



# Release Notes for Cisco Catalyst IR1101, IR1800, IR8140, and IR8340 Routers - Cisco IOS XE 17.17.x

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## Introduction to this Document

This Release Notes document provides information about the Cisco Catalyst IR1101 Rugged Series Routers, Cisco Catalyst IR1800 Rugged Series Routers, Cisco Catalyst IR8140 Heavy Duty Series Routers, and Cisco Catalyst IR8340 Rugged Series Routers running Cisco IOS XE 17.15.x Cisco IOS XE 17.17.x.

This document describes the new features, limitations, troubleshooting, besides providing recommended configurations, caveats, and information on how to obtain support and documentation.

### Product References

For more information about Cisco Catalyst IR1101, IR1800, IR8140, and IR8340 Routers, see:

- [Cisco Catalyst IR1101 Rugged Series Router Data Sheet](#)
- [Cisco Catalyst IR1800 Rugged Series Routers Data Sheet](#)
- [Cisco Catalyst IR8140 Heavy Duty Series Router](#)
- [Cisco Catalyst IR8340 Rugged Series Router Data Sheet](#)

## New Features in Cisco IOS XE 17.17.x

This table lists the new features in this release and the devices they are introduced on in this release.

**Table 1: New Features in Cisco IOS XE 17.17.1**

| Feature Name                                      | License Level                            | Description   | Supported Devices | Related Document  |
|---|--|---|-------------------|---|
| Cellular Pluggable Interface Module (PIM) Support | Network Essentials and Network advantage | The following hardware and corresponding PIMs will be supported on IR8140: <ul style="list-style-type: none"><li>• IRMH-LTE7-EAL with PIM P-LTEA7-EAL</li><li>• IRMH-5GR16SA with PIM P-5GS6-R16SA-GL</li></ul> | IR 8140           | <a href="#">Cellular Pluggable Interface Module Configuration Guide</a> |

| Feature Name  | License Level                            | Description   | Supported Devices | Related Document   |
|---|--|---|-------------------|--|
| Multi-Homing Configuration in BGP EVPN VXLAN Fabric | Network Essentials and Network advantage | By utilizing EVPN Ethernet Segments with VLANs mapped to Switched Virtual Interfaces (SVIs), you can implement multi-homing within an EVPN VXLAN fabric. Thus, it enhances network resilience, offers redundancy, and optimizes resource utilization. Earlier, single-model procedures for EVPN restricted configurations to either Bridge Domain (BD) or VLAN. | IR1100 and IR1800 | <a href="#">Cisco Catalyst IR1101 Rugged Series Router Software Configuration Guide</a><br><a href="#">Cisco Catalyst IR1800 Rugged Series Router Software Configuration Guide</a> |
| Serial MPLS Pseudowire                              | Network Essentials                       | From this release, you can transfer the serial async data using an MPLS label over a pseudowire between two IR8340 edge routers. In this scenario, one of the edge routers is located at the substation end and another edge router is located at the controller end.   | IR8340            | <a href="#">Cisco Catalyst IR8340 Rugged Series Router Software Configuration Guide</a>  |
| P-5GS6-R16SA-GL                                     | Network Essentials                       | The 5G Sub-6 GHz Pluggable Interface Modules offer 5G capability to the IoT Industrial Router family.   | IR8340            | <a href="#">Cellular Pluggable Interface Module Configuration Guide</a>  |

## Software Images for Cisco IOS XE Release 17.17.x



**Note** You must have a Cisco.com account to download the software.

Cisco IOS XE Release 17.17.1 includes the following Cisco images.

