



# Firmware Release Notes

Cisco Ultra Reliable Wireless Backhaul (formerly Fluidmesh) FM1000 and FM10000 (Generation 1) gateways

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## Applicability

These firmware release notes are applicable to FM1000 and first-generation FM10000 gateways only.

This document contains important change information regarding the most current device firmware version (1.4.1).

## Firmware changelog

The following device-specific changes were introduced for firmware version 1.4.1:

- **FM-QUADRO (second release).** This includes the following new features:
  - The FM-QUADRO user interface no longer needs Adobe Flash Player or Apache Flex to function.
  - FMQuadro 1.0 and Fluidity Quadro were previously two separate tools that needed users to toggle between them to effectively manage stationary and Fluidity networks. In contrast, FM-QUADRO 2.0 combines the functionality of both tools into a simpler, easier-to-use interface.
  - Operation of all aspects of the FM-QUADRO functionality has been streamlined and made more intuitive.
  - Visual cues have been incorporated that allow users to immediately distinguish between wired and wireless links and between stationary and mobile radios, and to immediately interpret the functional status of all components in the network cluster.
  - The user is only ever two clicks away from all functional information regarding individual radios and radio links.
  - The FM-QUADRO 2.0 view is completely customizable, and radio link information can be shown or suppressed as needed.
  - A representation file of the current network layout can be exported, allowing Fluidmesh Technical Support to visualize the network for troubleshooting purposes.
- **Telemetry:** A new telemetry protocol has been introduced, featuring support for FM-QUADRO 2.0.
- **Fluidity:**
  - An access-point coloring feature has been introduced to distinguish between Fluidmesh APs installed on different train tracks, in open sections of railway.
  - A pole-proximity safe MCS feature has been added.
  - A combined pole-proximity protocol has been added. This combines the established pole-ban functionality with LER detection: if a current pole to which it is possible to connect has been banned, and the LER at the currently connected pole is too high, the banned pole is unbanned, and the safe-mcs parameter is set to allow pole proximity.

### Bug fix changelog

- A pole-proximity dynamic duration feature has been added, allowing radios to automatically estimate pole ban durations.
- The Webserver functionality has been updated with support for FM-QUADRO 2.0 and various security fixes.

## Bug fix changelog

The following bug fix was introduced for firmware version 1.4.1:

- A potential memory leak involving packet fragmentation was fixed.
- A bug was fixed whereby Native VLAN tags were not preserved across the wireless network if radios are in Bridge Mode.

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