.0 20080221  +  
+-----+
```

```
mDDR
```

```
MPLL=800.00MHz, ARMCLK=400.00MHz (2:4:8), HCLK=133.33MHz, PCLK=66.67MHz
```

```
USB: IN_ENDPOINT:1 OUT_ENDPOINT:3
```

```
FORMAT: <ADDR(DATA):4> + <SIZE(n+10):4> + <DATA:n> + <CS:2>
```

```
NOTE: 1. Power off/on or press the reset button for 1 sec  
       in order to get a valid USB device address.
```

```
       2. For additional menu, Press any key.
```

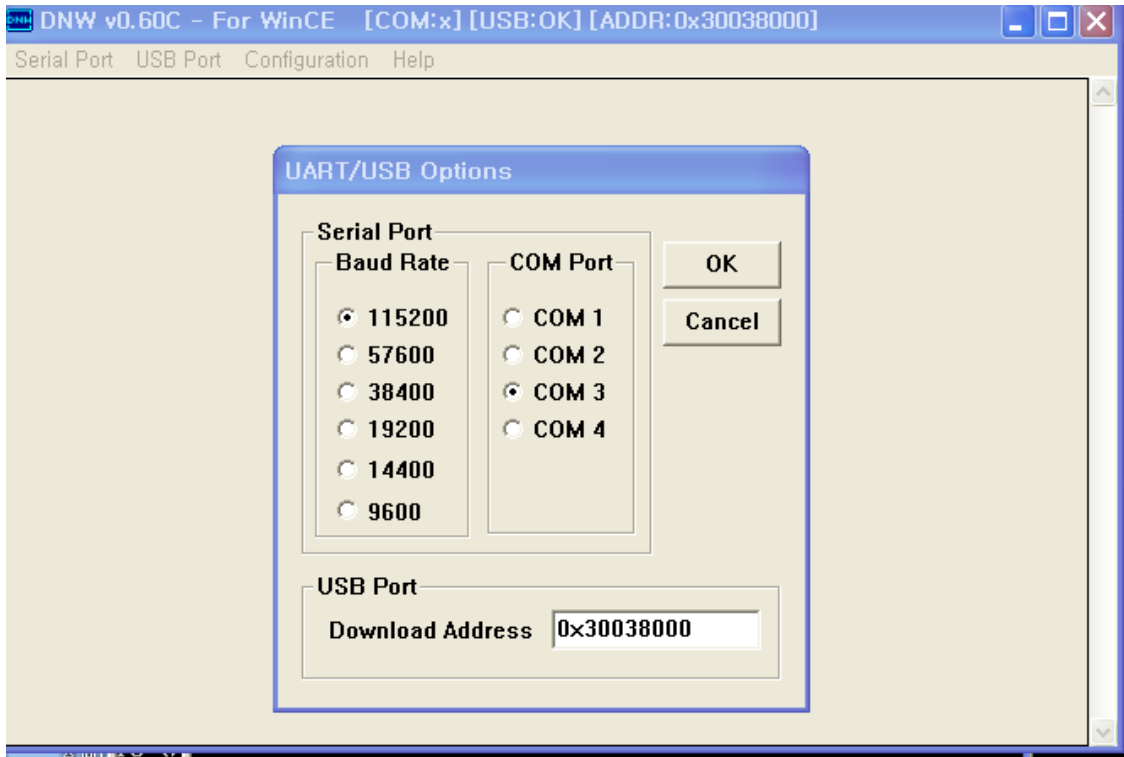
```
reset status register = 00000001
```

