

>> MGOS 4.2 Release Notes

[Updated: August 03, 2018]

MGOS 4.2 is for MG90 Series routers.

Upgrade Notes

AMM Over-The-Air Updates

Customers looking to upgrade to MGOS 4.2 over-the-air (OTA) must ensure that their AMM has been updated to AMM 2.16 or later before performing the update. MGOS 4.2 cannot be upgraded OTA by older AMM versions.

Disable Management Tunnel Ping Monitor

Prior to performing an upgrade from MGOS 4.1.x to MGOS 4.2, please disable any management tunnel ping monitors—performing the upgrade with the ping monitor enabled could lead to issues with VPN definitions and potentially other configurations. After the upgrade, re-enable the ping monitor.

Note: This will be addressed in MGOS 4.2.1. Until that time, customers are advised to disable management tunnel ping monitors before an upgrade, and re-enable post-upgrade.

Updating MG90s Containing Different Sierra Wireless Modules

This note applies only to MG90s that contain two different Sierra Wireless modules (e.g. MC7354+MC7455, MC7455+EM7511, etc.)

To install MGOS 4.2 on an MG90 that has two different Sierra Wireless modules, use either of the following methods:

- Upgrade OTA via AMM:
 - a. Insert a SIM for at least one of the radio modules.
 - b. Perform the OTA upgrade.
- Upgrade via USB stick:
 - a. Follow the instructions at https://source.sierrawireless.com/resources/airlink/software_downloads/airlink-mg-usb-images/ to get and install the 4.2 image from a USB flash drive.
 - b. Before putting the upgraded MG90 back on-air, upgrade the AMM with MGOS 4.2.

Note: If MGOS 4.2 is downloaded OTA without a SIM installed for at least one of the modules, the MG90 will not install the downloaded firmware, and will continue running its current version. To complete the upgrade:

- Follow the USB stick method above,
or
 - Insert a SIM for one or both radio modules, select and run (in the LCI) General > Tools > “clean-local-software-update-cache”, and then reboot.
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New Features

Broadcast Router Status

Status > Broadcast feature added to broadcast router status details to devices in local networks.

GPIO Configuration

Added General Purpose I/O Configuration application (Applications > GPIO), providing GPIO configuration options including digital output support and user-definable script for GPIO management.

GPIO Status

Added General Purpose I/O Status application (Applications > GPIO Status), allowing display of recent GPIO status events.

WAN Links

Reset on Disconnect option removed from WAN Link Configuration screens.

Added private zone configuration fields in WAN Link Configuration (WAN > Links) and Wi-Fi Network Configuration (WAN > WiFi Networks) screens.

GPS

Added support for Dead Reckoning. Enable DR option added on LCI GPS tab to allow start/stop of GPS dead reckoning augmentation to location data.

Added Forwarding Thresholds to enable GPS data forwarding to a local or remote server at tunable reporting intervals

LEDs

Updated GNSS LED color pattern to reflect Dead Reckoning status. Refer to the AirLink MG90 Software Configuration Guide for pattern details.

Green LED chase ('caterpillar') pattern now indicates GNSS firmware update in progress, as well as radio module update in progress.

Radio Modules

Added firmware support for EM7565 and EM7511 radio modules.

- EM7511—01.07.00.00 (AT&T/Generic)
- EM7565—01.07.00.00 (Generic)

Note: AT&T firmware is pending certification approval.

Updated module firmware:

- MC7455—02.24.05.06 (AT&T/Generic), 02.26.01.00 (Sprint)
- MC7430—02.24.05.06 (DoCoMo), 02.27.01.00 (Generic)

Note: No updates required for Telstra (MC7430) or Verizon (MC7455)

FirstNet SIM Support

AT&T FirstNet SIM support added. MG90 recognizes FirstNet SIM and auto-populates the FirstNet APN ("firstnet-broadband").

FIPS

Added "enable-fips-cryptographic-modules" command to General > Tools to enable FIPS modules when MG90 works in non-FIPS mode.

Important: *Please take care when enabling FIPS. Once enabled, there is no option to disable FIPS.*

PPPoE WAN

StarTech USB2100 USB-Ethernet adapter can be connected to an available USB slot to support PPPoE WAN Link to a connected Land Mobile Radio (LMR).

WLAN Access Points

Wi-Fi Access Point is now disabled by default.

Note: This does not affect the MG90's current configuration; the new default configuration takes effect if a factory reset is performed.

LAN/WAN Networking Rules

Added DSCP configuration option to QoS Priority Rules. Traffic to specified IPs/subnets can be marked with an appropriate DSCP value, so that it can be prioritized by the cellular network if supported by the carrier.

VPN

IPsec V1 tunnel now supports multiple local subnets.

