



Product Overview

This chapter provides an overview of the features available for the Cisco IR807 Integrated Services Router.

- [Product Overview, on page 1](#)
- [General Description, on page 1](#)
- [Hardware Overview, on page 2](#)
- [IR807 USB Ports, on page 6](#)
- [Software Overview, on page 6](#)
- [Antenna Recommendations, on page 6](#)
- [Related Documentation, on page 7](#)

Product Overview

This chapter provides an overview of the features available for the Cisco IR807 Integrated Services Routers and contains the following sections:

General Description

The IR807 routers are highly compact Cisco IOS routers with support for integrated 4G LTE wireless WAN capabilities.

Their benefits include:

- Easily and rapidly deployable
- Highly available and highly secure
- Reliable operation and seamless integration with SCADA systems
- Designed for power-constrained and harsh environments, tolerating a wide temperature range
- Compact, lightweight, and DIN rail mountable, with all input/output ports and connectors on the front panel for easy installation in space-constrained cabinets
- Well suited to industrial applications ranging from distribution automation for utilities to transportation and manufacturing, as well as remote asset management across the extended enterprise

These routers deliver enterprise-class features -- including highly secure data, voice, and video communications -- to stationary and mobile network nodes across wired and wireless links. The Cisco 807 industrial router supports enterprise-grade, wireline-like functionality such as:

- Dynamic Multipoint VPN (DMVPN)

- Quality of service (QoS) for cellular
- Multi-Virtual Route Forwarding (VRF) for cellular

For a complete listing of the routers capabilities, see:

<https://www.cisco.com/c/en/us/products/routers/807-industrial-integrated-services-routers/index.html>

Hardware Overview

This section covers the overview of the IR807.

SKU Information

[Table 1: Supported SKUs for Cisco IR807s, on page 2](#) lists the different SKUs available for the IR807. All SKUs support external antenna.

Table 1: Supported SKUs for Cisco IR807s



SKU ID	Description	Modem Type
IR807G-LTE-VZ-K9	North America (Verizon)	WP7601
IR807G-LTE-NA-K9	North America (AT&T)	WP7504
IR807G-LTE-GA-K9	EMEA	WP7502

Note: The IR807G-LTE-VZ-K9 SKU has a single SIM card socket. The IR807G-LTE-NA-K9 and IR807G-LTE-GA-K9 are equipped with dual SIM card sockets. Graphics in this guide show the dual SIM SKUs.

Front Panel Icons and LEDs

The IR807 uses icons to show the different features of the device. [Table 2: Icons with LEDs, on page 2](#) shows Icons and their associated LEDs with descriptions. LEDs are visible from the top cover and from the front panel. The LEDs allows easy visibility for wall and desk mounted installations regardless of chassis orientation. [Table 4: Icons only, on page 4](#) shows the Icons without associated LEDs and their descriptions.

Table 2: Icons with LEDs

Icon	Description/Activity	Icon	Description/Activity
	System - Power and System Status. Off — No power Green Steady on — Normal operation Green Flashing — Boot up phase or in ROM Monitor mode Amber Steady on — Power is OK but possible internal FPGA program failure		Alarm - Alarm Input Status Off — Normal operation Red - Alarm State on the Alarm Input




