Release Notes for Cisco Catalyst IR1101, IR1800, IR8140, and ESR 6300 Routers - (Cisco IOS XE Bengaluru 17.6.8)

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Introduction

These release notes support the Cisco Rugged series and Embedded Routers running IOS XE 17.6.8. These routers include the IR1101, IR1800, IR8140, and the ESR6300 as presented below.

These release notes are updated to describe new features, limitations, troubleshooting, recommended configurations, caveats, and provide information on how to obtain support and documentation.

Cisco Catalyst IR1101 Rugged Series Router

The Cisco Catalyst IR1101 Rugged Series Router is a next generation modular industrial router which has a base module with additional Pluggable Modules that can be added. The Pluggable Module provides the flexibility of adding different interfaces to the IR1101 platform, for example, a cellular module.

The IR1101 also has an Expansion Module that adds key capabilities to the IR1101, such as mSATA SSD FRU, Ethernet SFP port, and Digital GPIO connections. It also makes the IR1101 dual LTE capable, with one module in the base and the other in the expansion module.

Note The IR-1100-SP Expansion Module is the same as the IR-1100-SPMI module, without the Digital I/O and mSATA components.

Table 1: Interface Naming Convention for Cisco Catalyst IR1101 Rugged Series Routers

Port	Naming Convention
Gigabit Ethernet combo port	Gigabitethernet 0/0/0
Gigabit Ethernet SFP port on Expansion Module	Gigabitethernet 0/0/5
Fast Ethernet ports	Fastethernet 0/0/1-0/0/4
Cellular Interface on IR1101 Base	Cellular 0/1/0 and Cellular 0/1/1

Port	Naming Convention
Cellular Interface on Expansion Module	Cellular 0/3/0 and Cellular 0/3/1
Asynchronous Serial Interface	Async 0/2/0
USB	usbflash0:
mSATA	msata:
IR1101 Base Unit Alarm input	alarm contact 0
GPIO on Expansion Module	alarm contact 1-4

Cisco Catalyst IR1800 Rugged Series Router

The Cisco Catalyst IR1800 Rugged Series Router is a modular industrial router. The IR1800 series has four Base platforms with additional Pluggable Modules that can be added. The Pluggable Modules provide the flexibility of adding different interfaces to the base platform.

The IR1800 series features a Base Platform with modularity that includes:

- Pluggable Interface Module (PIM)
- mSATA Module (SSDM)
- GPS Module
- Wi-Fi Module (in a future release)

The IR1800 series consists of four base platforms. They are:

- IR1821
- IR1831
- IR1833
- IR1835

Table 2: Differences in IR1800 SKU Features

Feature	IR1821	IR1831	IR1833	IR1835
Processor Frequency	600 MHz	600 MHz	600 MHz	1200 MHz
DDR Memory	4GB	4GB	4GB	8GB
Flash Storage	4GB	4GB	4GB	8GB
PIM Slot	1	2	2	2

Feature	IR1821	IR1831	IR1833	IR1835
Wi-Fi Pluggable Module Slot	1	1	1	1
PoE	No	No	Yes	Yes
SSD Module Slot	No	No	Yes	Yes
GPS FRU Module Slot	No	No	Yes	Yes
Digital I/O	No	No	No	Yes
Asynchronous Serial Interface	(1) RS232 DTE	(1) RS232 DTE (1) RS232 DCE	(1) RS232 DTE (1) RS232 DCE	(1) RS232 DTE (1) RS232 DCE/RS485

Table 3: Interface Naming Convention for Cisco Catalyst IR1800 Rugged Series Router

Port	Naming Convention
Gigabit Ethernet combo port	Gigabitethernet 0/0/0
Gigabit Ethernet ports	GigabitEthernet 0/1/0-0/1/3
Cellular Interface	Cellular 0/4/0 Cellular 0/4/1 Cellular 0/5/0 Cellular 0/5/1
Asynchronous Serial Interface	Async 0/2/0 Async 0/2/1 (When the base platform supports two async serial interfaces)
USB	usbflash0:
mSATA	msata:
GPIO	alarm contact 1-4

Cisco Catalyst IR8140 Heavy Duty Series Router

The Cisco Catalyst IR8140 Heavy Duty Series Router (IR8140H), is the next generation modular IP 66/67 Industrial Router for outdoor use.

