



OpenWrt 2.0.16

Release Notes

OpenWrt Version: OpenWrt 21.02.1

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State: Released

1. Compatability

Hardware comaptible with OpenWrt 2.0.16:

- MC100
- MC-MR-L2
- LTE Gateway

The following Software can be upgraded to OpenWrt 2.0.16:

- OpenWrt 2.x.x

It is not possible to upgrade devices from OpenWrt firmware starting with "1.x.x".

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2. Table of updated packages

Name	Previous Version (OpenWrt 2.0.9)	New Version (OpenWrt 2.0.16)
Call Daemon	0.2.7	0.4.0
ec21-firmware	6.6.2	6.7
extension-firmware	-	v3.0-rc13
luci-app-mcwmbus	2	2.2
luci-app-node-red	-	1
mbus-hotplug-fix	-	0.3
mc-act8847-wdt	-	0.4
mc100-extensions-hotplug	-	0.1
mc100-extension	-	1.0.1
mcinfo	0.5.8	0.6.0
mcoverlayfs	0.1	0.2
mcwmbus	0.3.7	4.2
modem	0.4	0.6
node-red-nodes-sensorbox	2.0.1	3.0.0
prepare-wilc	-	1

3. All Devices

3.1. Added

3.1.1. Roaming

It is now possible to set the roaming option to **enabled**, **disabled** or **automatic** via the LuCi web interface. The current state of the roaming option can be viewed under Status->Modem.

3.1.2. New Watchdog

The image now features a new watchdog which is integrated into the PMIC. This further improves the reliability, as this watchdog is able to recover the device, even if its not reachable from the outside by performing a power cycle. It also provides the possibility of performing a power cycle via LuCi or ssh.

To provide this feature, the watchdog from the i.mx is no longer served by the system. It is still available because it provides the soft reboot functionality. It is still possible to remove the PMIC watchdog and let the system serve the i.mx watchdog, if that should be necessary. The PMIC watchdog can cover more error states than the i.mx one, so it basically just extends the functionality.

3.2. Added to Download Server

There are a few packages that will be build for the new OpenWrt firmware 2.0.16 which will not be installed in the default image. But they can be installed with the package manager opkg.

3.2.1. Coreutils

Coreutils is a collection of basic programs and commands used in various linux distributions. It includes for example the commands "date", "mv" and "cp". By default, basic utils are covered by "busybox" which is a less extensive version of coreutils.

3.2.2. Wireguard

Wireguard is a VPN alternative to OpenVPN. More information: [Wireguard documentation](#)

3.2.3. Mwan3

Mwan3 is a package used for multi WAN load balancing and failover. More information: [OpenWrt mwan3 user guide](#)

3.3. Updated

3.3.1. GPS

The GPS daemon "gpsd" is now disabled per default. This fixes an issue with enabling/disabling the daemon via LuCi.

3.3.2. Backups

Uploading a backup via LuCi now checks for matching OpenWrt versions. A warning is shown if the versions do not match.

3.3.3. LuCi Modem Status

The page Status->Modem in Luci has been extended and now shows more information. These information will not be updated if incomplete or false data is received and a timestamp at the bottom will indicate the last successful update.

3.3.4. Node-RED

A LuCi app was added for Node-RED. It can be found under Services->Node-RED. Available configurations are:

- using **https** instead of **http** which is now the default for security reasons
- Password protection can also be enabled here with the option to create Node-RED users
- Self-signed certificates will be generated on first start of Node-RED for https access. The app allows uploading your own, or set options and generate new self-signed certificates.

3.3.5. EC21 Firmware

The EC21 firmware package was updated, it can now update the Quectel Modem EC21 to version *EC21EFAR06A07M4G_20.200.20.200*.

3.4. Fixes

3.4.1. EC200T / EC200SEN

An issue with the tty devices of these modems was fixed. This also caused "mcinfo" to not work properly.

3.4.2. WIFI

1. An issue with WIFI access points which were wrongfully shown as activated in LuCi after a reboot of the device was fixed
2. The WIFI interface gets assigned a vendor specific MAC address just like the ethernet interface
3. Removed an unused start script named "wlan".

3.4.3. MBUS

The detection of pl2303 based MBUS adapters was fixed. These are now correctly processed and shown.

3.4.4. Boot with SD Card

Fixed an issue with booting while an SD card was inserted (MC100).

3.5. Removed

Some packages are removed but they will still be available for download via "opkg".

If one of these is currently in use, upgrading to 2.0.16 will probably remove the package from your device.

3.5.1. NTPclient

The ntpclient package interfered with the ntpd package. The ntpd package is sufficient for most use cases.

3.5.2. Node-RED modbus documentation

Several unused documentation files were installed in the base image. Due to size limitations, documentation files were removed in the default installation.

3.5.3. Strongswan

Strongswan is removed in the default image.

4. MC100

4.1. Call Daemon

The Call Daemon was updated with the option to control the volume of a call via http request.

4.2. MC100 Extension (GPIO, SensT2, Sensorbox)

The kernel module was reworked. The new kernel module is backwards compatible so if any program needs a specific path to read a value from the extension boards it will still be available.

4.3. Extension-Firmware

There are firmware updates available for the extension boards of the mc100.

4.4. MC100-Extension-Hotplug

Creates symbolic links for the expansion slots of the MC100 extension boards. This helps in identifying them and ensures every expansion slot always has the same name.

4.5. MCWMBUS

The mcwmbus package has some fixes and new features:

- filtering of received messages with sensor name ,sensor id and or manufacturer id all as regular expressions.
- decrypting mcwmbus messages if the key is provided. AES cbc 128 decryption with 16 byte-keys are supported. Supported wmbus safety modes:
 - mode 5 and 7
- filtering and decrypting of messages possible as a service
- managing keys and filters in luci
- fixed length-byte bug from previous mcwmbus version (if activated, inactive by default)
- include or ignore RSSI byte (active by default)

4.6. Node-RED-Nodes-Sensorbox

Updated nodes for Node-RED for the sensorbox extension of the MC100 to support the newest hardware version 1.5.

4.7. GPIO Assignments

Fixed wrong assignment of GPIO in the filesystem.