

Product Security Advisory: AirLink Router Security Advisory

Sierra Wireless Advisory: SWI-PSA-2023-003 (link to latest version)

Date: June 22, 2023

### Summary

This security update is to provide additional guidance for Sierra Wireless routers following the recently published security bulletin (<u>SWI-PSA-2023-002: AirVantage Security Advisory</u>) relating to CVE-2023-31279 - Improper Authentication.

### **Issue Summary**

The ALMS / AirVantage platform is vulnerable to an unauthorized attacker, with relevant registration information, registering unregistered devices on the ALMS / AirVantage platform when the legitimate owner has not registered the device or disabled the AirLink Management Service protocol on the devices. This could enable an attacker to configure and manage an unsuspecting user's devices.

# **Affected Products**

- AirLink ES450, GX450, MP70, RV50, RV50x, RV55, LX40, and LX60 that are not registered with ALMS / AirVantage or AM/AMM, and where an attacker has access to the serial number and IMEI of the devices.
- AirLink RX55, XR80 and XR90 that are not registered with ALMS / AirVantage and where an attacker has access to the serial number and registration code of the devices.

Note: Devices that were previously registered but have since been unregistered from ALMS / AirVantage are also vulnerable to this issue.

AirLink MG90 routers are not impacted by this vulnerability.

### **Recommended Actions**

#### Mitigations

There are two options to mitigate this issue:



# 1. Register device with ALMS / AirVantage (recommended; there is no cost associated with a registration)

Sierra Wireless recommends that all AirLink routers are registered in ALMS / AirVantage, irrespective of any plans to use ALMS / AirVantage for ongoing device management. The act of registration claims the device into the owner's account, preventing unauthorized activation. Registration will also provide an easy way to track warranty and support information for those devices.

The device can be registered in ALMS / AirVantage and activated immediately or registered in a suspended state for up to 60 days to support your deployment timelines. In the suspended state, the device does not communicate with ALMS / AirVantage and is not eligible for remote management, support, or warranty. Once activated the device will automatically be enrolled in AirLink Complete or AirLink Premium, depending on the device model. This provides access to ALMS / AirVantage, Customer Support, and Warranty. The first year of the subscription is included with your purchase.

At the end of the first year the devices will transition back to the suspended state in ALMS / AirVantage if the service is not explicitly renewed. In the suspended state, the device does not communicate with ALMS / AirVantage and is not eligible for remote management, support, or warranty but continues to functional otherwise. Devices in the suspended state can be activated at any time with the purchase of an appropriate service (e.g. AirLink Complete). Please speak to your Sierra Wireless Partner to purchase services for older devices.

To create a new ALMS / AirVantage account please click here (link to https://www.sierrawireless.com/router-solutions/alms/register/)

#### 2. Disable the ALMS Service in the Device

If it is not possible to register devices in ALMS / AirVantage, Sierra Wireless recommends that the service is disabled on unregistered devices. This will prevent the devices from communicating with ALMS / AirVantage.

Please note that a device with the service disabled cannot be remotely managed by ALMS / AirVantage until the service is enabled again through manual reconfiguration.



### Instructions to Disable ALMS

#### 1. ALEOS-based Devices (AirLink ES450, GX450, MP70, RV50, RV50x, RV55, LX40, & LX60)

In AceManager update the "ALMS Protocol" configuration setting in Services > ALMS tab to "Disable" and apply the settings.

NOTE: This setting will need to be updated if ALMS support is desired.