There are two IR8140H models:

- IR8140H-P-K9 (With PoE PSE)
- IR8140H-K9 (Without PoE PSE)

The IR8140H Series features 4 external module slots plus two onboard WAN ports and supports the following:

- 60W PSU
- GPS onboard receiver
- 900MHz WPAN – OFDM/FSK
- 4G/LTE IRMH modules
- mSATA module
- 1x 1Gbe SFP WAN
- 1x 1Gbe Cu WAN
- PoE (15W) – Supported only on the IR8140H-P-K9 PID
- 12VDC_OUT port (Only available when PoE is not in use)
- Battery Backup Units (BBUs) – Up to 3
- 2x Alarm ports (Digital IO)

Table 4: Interface Naming Convention for Cisco Catalyst IR8140 Heavy Duty Series Router

Port	Naming Convention
Gigabit Ethernet ports	Gigabitethernet 0/0/0 GigabitEtherne t0/0/1

Port	Naming Convention
Cellular Interface	Cellular 0/4/0 Cellular 0/4/1 Cellular 0/5/0 Cellular 0/5/1
SSD	msata:
WPAN	Wpan 0/1/0 Wpan 0/2/0
Digital IO	alarm contact 1-2

Cisco ESR6300 Embedded Series Router

The ESR6300 is a small form factor embedded router module with a board size of 3.0" x 3.775"(76.2mm x 95.885mm). The more compact design simplifies integration, and offers system integrators the ability to use the Cisco ESR 6300 in a wide variety of embedded applications. The ESR module is available with a Cisco-designed cooling plate customized to the ESR, as well as without the cooling plate for system integrators who want to design their own custom thermal solution.

There are two ESR 6300 SKUs:

- ESR-6300-NCP-K9: Embedded Router Board without a cooling plate. (NCP = No Cooling Plate)
- ESR-6300-CON-K9: Embedded Router Board without a cooling plate. (NCP = No Cooling Plate)

Both of the SKUs offer the following Ports/Module Interfaces:

- 4 GE LAN ports
- 2 combo GE WAN ports
- 1 USB 3.0 port
- 1 mSATA module interface

Table 5: Interface Naming Convention for Cisco ESR6300 Embedded Series Router

Port	Naming Convention
Gigabit Ethernet combo port WAN/Layer3	Gigabitethernet 0/0/0 GigabitEthernet 0/0/1

Port	Naming Convention
Gigabit Ethernet LAN/Layer 2 ports	GigabitEthernet 0/1/0 GigabitEthernet 0/1/1 GigabitEthernet 0/1/2 GigabitEthernet 0/1/3
USB Port	usbflash0: (IOS and rommon)
Console Port	Line console 0

New Features in Cisco IOS XE 17.6.8

There are no new software features or hardware introduced in this release. It is a maintenance only release.

Software Images for IoT Routers

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

Cisco IOS XE Release 17.6.8 includes the following Cisco images:

Table 6: Software Images 17.6.8

Router	Image Type	Filename
IR1101	Universal	ir1101-universalk9.17.06.08.SPA.bin
	NPE	ir1101-universal9_npe.17.06.08.SPA.bin
IR1800	Universal	IR1800-universalk9.17.06.08.SPA.bin
	NPE	IR1800-universal9_npe.17.06.08.SPA.bin
IR8140	Universal	IR8100-universalk9.17.06.08.SPA.bin
	NPE	IR8100-universal9_npe.17.06.08.SPA.bin
ESR6300	Universal	c6300-universalk9.17.06.08.SPA.bin

The latest software downloads for the Routers can be found at the Software Downloads page. Click on the link to your device to take you to the specific software you are looking for.

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).

IOx on the ESR6300

Note IOx development is not supported on the ESR6300. While this is platform independent code, it is unsupported and untested on this device.

Standalone MAC Authentication Bypass (MAB) 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.

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. If users still want to use MAB/Dot1x, they should disable the type-6 encryption and enable type-7 encryption.	17.4.X 17.5.X 17.6.1 17.6.2 17.7.1	17.3.5 Fixed in these future releases: 17.6.3 17.7.2 17.8.1 and later.
dACL and device-tracking features are not supported on the IR1101 and ESR6300 due to a hardware limitation. dACL is supported on the IR1800 series. Therefore, features such as MAB and Dot1x should not be used with the optional dACL/device-tracking enabled.	**Note** 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

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 Bengaluru 17.6.8

There are no open caveats in this release.

Resolved Caveats in Cisco IOS XE Bengaluru 17.6.8

There are no resolved caveats in this release.

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 ESR6300 Embedded Series Router

ESR6300 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

Communications, Services, and Additional Information

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