**Table 2: Software Images for Cisco IOS-XE, Release 17.17.1**

| Router | Image Type                  | Filename  |
|--------|-----------------------------|---|
| IR1101 | Universal                   | ir1101-universalk9.17.17.1.SPA.bin                  |
|        | NPE                         | ir1101-universalk9_npe.17.17.1.SPA.bin              |
| IR1800 | Universal                   | ir1800-universalk9.17.17.1.SPA.bin                  |
|        | NPE                         | ir1800-universalk9_npe.17.17.1.SPA.bin              |
|        | UTD Engine for Cisco IR1835 | utd.17.17.1.1.0.7_SV3.1.55.0_XE17.17.x86_arch64.tar |

| Router | Image Type                  | Filename  |
|--------|-----------------------------|---|
| IR8100 | Universal                   | ir8100-universalk9.17.17.1.SPA.bin              |
|        | NPE                         | ir8100-universalk9_npe.17.17.1.SPA.bin          |
| IR8340 | Universal                   | ir8340-universalk9.17.17.1.SPA.bin              |
|        | NPE                         | ir8340-universalk9_npe.17.17.1.SPA.bin          |
|        | UTD Engine for Cisco IR8340 | utd.17.17.1.1.0.7_SV3.1.55.0_XE17.17.x86_64.tar |

The latest software downloads for the routers can be found at the [Software Downloads](#) page. Click the link corresponding to your device to take you to the specific software you are looking for.

## Interface Naming Conventions

This section shows the names of the interfaces on Cisco Catalyst IR1101, IR1800, IR8140, and IR8340 routers on each port.

### Cisco Catalyst IR1101 Rugged Series Router

| Port  | Naming Convention  |
|---|--|
| Gigabit Ethernet combo port                                     | GigabitEthernet0/0/0   |
| Gigabit Ethernet SFP port on IRM-1100                           | GigabitEthernet0/0/5   |
| Gigabit Ethernet on IRM-1100-4A2T mounted on the Expansion side | GigabitEthernet 0/0/5<br>GigabitEthernet 0/0/6                                   |
| Fast Ethernet ports   | FastEthernet0/0/1<br>FastEthernet0/0/2<br>FastEthernet0/0/3<br>FastEthernet0/0/4 |
| Cellular Interface on IR1101 Base                               | Cellular 0/1/0<br>Cellular 0/1/1   |
| Cellular Interface on IRM-1100 mounted on the top (EM) side     | Cellular 0/3/0<br>Cellular 0/3/1   |
| Cellular Interface on IRM-1100 mounted on the bottom (CM) side  | Cellular 0/4/0<br>Cellular 0/4/1   |
| Asynchronous Serial Interface Base                              | async0/2/0   |

| Port   | Naming Convention   |
|--|---|
| IRM-1100-4A2T is mounted on the top (EM) side                                    | async 0/3/0<br>async 0/3/1<br>async 0/3/2<br>async 0/3/3                |
| IRM-1100-4A2T is mounted on the bottom (CM) side                                 | async 0/4/0<br>async 0/4/1<br>async 0/4/2<br>async 0/4/3                |
| USB  | usbflash0:  |
| mSATA  | msata:  |
| IR1101 Base Unit Alarm input   | alarm contact 0   |
| GPIO on IRM-1100   | alarm contact 1-4   |
| LoRaWAN interface on IR1101 Base   | LORAWAN0/1/0  |
| LoRaWAN interface on the top (EM) side   | LORAWAN0/3/0  |
| Gigabit Ethernet interface for LTE 450MHz module on IR1101 Base                  | GigabitEthernet 0/1/0<br>GigabitEthernet 0/1/0.x for multiPDN operation |
| Gigabit Ethernet interface for LTE 450MHz module mounted on the bottom (CM) side | GI0/4/0   |

### Cisco Catalyst IR1800 Rugged Series Router

| Port                        | Naming Convention  |
|-----------------------------|--|
| Gigabit Ethernet combo port | GigabitEthernet0/0/0   |
| Gigabit Ethernet ports      | GigabitEthernet0/1/0<br>GigabitEthernet0/1/1<br>GigabitEthernet0/1/2<br>GigabitEthernet0/1/3 |
| Cellular Interface          | Cellular 0/4/0<br>Cellular 0/4/1<br>Cellular 0/5/0<br>Cellular 0/5/1                         |

| Port                          | Naming Convention   |
|-------------------------------|---|
| Asynchronous Serial Interface | Async0/2/0<br>Async0/2/1 (when the base platform supports two asynchronous serial interfaces) |
| Wi-Fi Interface               | Wi0/1/4   |
| USB                           | usbflash0:  |
| mSATA                         | msata:  |
| GPIO                          | alarm contact 1-4   |

