



## AirLink OS 2.0

### RELEASE NOTES

## About AirLink OS 2.0

This release of AirLink OS 2.0 is for the AirLink XR90. These release notes describe new features, bug fixes and known issues that apply to this release.

## New Features

### Radio Module Firmware

The following radio module firmware applies to this release:

HL7800:

- 4.4.14.00

EM9190:

- AT&T, T-Mobile: 01.07.13.00
- Verizon: 01.07.12.00

### WAN

Added LPWA route management and FQDN support for Multi-WAN.

### Wi-Fi

XR90: Added In-vehicle Wi-Fi support, including client isolation.

Wi-Fi 10gu power table and DFS SDK were updated.

### Location and Telemetry

Added support for ALMS ARA (Advanced Reporting and Analytics). For more information about ALMS ARA, see [source.sierrawireless.com/airvantage/alms/reference/reports/](https://source.sierrawireless.com/airvantage/alms/reference/reports/).

### AirLink OS

Enhanced Datasets and smart reporting rules, aligning their functionality with how they are deployed in ALMS.

Added Secure Boot features, including certificate and firmware validation at startup.

Added secure SSH access for remote analysis and debugging.

### Cellular

XR90: Enhanced support for the EM9190 radio module, including multiple-APN support.

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Disabled Band 30 for the EM9190 radio module.

## Bug Fixes

### Networking and Connectivity

Resolved an issue where Contrack del returned error messages flooded the logs.

Resolved an issue where Ping Monitor was still active after the Cellular WAN interface was disabled.

Resolved an issue where Policy based rules for src/dst port rules did not work on XR90. WAN policy rules that want to differentiate traffic based on services cannot be applied.

### Cellular

Resolved an issue where EM9190 and EM7690 firmware upgrades were failing.

### Wi-Fi

Resolved an issue where a ping from XR90 failed for the gateway of the remote AP using 802.11ax on Meraki45 AX.

XR90: Resolved an issue exists XR90 (in client mode) cannot get an IP address via DHCP from a Cisco 9117AX Access Point.

Resolved an issue where the Wi-Fi module reported an erroneous temperature value.

### VPN

Resolved an issue where data traffic through the tunnel failed when an H2L mode IPsec tunnel was enabled.

Resolved an issue where IPsec traffic was blocked (sometimes temporarily) after the WAN link was switched from Cellular to Wi-Fi.

Resolved an issue where "Manual Virtual IP Address" was not working for an H2L mode IPsec tunnel.

## Known Issues

### Wi-Fi

With XR90 as a 5GHz access point, the LED that indicates Wi-Fi traffic stops blinking purple when more than one client device is connected.

After upgrading to AirLink OS 2.0 from an earlier release, it may not be possible to configure the Wi-Fi B 5GHz interface. To resolve, reset the device to factory defaults.

The Wi-Fi or XP cellular WAN interfaces may disconnect after a reboot. As well, the Wi-Fi WAN or XP cellular WAN connection state may be incorrectly reported in the WAN Status table (the Multi-WAN Policy Rules Status table may show the *correct* connection state).

To resolve the issue, disable and re-enable:

- the Wi-Fi interface at Hardware Interfaces > Wi-Fi Interfaces > Configuration
- the Cellular interface at Hardware Interfaces > Cellular Interfaces > Configuration

When using XR90 Wi-Fi in Client mode, background scan can result in reduced Wi-Fi WAN to Eth/Wi-Fi LAN throughput.

XR90: IPv6 Prefix Extension is not supported in multi-wan scenarios (that is, more than one WAN interface).

Changing security protocols on SSID 1 and 2 (2.4GHz and 5GHz) may cause issues with password recognition on Apple devices (passwords may need to be entered multiple times).

## Networking and Connectivity

An issue exists with writing a Verizon network-managed APN to the SIM.

Windows 10 computer connected to XR90 via USB lost Internet connection after the XR90 was rebooted. Unplugging/replugging the cable restored the Internet connection.

IPv6 DNS Propagate does not work with Windows 10 Enterprise.

XR90: An issue exists where IPv6 routes on multi-APN interfaces were not created after multiple reboots.

With the XP90 connected via Cellular to the WAN and a host PC connected to the XP90 via Ethernet, the IPv4 Passthrough value for the WAN IPv4 interface can be reported (on Networking > General > WAN) on the Update WAN IPv4 Interface as "Value not Available" instead of the correct Ethernet interface.

IPv6 DNS Propagate fails for the Ethernet WAN interface. Manually configured DNSv6 servers are not propagated from WAN to HOST-PC on the LAN.

After creating a DHCP Reservation (Fixed IPv4 or IPv6 Assignment) for a HOST-PC client with a previous IP allocation, the client persists in using the previous IP allocation. To have the client use the new IP address, the DHCP leases must be cleared and the Ethernet cable disconnected/reconnected.

XR90: Port forwarding may not work when more than one WAN interface is active.

Do not set the WAN Propagate feature to "auto" when two cellular WAN interfaces are configured for a LAN bridge.

In Multi-WAN scenarios where DNS needs to be always available, it is recommended to not use the WAN Propagate feature if the DNS servers being passed to clients are WAN link specific. For example, when using two SIM cards for different carriers, if Carrier 1 provides the DNS server to the client, then the client should be aware that if the Carrier 1 link is lost and the WAN link switches to Carrier 2 (with its own private DNS), the DNS does not resolve until the client renews its DNS servers. DNS renewal time depends on lease time configuration (two minutes minimum).

XR90: QoS (traffic shaping and policing) cannot be applied for traffic to/from the gateway itself, and may not be applied to some flows through the gateway.

When configuring an Ethernet or Wi-Fi WAN, the assigned address/mask can be the same as one of the LAN subnets. This causes issues with DNS queries from the LAN segment if the DNS resolver is on the WAN gateway (typically the Wi-Fi gateway provides its own address as DNS resolver to its DHCP clients). At present, AirLink OS does not show an alert when this condition exists.

After the router is reset to factory defaults from AirLink OS, the LPWA radio cannot reconnect to network.

After a reboot, the LPWA radio Adapter Status in AirLink OS Status/Monitoring may show "Standby" after previously showing "No Service" despite the radio being enabled.

## VPN

IPv4 IPsec VPN (connected over cellular) does not work after IPv6 Clat is enabled.

### Hardware

During Normal Operation or after a reboot, the HL7800 LPWA radio may become stuck in “Starting” mode (as reported under Adapter Status) and disconnect from ALMS. To resolve, reboot the XR90 again.

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Unsupported link speeds 5000baseT/Full and 2500baseT/Full are shown as available for selection on the GigE Ethernet ports (Eth2 and Eth3).

### Datasets

Unable to create a dataset from scratch in ALMS/AirVantage.

### AirVantage

The XR90 may not connect to AirVantage, although the R2C eSIM is activated and the status display on the router is “Connected”.

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After an XR90 with R2C eSIM is activated, the router must be rebooted to reattach to the network.

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After a “Network Detach” operation initiated via ALMS Diagnostics, the HL7800 LPWA radio cannot recover a Network attachment.

### Location

During drive tests, store-and-forward operation to maintain NMEA data during network outages does not start consistently after an outage is detected.

### AirLink OS

Validation errors may arise when resetting the XR90 to a custom template (for instance, when the template contains settings for Multi-WAN policies).

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Creating multiple templates from the current configuration may produce templates with invalid data. The first template created from the current configuration will be valid; additional templates may have invalid data. To create additional templates from the current configuration during a session, press F5 to refresh the screen before proceeding.