

Resolving the EM75xx/MC7455 Service Interruption Issue on AirLink Routers (NA Only)

APPLICATION NOTE

This application note, intended for North American AirLink customers using ALEOS and MGOS devices (“AirLink routers”), describes how to resolve an issue with AirPrime EM7511, EM7565 and MC7455 radio modules that can affect connectivity on the USA AT&T and FirstNet carrier networks and on some Canadian carrier networks.

Background

An issue exists with Carrier Aggregation combinations in EM7511, EM7565 and MC7455 radio modules that can result in frequent radio resets and unstable cellular connectivity. The issue occurs on the AT&T, FirstNet, and some Canadian carrier cellular networks with AirLink routers running ALEOS 4.14.0 or later and MG90 routers running MGOS 4.3.1 or later.

The following AirLink LTE-A Pro routers are affected when used on those networks:

- MG90 LTE-A Pro
- RV55 LTE-A Pro
- MP70 LTE-A Pro
- RV50X

This issue does not apply to customers using Verizon.

Details

To resolve the issue, you must disable the use of LTE band 29. Band 29 is a receive-only band, and can only be used as a secondary carrier for Carrier Aggregation (LTE-advanced) operation; it cannot be used as a primary carrier, so disabling this band will not affect cellular coverage.

Manually disabling the use of LTE band 29 is an interim work-around. As a near-term software solution, Sierra will release software updates that will disable certain Band 29 carrier aggregation combinations. In the first half of 2022, Sierra will release MGOS and ALEOS software updates to address the underlying issue and reenable the B29 carrier aggregation combinations, preventing further potential cellular service interruptions.

You can manually disable band 29 using the methods described below.

Disabling Band 29 in ALEOS devices

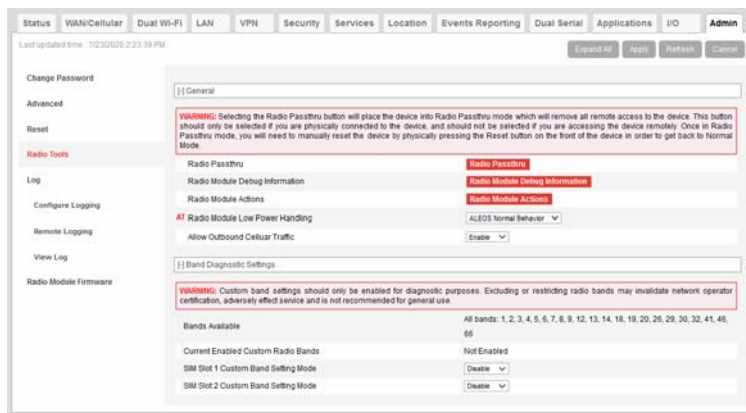
You can disable Band 29 using ACEmanager (local configuration interface) or ALMS (cloud-based management system).

For more information about ACEmanager, you can download the ALEOS Software Configuration Guide for your AirLink router from [the Source](#).

Online documentation for ALMS is available [here](#).

Disabling Band 29 using ACEmanager

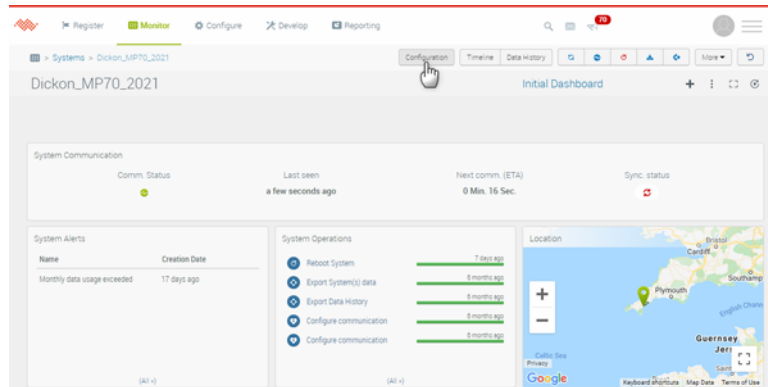
1. Log in to ACEmanager
2. Go to Admin > Radio Tools > Band Diagnostic Settings.



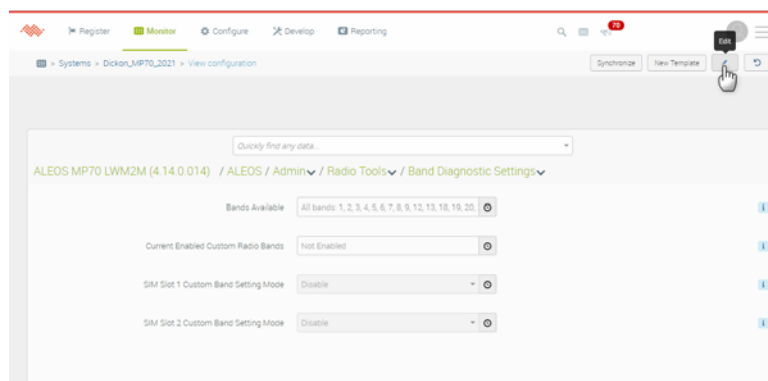
3. For the SIM slot in which the AT&T or FirstNet SIM is installed, set **Custom Band Setting Mode** to **Exclude**.
After selecting Exclude, an **Exclude Bands** field appears.
4. In the **Exclude Bands** field, enter 29.
5. Click **Apply**.
6. Reboot the router.