### Cisco Catalyst IR8140 Heavy Duty Series Router

| Port                   | Naming Convention  |
|------------------------|--|
| Gigabit Ethernet ports | GigabitEthernet0/0/0<br>GigabitEthernet0/0/1                         |
| Cellular Interface     | Cellular 0/2/0<br>Cellular 0/2/1<br>Cellular 0/3/0<br>Cellular 0/3/1 |
| SSD                    | Virtual port Group0  |
| WPAN                   | Wpan 0/1/0<br>Wpan 0/2/0<br>Wpan 0/3/0                               |
| Digital IO             | alarm contact 1-2  |

### Cisco Catalyst IR8340 Rugged Series Router

| Port                       | Naming Convention                            |
|----------------------------|--|
| Gigabit Ethernet WAN ports | GigabitEthernet0/0/0<br>GigabitEthernet0/0/1 |

| Port  | Naming Convention  |
|---|--|
| Gigabit Ethernet LAN ports  | GigabitEthernet0/1/0<br>GigabitEthernet0/1/1<br>GigabitEthernet0/1/2<br>GigabitEthernet0/1/3<br>GigabitEthernet0/1/4<br>GigabitEthernet0/1/5<br>GigabitEthernet0/1/6<br>GigabitEthernet0/1/7<br>GigabitEthernet0/1/8<br>GigabitEthernet0/1/9<br>GigabitEthernet0/1/10<br>GigabitEthernet0/1/11 |
| Cellular Interface  | Cellular 0/4/0<br>Cellular 0/4/1<br>Cellular 0/5/0<br>Cellular 0/5/1   |
| NIM Interface<br>(Asynchronous/Synchronous Serial Ports or E1/T1 ports) | 0/2/0<br>0/2/1<br>0/3/0<br>0/3/1   |
| mSATA SSD   | msata:   |
| GPIO  | alarm contact 0-2  |
| USB Port  | usb0:  |
| Console Port  | Line console 0   |

## Cellular Module Modem Firmware, OEM/PRI

This section contains the latest modem firmware available for each of the modems used by the Cisco IoT routers. See the [Cisco Firmware Upgrade Guide for 4G LTE and 5G Cellular Modems](#) for upgrade instructions.



**Note** Cisco IOS XE updates do not automatically update the modem firmware. The user should check and update all modems to the latest firmware and any associated PRI and/or OEMPRI. See the following table for the latest information:

**Table 3: Cellular Module Modem Firmware**

| Cellular Module                 | Modem  | Firmware Version | Software Download Link   |
|---------------------------------|--------|------------------|--|
| P-5GS6-GL                       | FN980  | 38.03.0202       | <a href="https://software.cisco.com/download/home/286329300/type/">https://software.cisco.com/download/home/286329300/type/</a>  |
| P-LTEAP18-GL<br>IRMH-LTEAP18-GL | LM960  | 32.00.1x9        | <a href="https://software.cisco.com/download/home/286311455/type">https://software.cisco.com/download/home/286311455/type</a><br><a href="https://software.cisco.com/download/home/286311455/type">https://software.cisco.com/download/home/286311455/type</a>   |
| P-LTEA-EA<br>IRMH-LTEA-EA       | EM7455 | 02.39.00.00      | Generic:<br><a href="https://software.cisco.com/download/home/286308426/type">https://software.cisco.com/download/home/286308426/type</a><br>Europe:<br><a href="https://software.cisco.com/download/home/286308426/type">https://software.cisco.com/download/home/286308426/type</a><br>Canada:<br><a href="https://software.cisco.com/download/home/286319713/type">https://software.cisco.com/download/home/286319713/type</a><br>North America ATT:<br><a href="https://software.cisco.com/download/home/286311442/type">https://software.cisco.com/download/home/286311442/type</a><br>North American Sprint:<br><a href="https://software.cisco.com/download/home/286311455/type">https://software.cisco.com/download/home/286311455/type</a><br>North America Verizon:<br><a href="https://software.cisco.com/download/home/286311429/type">https://software.cisco.com/download/home/286311429/type</a> |
| P-LTEA-LA<br>IRMH-LTEA-LA       | EM7430 | 02.38.00.00      | Generic:<br><a href="https://software.cisco.com/download/home/286308413/type">https://software.cisco.com/download/home/286308413/type</a><br>Australia Telstra:<br><a href="https://software.cisco.com/download/home/286311403/type">https://software.cisco.com/download/home/286311403/type</a><br>Japan:<br><a href="https://software.cisco.com/download/home/286311416/type">https://software.cisco.com/download/home/286311416/type</a>  |
| P-LTE-VZW                       | WP7601 | 02.37.0x.00      | <a href="https://software.cisco.com/download/home/286322139/type">https://software.cisco.com/download/home/286322139/type</a>  |
| P-LTE-US                        | WP7603 | 02.37.0x.00      | <a href="https://software.cisco.com/download/home/286322143/type">https://software.cisco.com/download/home/286322143/type</a>  |
| P-LTE-JN                        | WP7605 | 02.28.03         | <a href="https://software.cisco.com/download/home/286322156/type">https://software.cisco.com/download/home/286322156/type</a>  |
| P-LTE-GB                        | WP7607 | 02.37.03.05      | <a href="https://software.cisco.com/download/home/286322147/type">https://software.cisco.com/download/home/286322147/type</a>  |