|  |                  |            |                  |  |          |          | Software and | Firmware | Template | Refresh All | Reboot       | Help  | Logout  |        |
|--|------------------|------------|------------------|--|----------|----------|--------------|----------|----------|-------------|--------------|-------|---------|--------|
| Status                                   | WAN/Cellular     | Dual Wi-Fi | LAN              | VPN                                    | Security | Services | Location     | Events R | eporting | Dual Serial | Applications | I/O   | Admin   |        |
| Last updated time : 2023-05-19 9:32:09 a |                  |            |                  |  |          |          |              |          |          |             | Expand All   | Apply | Refresh | Cancel |
| ALMS                                     |                  |            |                  |  |          |          |              |          |          |             |              |       |         |        |
| ACEmanager                               |                  | E          | AirLink Mar      | nagement Se                            | rvice    |          |              |          |          |             |              |       |         |        |
| Power M                                  | Power Management |            | AT ALMS Protocol |  |          |          |              |          | Disable  |             | <b>v</b>     |       |         |        |
| -  |                  |            | Protocol In Use  |  |          |          |              | Disabled |          |             |              |       |         |        |
| Dynamic                                  | Dynamic DNS      |            |                  | AT Device Initiated Interval (minutes) |          |          |              |          | 1440     |             |              |       |         |        |
| SMS                                      | SMS              |            | AT ALMS Name     |  |          |          |              |          |          |             |              |       |         |        |
| AT (Telne                                | AT (Telnet/SSH)  |            | AT Status        |  |          |          |              |          | Disabled |             |              |       |         |        |
| E  |                  |            | AT Connect       |  |          |          |              |          | Connect  |             |              |       |         |        |
| Email (SMTP)                             |                  | [+         | [+] MSCI         |  |          |          |              |          |          |             |              |       |         |        |
| Manager                                  | ment (SNMP)      |            |                  |  |          |          |              |          |          |             |              |       |         |        |
| Time (NTP)                               |                  | [+         | ] LWM2M          |  |          |          |              |          |          |             |              |       |         |        |
| Authentication                           |                  |            |                  |  |          |          |              |          |          |             |              |       |         |        |
|  |                  | [+         | ] AAF            |  |          |          |              |          |          |             |              |       |         |        |
| Device S                                 | tatus Screen     |            |                  |  |          |          |              |          |          |             |              |       |         |        |

2. AirLink OS-based Devices (AirLink RX55, XR80 & XR90)

Disable LwM2M in the System > ALMS > LwM2M tab, as seen below, and save the changes.

NOTE: This setting will need to be updated if ALMS support is desired.

|                     | > System / Admin ALMS I/O LEDs Logs Security     | SMS Provision Time MCU User accounts |                           | Q | P |  | € |  |
|---------------------|--|--------------------------------------|---------------------------|---|---|--|---|--|
| SIERRA AirLink      | LuMZM Smart Reporting                            |                                      |                           |   |   |  |   |  |
|                     | ALMS >   |                                      |                           |   |   |  |   |  |
| Status / Monitoring | LwM2M  |                                      |                           |   |   |  |   |  |
| Hardware Interfaces | START Disabled                                   | CHECK NOW                            |                           |   |   |  |   |  |
| Networking          | STATUS   | LAST COMMUNICATION DATE              | ENDPOINT                  |   |   |  |   |  |
| Services            | Connection Error                                 |                                      | 6Q1065003702AC24          |   |   |  |   |  |
| Apps                | LOCAL PORT                                       | HEARTBEAT                            | BOOTSTRAP URI             |   |   |  |   |  |
| System              | 56830  | 15 min                               | coaps://bs.airvantage.net |   |   |  |   |  |
|                     | BOOTSTRAP CREDENTIALS<br>Use Factory Credentials |                                      |                           |   |   |  |   |  |
|                     | LWM2M SERVERS IN USE                             |                                      |                           |   |   |  |   |  |
|                     | URI ^  |                                      |                           |   |   |  |   |  |
|                     | coaps://bs.airvantage.net                        |                                      |                           |   |   |  |   |  |
|                     |  |                                      |                           |   |   |  |   |  |



# **Support Contact Information**

Sierra Wireless Technical Support is available by phone or web portal from 6:00 to 17:00 PST, Monday to Friday. Phone (Toll-Free): 1-877-687-7795 Web: <u>https://www.sierrawireless.com/support/community-portal/</u>

# **Security Bulletins**

To see the latest security updates from Sierra Wireless, please visit: <u>https://www.sierrawireless.com/company/security/</u>