Disabling Band 29 using ALMS

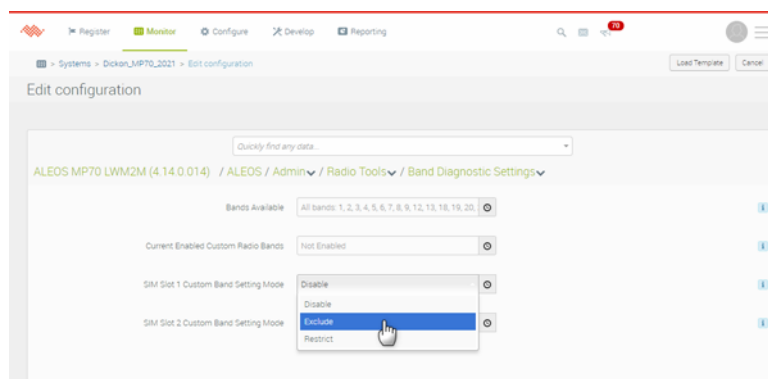
1. Go to Monitor > Systems.
2. Click the row for the system you want to modify. The summary page for the system opens.
3. Click the Configuration button.



4. Navigate to Admin > Radio Tools > Band Diagnostic Settings.
5. Click Edit.

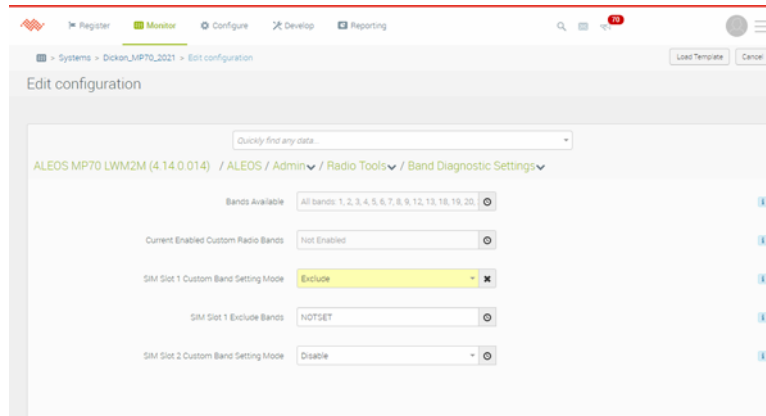


6. For the SIM slot in which the AT&T or FirstNet SIM is installed, set **Custom Band Setting Mode** to **Exclude**.



After selecting Exclude, an **Exclude Bands** field appears.

Resolving EM75xx Service Interruption Issue

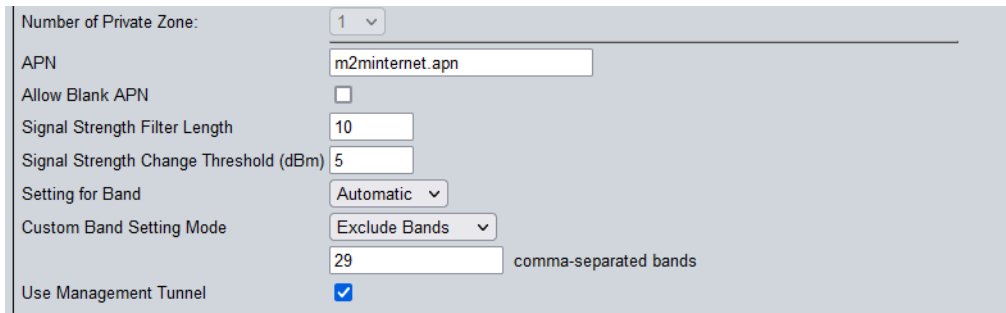


7. In the **Exclude Bands** field, enter **29**.
8. Click **Apply**.

Disabling Band 29 in MGOS devices

You can download the full MG90 Series Software Configuration Guide from [the Source](#).

1. Access the Local Configuration Interface (LCI).
2. On the WAN > Links tab, select **Configure** for the cellular link with the AT&T or FirstNet SIM card.
3. From the Custom Band Setting Mode, select **Exclude Bands**.
4. In the next field (for comma-separated bands), enter **29**.



The screenshot shows the configuration interface for a cellular link. The 'Custom Band Setting Mode' is set to 'Exclude Bands', and the 'Comma-separated bands' field contains the value '29'. Other visible settings include APN 'm2minternet.apn', Signal Strength Filter Length '10', and Signal Strength Change Threshold (dBm) '5'.

Number of Private Zone:	1
APN	m2minternet.apn
Allow Blank APN	<input type="checkbox"/>
Signal Strength Filter Length	10
Signal Strength Change Threshold (dBm)	5
Setting for Band	Automatic
Custom Band Setting Mode	Exclude Bands
	29 comma-separated bands
Use Management Tunnel	<input checked="" type="checkbox"/>

5. Click Save.

Document History

Revision number	Release date	Changes
1	October 2021	First release
2	January 2022	Added RV50X/MC7455

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