| Cellular Module | Modem          | Firmware Version | Software Download Link  |
|-----------------|----------------|------------------|---|
| P-LTE-IN        | WP7608         | 02.28.03         | <a href="https://software.cisco.com/download/home/286322152/type">https://software.cisco.com/download/home/286322152/type</a> |
| P-LTE-AU        | WP7609         | 02.28.03         | <a href="https://software.cisco.com/download/home/286323720/type">https://software.cisco.com/download/home/286323720/type</a> |
| P-LTE-MNA       | WP7610         | 02.37.0x.0x      | <a href="https://software.cisco.com/download/home/286324942/type">https://software.cisco.com/download/home/286324942/type</a> |
| P-LTEA7-NA      | EM7411         | 01.14.22.00      | <a href="https://software.cisco.com/download/home/286333933/type">https://software.cisco.com/download/home/286333933/type</a> |
| P-LTEA7-EAL     | EM7421         | 01.14.22.00      | <a href="https://software.cisco.com/download/home/286333937/type">https://software.cisco.com/download/home/286333937/type</a> |
| P-LTEA7-JP      | EM7431         | 01.14.22.00      | <a href="https://software.cisco.com/download/home/286333939/type">https://software.cisco.com/download/home/286333939/type</a> |
| P-5GS6-R16SA-GL | EM9293         | 02.17.08.00      | <a href="https://software.cisco.com/download/home/286334597/type">https://software.cisco.com/download/home/286334597/type</a> |
| P-LTE-450       | Not Applicable | v1.3.0           | Contact Intelliport for the software download link (info@intelliport.hu)  |

## Known Limitations

### Smart Licensing Using Policy

Starting with Cisco IOS XE 17.6.1, with the introduction of Smart Licensing Using Policy, even if you configure a hostname for a product instance or device, only the Unique Device Identifier (UDI) is displayed. This change in the display can be observed in all licensing utilities and user interfaces where the hostname was displayed in earlier releases. It does not affect any licensing functionality. There is no workaround for this limitation.

The licensing utilities and user interfaces that are affected by this limitation include only the following: Cisco Smart Software Manager (CSSM), Cisco Smart License Utility (CSLU), and Smart Software Manager On-Prem (SSM On-Prem).

### VLAN-Aware Interoperability Limitations on IR1101

Cisco does not support VLAN-aware interoperability with other vendors on the IR1101 platform.

## Standalone MAC Authentication Bypass Limitation

Standalone MAC Authentication Bypass (MAB) is an authentication method that grants network access to specific MAC addresses regardless of 802.1X capability or credentials. The IR1100 crashes with concurrent IPSec traffic and macsec traffic (device to client).

