

Specifically, SKW92A\_E16, described here:

[http://www.skylabmodule.com/wp-content/uploads/SkyLab\\_SKW92A\\_V1.04\\_datasheet.pdf](http://www.skylabmodule.com/wp-content/uploads/SkyLab_SKW92A_V1.04_datasheet.pdf)

#### Specification:

- MediaTek MT7628N/N (580 Mhz)
- 64 MB of RAM
- 16 MB of FLASH
- 2T2R 2.4 GHz
- 5x 10/100 Mbps Ethernet
- 2x u.FL
- Power by micro-USB connector at USB1 on EVB
- UART via micro-USB connector at USB3 on EVB (57600 8n1)
- 5x Ethernet LEDs
- 1x WLAN LEDs
- 1x WPS LED connected by jumper wire from I2S\_CK on J20 to WPS\_LED pin hole next to daughter board on EVB
- WPS/Reset button (S2 on EVB)
- RESET button (S1 on EVB) is *\*not\** connected to RST hole next to daughter board

#### Flash instruction:

>From Skylab firmware:

1. Associate with SKYLAP\_AP
2. In a browser, load: <http://10.10.10.254/>
3. Username/password: admin/admin
4. In web admin interface: Administration / Upload Firmware, browse to sysupgrade image, apply, flash will fail with a message: Not a valid firmware. \*\*\* Warning: "/var/tmpFW" has corrupted data!
5. Telnet to 10.10.10.254, drops you into a root shell with no credentials
6. # cd /var
7. # mtd\_write -r write tmpFW mtd4 Unlocking mtd4 ... Writing from tmpFW to mtd4 ... [e]
8. When flash has completed, you will have booted into your firmware.

>From U-boot via TFTP and initramfs:

1. Place openwrt-ramips-mt76x8-skw92a-initramfs-kernel.bin on a TFTP server
2. Connect to serial console at USB3 on EVB
3. Connect ethernet between port 1 (not WAN) and your TFTP server (e.g. 192.168.11.20)
4. Start terminal software (e.g. screen /dev/ttyUSB0 57600) on PC
5. Apply power to EVB

6. Interrupt u-boot with keypress of "1"
7. At u-boot prompts: Input device IP (10.10.10.123) ==:192.168.11.21  
Input server IP (10.10.10.3) ==:192.168.11.20 Input Linux Kernel  
filename (root\_uImage) ==:openwrt-ramips-mt76x8-skw92a-initramfs-  
kernel.bin
8. Move ethernet to port 0 (WAN) on EVB
9. At new OpenWrt console shell, fetch squashfs-sysupgrade image and  
flash with sysupgrade.

>From U-boot via TFTP direct flash:

1. Place openwrt-ramips-mt76x8-skw92a-squashfs-sysupgrade.bin on a  
TFTP server
2. Connect to serial console at USB3 on EVB (57600 8N1)
3. Connect ethernet between port 1 (not WAN) an your TFTP server  
(e.g. 192.168.11.20)
4. Start terminal software (e.g. screen /dev/ttyUSB0 57600) on PC
5. Apply power to EVB
6. Interrupt u-boot with keypress of "2"
7. At u-boot prompts: Warning!! Erase Linux in Flash then burn new  
one. Are you sure?(Y/N) Y Input device IP (10.10.10.123)  
==:192.168.11.21 Input server IP (10.10.10.3) ==:192.168.11.20  
Input Linux Kernel filename (root\_uImage) ==:openwrt-ramips-  
mt76x8-skw92a-squashfs-sysupgrade.bin
8. When transfer is complete or as OpenWrt begins booting, move  
ethernet to port 0 (WAN).