```
Power-on Reset
```

```
USB host is not connected yet.
```

```
USB host is connected. Waiting a download.
```

DNW Tool을 실행을 하고, Download address 주소를 0x30038000으로 설정



USB Port -> Transmmit  
에서 Eboot.nb0 선택  
실행이 되면

Ethernet Boot Loader Configuration:

- 0) IP address: 0.0.0.0
- 1) Subnet mask: 255.255.255.0
- 2) DHCP: Disabled
- 3) Boot delay: 5 seconds
- 4) Reset to factory default configuration
- 5) Startup image: DOWNLOAD NEW
- 6) Program disk image into SmartMedia card: Disabled
- 7) Program CS8900 MAC address (00:00:00:00:00:00)
- 8) KITL Configuration: ENABLED
- 9) Format Boot Media for BinFS
  - A) Erase All Blocks
  - B) Mark Bad Block at Reserved Block

C) Clean Boot Option: FALSE  
D) Download image now  
E) Erase Reserved Block  
F) Low-level format the Smart Media card  
L) LAUNCH existing Boot Media image  
R) Read Configuration  
U) DOWNLOAD image now(USB)  
W) Write Configuration Right Now

"5,6 번 입력"

5) Startup image: LAUNCH EXISTING  
6) Program disk image into SmartMedia card: Enabled  
변경합니다.

"A) Erase All Blocks" 선택합니다. (처음 한번)

## Stepldr.nb0 이미지 퓨징

"u" 입력합니다.

"DNW tool"에서 USB Port -> UBOOT-> UBOOT" 에서  
"STEPLDR.nb0"  
선택

## Eboot.bin 이미지 퓨징

"Openocd JTAG 으로 Eboot 실행" 실행 과정을 반복

"u" 입력 후

"DNW tool"에서 USB Port -> UBOOT-> UBOOT" 에서  
EBoot.bin 선택

Enter your selection: u  
System ready!  
Preparing for download...  
INFO: \*\*\* Device Name 'SMDK24500' \*\*\*



Please send the Image through USB.

BL\_IMAGE\_TYPE\_UNKNOWN

Download BIN file information:

-----  
[0]: Base Address=0x0 Length=0x1000  
-----

dwStartAddr:0x00000000, dwLength:0x4096

OEMVerifyMemory: Stepldr image

ImageStart = 0x0, ImageLength = 0x1000, LaunchAddr = 0x0

Completed file(s):

-----  
[0]: Address=0x0 Length=0x1000 Name="" Target=RAM

dwImageLength = 0x1000

dwNumBlocks = 0x1

dwBlock(0x0) X g\_FlashInfo.wSectorsPerBlock(0x40) = 0x0

INFO: Step loader image stored to Smart Media. Please Reboot. Halting...

## NK.bin 이미지 퓨징

Openocd 창은 Dos 창은 모두 닫습니다. (FT2232 usb JTAG 은 연결을 해제)

NAND Mode로 부팅

“F, 9” 선택

“DNW tool”에서 USB Port -> UBOOT-> UBOOT” 에서

**“NK.bin” 선택**

Enter your selection: u

System ready!

Preparing for download...

INFO: \*\*\* Device Name 'SMDK24500' \*\*\*

Please send the Image through USB.

BL\_IMAGE\_TYPE\_BIN

Download BIN file information:

-----  
[0]: Base Address=0x80200000 Length=0x2483C78  
-----

dwStartAddr:0x80200000, dwLength:0x38288504

OEMVerifyMemory: RAM image

rom\_offset=0x0.

ImageStart = 0x80200000, ImageLength = 0x2483C78, LaunchAddr = 0x80205F40

Completed file(s):

-----  
[0]: Address=0x80200000 Length=0x2483C78 Name="" Target=RAM

ROMHDR at Address 80200044h

+WriteOSImageToBootMedia: g\_dwTocEntry =1, ImageStart: 0x80200000, ImageLength: 0x2483c78,

LaunchAddr:0x80205f40

[226] Module Name: nk.exe

INFO: OEMLaunch: Found chain extension: " @ 0x80200000

Writing single region/multi-region update, dwBINFSpartLength: 38288504

#### SECC1 Uncorrectable error(0x61c0) ####

#### NAND\_LB\_ReadSectorInfo ECC\_Correct\_Spare1 Error

#### SECC1 Uncorrectable error(0x1afc0) ####

#### NAND\_LB\_ReadSectorInfo ECC\_Correct\_Spare1 Error

완전히 부팅할 때까지 기다립니다.