

Topkick1281P2 User Guide

Version 1.1

1. Firmware Images Layout

The u-boot image is about 512KB and located in the NAND or SPI flash between 0 and 0x0100000, be careful to erase it when update new u-boot. And layout of firmware images on NAND flash is as follows

Note: Please DO NOT erase the UBoot space if it is not necessary

Image	Offset	Size
U-boot	0x0	0x100000
U-boot environment	0x180000	0x20000
Kernel	0x200000	0x600000
File system (Initrd)	0x800000	0x1000000

Table 1-1: Firmware NAND Flash Layout

2. Network Service

The eth0 static IP is 192.168.58.100. The wireless AP's static IP is 192.168.1.1. The AP's SSID is Topkick1281P2-AP-* and it has no encryption.

The default network services on the board are Samba, FTP and Telnet.

Username and password for Samba and Telnet's are root:root.

Username and password for Ftp is admin:admin.

3. How to Boot From SATA Disk

The default u-boot bootcmd is "bootcmd=nand read.e 0x1200000 0x200000 0x600000;nand read.e 0x2000000 0x800000 0x1000000;bootm 0x1200000 0x2000000" and the bootargs valuable is "bootargs=console=ttyS0,115200"

If you want to port the root filesystem to sata disk partition please type the command below in U-boot environment, which can be modified on your demand.

```
Marvell>> setenv bootargs 'console=ttyS0,115200 root=/dev/sda1 rw'
```

```
Marvell>> setenv bootcmd 'nand read.e 0x1200000 0x200000 0x600000;bootm 0x1200000'
```

```
Marvell>> save
```

```
Marvell>> boot
```

4. How to Boot From USB Disk

The default u-boot bootcmd is "bootcmd=nand read.e 0x1200000 0x200000 0x600000;nand read.e 0x2000000 0x800000 0x1000000;bootm 0x1200000 0x2000000" and the bootargs valuable is "bootargs=console=ttyS0,115200"

If you want to port the root filesystem to USB disk partition please type the command below in U-boot environment, which can be modified on your demand.

```
Marvell>> setenv bootargs 'console=ttyS0,115200 root=/dev/sda1 rw rootdelay=10'
```

//Note: root=/dev/sda1 can be changed to root=/dev/sdb1 or others according to USB partition name

```
Marvell>> setenv bootcmd 'nand read.e 0x1200000 0x200000 0x600000;bootm 0x1200000'
```

```
Marvell>> save
```

```
Marvell>> boot
```

5. Programmable Function

5.1 Switch Function

The switch action is detected by the daemon "pwrctl -d". The switch has two directions. You can switch button to position A to shut down the system by script /usr/sbin/switch_off (>2S), switch to position B to excute /usr/sbin/switch_optional which can be customized. See Figure 1-1



Figure 1-1: Topkick1281P2 Switch Indication

5.2 Led Control Function

The board has five LEDs and their control commands and functions are as Table 1-1:

LED Function	Led Color	Light On	Light Off	Blink
System LED	Blue	pwrctl -o 502	pwrctl -o 503	pwrctl -o 504
	Red	pwrctl -o 602	pwrctl -o 603	pwrctl -o 604
Wireless LED	Yellow	pwrctl -o 302	pwrctl -o 303	pwrctl -o 304
	Green	pwrctl -o 702	pwrctl -o 703	pwrctl -o 704
SATA LED	Blue	None	None	None

Table 2-1: LED Control Function Table

5.3 WOL Function

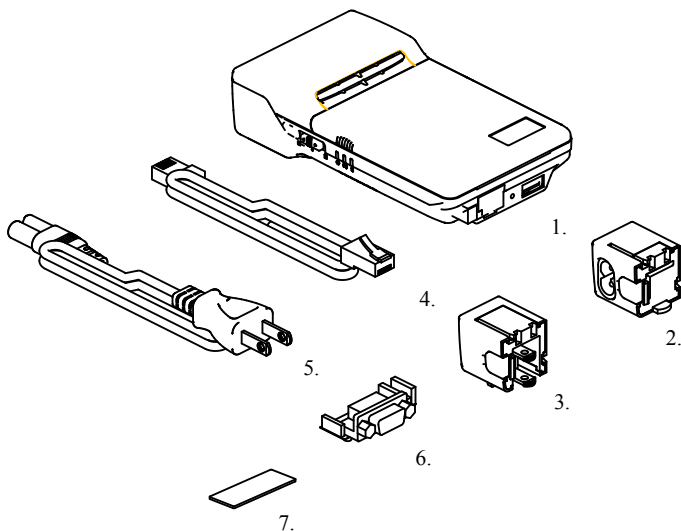
The topkick1281p2 system support WOL(Wake On Lan) function. The magic packet can be sent by magic packet tool such as *magpac.exe* to turn on the system if the system is powered and connect to network.

5.4 WiFi Function

The WiFi controller IC is sd8786 which work in AP mode. The file sd8786_uapsta.bin should be copied to /lib/firmware/mrvl/ directory. The operations to load the driver module, configure and bring up the wifi interface are as follows.

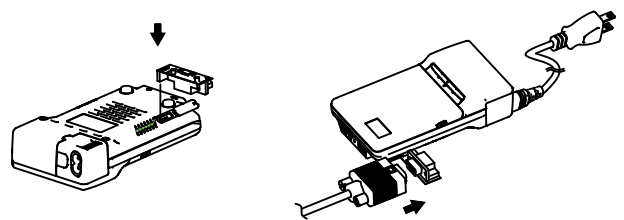
```
# insmod /lib/modules/mlan.ko
# insmod /lib/modules/sd8xxx.ko
# uaputl.exe sys_cfg_ssid $APNAME
# uaputl.exe bss_start
# ifconfig uap0 192.168.1.1
"uaputl.exe --help" for more details.
```

Content list



- 1. : Main Unit1pcs
- 2. : AC Socket.....1pcs
- 3. : AC Plug.....1pcs
- 4. : Ethernet Cable.....1pcs
- 5. : AC Power Cord.....1pcs
- 6. : UART Board.....1pcs
- 7. : HDD Sponge.....1pcs

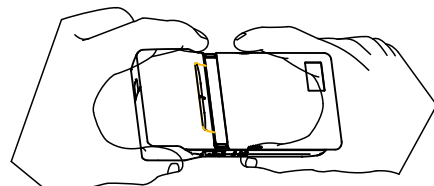
1.Set up remote console for SW development



1. Connect UART board to Main Unit

2. Connect RS-232 cable to UART board

2.How to remove HDD cover



3.HDD sponge option

User can stick the accessory of HDD sponge to fix HDD more