Management Tunnel Configuration updated:

- Specific UDP ports available for selection. Management tunnel is brought up on one of the selected ports, randomly chosen.
- User-defined monitors replaced by new Tunnel Automatic Monitor option.

AMM

Added new DELS events:

- FirstNet SIM status
- MG90 automatically updated APN to a pre-defined value
- GPIO state change

Status

Updated Status > General and Easy Access screens:

- Appended IPL (Dead Reckoning application) version number to GNSS Module Version number
- Added "Satellites Usable"
- Updated Extended Status screen to display SIM type as FirstNet when detected
- Firmware images that are available (loaded on the MG90) for image switching are displayed. A "Purged" label displays beside firmware versions that have recently been purged.

Resolved Security Issues

Security

Prompt added to LCI to remind user to change password if username and password are identical.

Added “Advanced Configuration Login” to access certain LCI tabs, to resolve an authentication vulnerability.

Added increased controls on remote access operations.

Bluetooth

Bluetooth is now disabled by default; password will be user-specified when Bluetooth is enabled.

Note: This does not affect the MG90’s current configuration; the new default configuration takes effect if a factory reset is performed.

Common Vulnerabilities and Exposures (CVE)[®]

Addressed potential Bluetooth vulnerabilities (“BlueBorne”) related to:

- CVE-2017-1000250
- CVE-2017-1000251

Addressed potential ‘bash’ vulnerabilities, upgrade to version 4.4:

- CVE-2016-7543
- CVE-2016-0634

Addressed potential ‘bind’ vulnerabilities, upgrade to version 9.10.3+P3:

- CVE-2016-2088
- CVE-2016-2775
- CVE-2016-2776
- CVE-2016-6170
- CVE-2016-8864
- CVE-2015-5477

Addressed potential ‘file’ vulnerability, upgrade to version 5.22:

- CVE-2014-9653

Addressed potential ‘openssh’ vulnerabilities, upgrade to version 7.5p1:

- CVE-2016-10012
- CVE-2016-10010
- CVE-2016-10009
- CVE-2015-8325

Addressed potential ‘openvpn’ vulnerabilities, upgrade to version 2.4.4:

- CVE-2017-12166
- CVE-2017-7508
- CVE-2017-7520

Addressed potential ‘tar’ vulnerability:

- CVE-2016-6321

Maintenance/security upgrades:

- libevent—version 2.1.8
- tcpdump—version 4.9.2
- vim—version 8.0.0983

Addressed potential Linux kernel vulnerabilities:

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|-----------------|----------------|
| • CVE-2015-6937 | CVE-2017-7645 |
| • CVE-2015-8543 | CVE-2017-8890 |
| • CVE-2015-8966 | CVE-2017-9074 |
| • CVE-2016-2053 | CVE-2017-9075 |
| • CVE-2016-2070 | CVE-2017-10661 |
| • CVE-2016-8655 | CVE-2017-11176 |
| • CVE-2016-6786 | CVE-2017-12146 |
| • CVE-2016-6787 | CVE-2017-15115 |
| • CVE-2017-5669 | CVE-2017-15265 |
| • CVE-2017-6074 | CVE-2017-15649 |
| • CVE-2017-7487 | CVE-2017-16526 |
| • CVE-2017-7541 | CVE-2017-16939 |
| • CVE-2017-7618 | |

Addressed Issues

AMM Support

Resolved issue where AMM would report an “Out of sync” error after upgrading the MG90.

Resolved issue causing DELS error during upgrades

Resolved issue where the router would not send known laptop name to the AMM.

Cellular WAN

Cellular connection now automatically sets the MTU size to match the carrier network setting.

Note: If the MTU configuration has already been set up manually, the configuration is preserved during the upgrade and the MTU size will not be set automatically.

Resolved issue where router could not connect to Sprint 3G network when out of LTE coverage.

GPS

Fixed error caused by lower-case TAIP response such as “pv” being accepted from LCI.

MG90 Power

Resolved issue where the MG90 would sometimes fail to restart after a “battery under voltage” condition occurred during shutdown.

Resolved issue where the router would factory reset on its own.

3rd-party Product Support

Physio Control application:

- Resolved issue where transmission would fail when registration token is 'None'
- Fixed LCI error on application page when unregistering without a valid registration token

Note: This release is required for the upcoming lifenetsystem.com update in late summer 2018.

VPN

Resolved issue where MG90 stops passing traffic over VPN after WAN interface switches.

Known Issues

Captive Portal

Display of captive portal landing page on iPhones may be delayed by 2–3 minutes.

Broadcast Router Status

Router status beacon outputs signal strength “-200.00000” for second Cellular WAN link.

Sierra Wireless Contact Information

Sales information and technical support, including warranty and returns:

Web: sierrawireless.com/company/contact-us/

Global toll-free number: 1-877-687-7795

Corporate and product information: sierrawireless.com