Refer to the following table for details:



| Details   | Release Affected                               | Release Fixed  |
|---|--|--|
| MAB/Dot1x may not work if the global type-6 encryption setting is enabled.<br><br>If users still want to use MAB/Dot1x, they should disable the type-6 encryption and enable type-7 encryption.   | 17.4.x<br>17.5.x<br>17.6.1<br>17.6.2<br>17.7.1 | 17.3.5<br><br>Fixed in these future releases:<br>17.6.3<br>17.7.2<br>17.8.1 and later. |
| dACL and device-tracking features are not supported on the Cisco Catalyst IR1101 Rugged Series Routers due to a hardware limitation. dACL is supported on the Cisco Catalyst IR1800 Rugged Series Routers series.<br><br>Therefore, features such as MAB and Dot1x should not be used with the optional dACL/device-tracking enabled. | <b>Note</b><br>Occurs in all releases.         | Hardware limitation, no software fix available.  |

## Caveats

Caveats describe unexpected behavior in Cisco IOS XE releases. Caveats listed as open in a prior release are carried forward to the next release as either open or resolved.

### Cisco Bug Search Tool (BST)

The Cisco [Bug Search Tool](#) (BST) is a gateway to the Cisco bug-tracking system, which maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. The BST provides you with detailed defect information about your products and software.

## Open Caveats in Cisco IOS XE 17.17.1

To view the details of a caveat, click on the identifier.

| Identifier                 | Description  | Platform |
|----------------------------|--|----------|
| <a href="#">CSCwn98622</a> | Hardware removal & insertion SNMP traps received after soft reload-Misleading router actual activity | IR8140   |
| <a href="#">CSCwo31561</a> | "Error in showing license Information" when "show license rum id all" is executed.                   | IR1101   |

## Resolved Caveats in Cisco IOS XE 17.17.1

To view the details of a caveat, click on the identifier.

| Identifier                 | Description   | Platform |
|----------------------------|---|----------|
| <a href="#">CSCwm67835</a> | Seeing High Offset value when two ntp servers are configured and GNSS as refclock                   | IR8340   |
| <a href="#">CSCwm40611</a> | Serial interface snmp query is failing after enabled "physical-layer async"                         | IR8340   |
| <a href="#">CSCwm57517</a> | Not able to see the description of serial interfaces after power cycle of IR8340                    | IR8340   |
| <a href="#">CSCwn11290</a> | Input errors on G0/0/0 interface  | IR8340   |
| <a href="#">CSCwn31694</a> | Memory Leak cause by PTP process in linux_ios-imag  | IR8340   |
| <a href="#">CSCwn31061</a> | GIG 0/0/5 interface on the expansion module goes in err-disabled mode when traffic exceeds 480 Mbps | IR1101   |
| <a href="#">CSCwn80507</a> | Traceback followed by CPUHOG observed when IRM-GNSS-ADR VID: V20 is inserted into IR1833 router     | IR1800   |
| <a href="#">CSCwo13365</a> | Back off the fix of CSCwh37024 and keep default cellular MTU to 1500 bytes                          | IR1800   |

## Related Documentation

### Cisco Catalyst IR1101 Rugged Series Router

[IR1101 documentation landing page](#)

### Cisco Catalyst IR1800 Rugged Series Router

[IR1800 documentation landing page](#)

### Cisco Catalyst IR8140 Heavy Duty Series Router

[IR8100 documentation landing page](#)

### Cisco Catalyst IR8340 Rugged Series Router

[IR8340 documentation landing page](#)

### Product Independent Documentation

[Cisco Industrial Routers and Industrial Wireless Access Points Antenna Guide](#)

[Cisco IOS XE 17.x](#)

[Cisco SD-WAN](#)

[Cisco IoT Field Network Director](#)

[Cisco Industrial Network Director](#)

[Cisco IoT Operations Dashboard](#)

## Cisco Industrial IoT Licensing

For more information on Smart Licensing Using Policy, refer to the guide [Smart Licensing Using Policy on the Cisco Catalyst IR1101, IR1800, IR8140, and IR8340 Routers](#) or the [Cisco Industrial IoT Licensing](#) page.

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