



OpenWrt 2.0.19

Release Notes

OpenWrt Version: OpenWrt 21.02.1

Date: 31.07.2025

State: Released

1. Compatibility

Hardware compatible with OpenWrt 2.0.19:

- MC100 Family
- MC100 Sensorbox
- MC-MR-L2 Family

Devices with the following firmware can be upgraded to OpenWrt 2.0.19:

- OpenWrt 2.x.x

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

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2. Updated Features / Packages

These updates introduce substantial upgrades across core software modules and integrated libraries.

2.1. Node and Node-Red

Change: Updated to Node v20.18.3 and Node-RED v4.0.5.

Purpose: Enables the use of newer community and custom nodes while establishing a long-term support (LTS) base for future stability and maintainability. These versions provide performance enhancements, improved security patching cadence, and extended compatibility with modern JavaScript features.

Impact:

- Support for a broader range of Node-RED nodes and npm packages
- Improved system stability with LTS version guarantees
- Enhanced performance and security through modern runtime features

2.2. Libmbus library upgrade (MC100 Sensorbox)

Change: Upgraded libmbus to version v2025, introducing the new suite of TCP-based tools: mbus-tcp. For more information: [libmbus](#)

Purpose: Enhances the library's support for M-Bus over TCP transport, making it easier to integrate with modern networked environments and remote devices. The new tools expand flexibility and simplify deployments that rely on IP-based communication rather than serial interfaces.

Impact:

- Added utilities: mbus-tcp-client, mbus-tcp-server, and related command-line helpers.
- Streamlined debugging and test setups with more intuitive TCP interfaces
- Maintains compatibility with serial-based mbus-* tools for hybrid use cases

3. Bug Fixes

The following bug fixes address system stability, connectivity reliability, and firmware-level issues identified in earlier versions.

3.1. Mwan3

Issue: The `mwan3_flush_contrack` function was incorrectly triggered only when MWAN3 was globally disabled, due to a logic inversion.

Resolution: The fix involved moving the `flush_contrack` call to the correct location in the hotplug script.

Impact: Restores expected behavior: connection tracking is flushed when interfaces connect.

3.2. Add modem-defaults

Issue: Unstable SIM card connection during physical disturbance due to default modem settings lacking robustness.

Resolution: Introduced modem-defaults configuration set to enhance retry logic and connection robustness.

Impact:

- Improved reliability in SIM detection and retention.
- More stable mobile connection in vibration-prone installations.

3.3. Watchdog (MC100 Family/Sensorbox)

Issue: Unexpected system reboots during periods of high CPU or I/O load due to delayed or missed execution of the watchdog thread.

Resolution: Increased the scheduling priority of the watchdog thread within the kernel to ensure it can execute reliably under heavy system stress. This change helps prevent false-positive resets caused by timing failures.

Impact:

- Improved system stability during overload conditions
- Reduced risk of unnecessary reboots on busy systems

3.4. WiFi (MC100 Family/Sensorbox)

Issue: Limited reliability and robustness of the internal WiFi driver when operating in station mode, especially under edge-case connectivity scenarios and varying AP configurations.

Resolution: Integrated the external wilc1000 kernel module to replace the internal driver for WiFi station mode. This external implementation offers improved handling of complex connectivity cases.

Impact:

- Increased wireless stability in station mode
- Reduced risk of disconnections and driver-related hangs

3.5. Analog Signal Reliability (MC100 Family/Sensorbox)

Issue: Analog input readings were inaccurate or unstable, affecting the reliability of data acquisition in sensor-driven or embedded applications.

Resolution: Updated STM firmware to enhance analog signal handling and correct input processing logic.

Impact:

- Improved accuracy and consistency of analog data acquisition
- Greater confidence in system diagnostics and performance analytics