

Overview

STM32F107 RBT6 + QCA8337 AL3C based router with serial and swd headers

- <https://www.st.com/en/microcontrollers/stm32f107rb.html>

Mainstream Connectivity line, ARM Cortex-M3 MCU with 128 Kbytes Flash, 72 MHz CPU, Ethernet MAC, CAN and USB 2.0 OTG

Firmware

According to https://wiki.mikrotik.com/wiki/SwOS/RB250_RB260#Summary

new RB260GS (CSS106-5G-1S), new RB260GSP(CSS106-1G-4P-1S) supports SwOS v2.0 and newer.

Example working (as of 2018-07-06) url download links which work for CSS106-5G-1S:

<https://download2.mikrotik.com/swos2/css106/swos-css1061g4p1s-2.0.bin>
<https://download2.mikrotik.com/swos2/css106/swos-css1061g4p1s-2.2.bin>

```
dpavlin@lib10:/lib10/arh-hw/backup/Mikrotik-RB260GS-CSS106-5G-1S/rb260gsp$ md5sum *
bf110ca7e1cd0558cefeacd9e0b62c19  swos-css1061g4p1s-2.0.bin
a491bbf2732937839e6a8222a876cc7a  swos-css1061g4p1s-2.2.bin
f098106dfc8ac5ad0fedf0181c68d8de  swos-css1061g4p1s-2.3.bin
f4f74f697039a83baa99d37017251805  swos-css1061g4p1s-2.4.bin
90d2ec8571dd9d9aeab1bfbaaa99dea2  swos-css1061g4p1s-2.5.bin
a7f046fc8a12b5eb85f9a4bb0dd275  swos-css1061g4p1s-2.6.bin
a1e7adc6ad63e5560156b0f2b6f272ce  swos-css1061g4p1s-2.7.bin
```

<https://mikrotik.com/download> (SwitchOS) latest version:

<https://download.mikrotik.com/swos2/css106/swos-css106-2.13.bin>

version

from web interface

```
Firmware
Current Installed Version      2.7 (built at Fri Dec 15 2017 09:42:48 GMT+0100 (CET))
Latest Available Version      2.7 (built at Fri Dec 15 2017 09:42:48 GMT+0100 (CET))
```

reset

- hold reset while poweron

SwOS v2.x - RB260GS(CSS106-5G-1S) and RB260GSP(CSS106-1G-4P-1S)

The new RB260GS(CSS106-5G-1S) and RB260GSP(CSS106-1G-4P-1S) has built-in backup SwOS firmware which can be loaded in case standard firmware breaks or upgrade fails:

Holding Reset button for few seconds while device is booting resets configuration and loads backup firmware SwOS 2.0p.

After loading backup firmware SwOS 2.0p it is possible to connect to 192.168.88.1 using web browser and install new SwOS firmware.

default ip: 192.168.88.1

```
Current Installed Version      2.0p (built at Fri Oct 21 2016 10:18:39 GMT+0200 (CEST))
Latest Available Version      2.7 (built at Fri Dec 15 2017 09:42:48 GMT+0100 (CET))
```

After this, router knows that there is new version, but can't download it from <http://upgrade.mikrotik.com/swos2/css106/swos-css106-2.7.bin>

Linux setup

```
dpavlin@x230:~$ sudo ifconfig enp0s25 192.168.88.240
```

```
wget --http-user=admin --http-password='' 'http://192.168.88.1/!stats.b'
```

find on network

<https://forum.mikrotik.com/viewtopic.php?t=162881>

https://wiki.mikrotik.com/wiki/MAC_access

MNDP frames

sudo apt install mactelnet-client

```
dpavlin@klin:~$ mndp
Searching for MikroTik routers... Abort with CTRL+C.
```

IP	MAC-Address	Identity (platform version hardware)	uptime
192.168.88.1	c4:ad:34:47:12:91	MikroTik (MikroTik 2.7 CSS106-5G-1S)	up 113 days 4 hours
10.60.0.1	d4:ca:6d:1:4c:ed	ccr (MikroTik 6.46.6 (testing) CCR1036-8G-2S+)	up 113 days 4 h