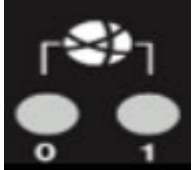

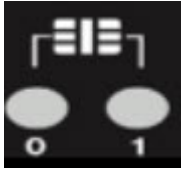










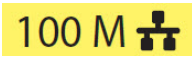


Icon	Description/Activity	Icon	Description/Activity
	<p>VPN</p> <p>Off — No VPN tunnel</p> <p>Steady Green — At least one VPN tunnel is up</p>		User Configurable LED
	<p>GPS - GPS Status</p> <p>Off — GPS not configured</p> <p>Steady Green — GPS configured</p> <p>Slow Flash — GPS Acquiring in Standalone GPS</p> <p>Fast Flash — GPS Acquiring in Assisted GPS</p> <p>Slow Flash is defined as the LED will be on for 0.25 seconds and off for 0.75 seconds. Fast Flash is defined as the LED will be on for 0.25 seconds and off for 0.25 seconds.</p>		<p>RJ45 Fast Ethernet Ports -Link Status 0:1</p> <p>Off — No link</p> <p>Steady Green — Link is up</p> <p>Flashing — Transmitting and Receiving data</p>
	<p>RSSI - Received Signal Strength Indication</p> <p>The RSSI LEDs are a 3 LED bar graph to indicate signal strength. Their functionality is described in the RSSI LED Table 3: RSSI LEDs, on page 3.</p>		<p>SIM Cards - SIM0/SIM1</p> <p>Off — No USIM</p> <p>Green — USIM installed and active</p>
			<p>WWAN - Wireless WAN Activity</p> <p>Off — Offline</p> <p>On — In Service</p> <p>Flash (on 200ms off 5 sec) — No Service</p> <p>Flash (on 1 sec off 1 sec) — Low Power Mode</p> <p>Flash (on 5 sec off 200ms) — Roaming</p> <p>Flash (on 400ms off 100ms) — Data Active</p>

Table 3: RSSI LEDs

RSSI	RSSI (2)	RSSI (1)	RSSI (0)
	Green	Green	Green/Amber
< -110dBm	Off	Off	Off

RSSI	RSSI (2)	RSSI (1)	RSSI (0)
-110 to -90dBm	Off	Off	On - Amber
-90 to -75dBm	Off	Off	On - Green
-75 to -60dBm	Off	On - Green	On - Green
> -60dBm	On - Green	On - Green	On - Green

Table 4: Icons only

Icon	Description	Icon	Description
	Console		USB 2.0 Type A Port for Storage and Networking
	Grounding point (located on side of device)		Reset Button
	DC Power Input (12V to 48V)		DC Power Return
	Alarm Common		Alarm IN
	Serial Ports		Fast Ethernet Ports
	Antenna 1 (TNC) Main		Antenna 2 (TNC) Div


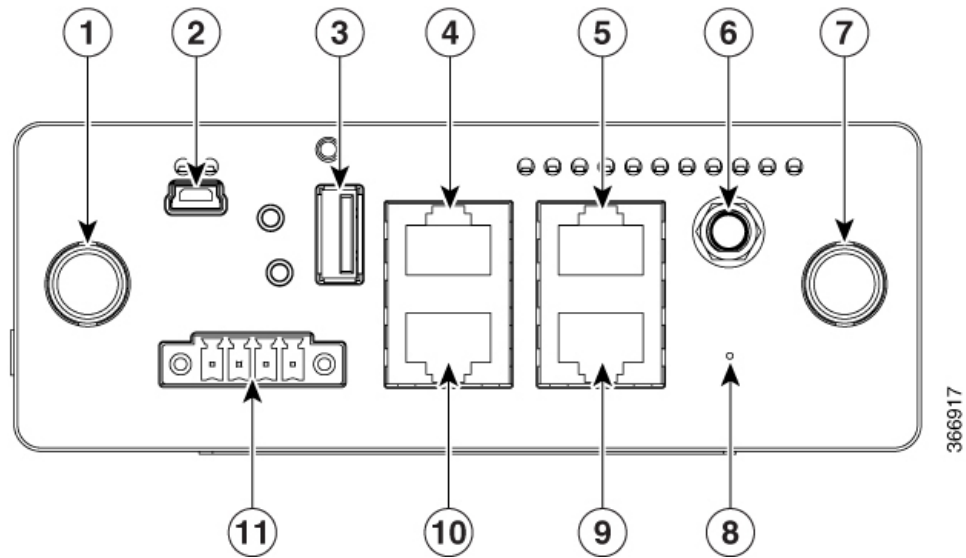
Icon	Description	Icon	Description
	Warning		

Figure 1: Cisco IR807 Front Panel, on page 5 shows the front panel details of the IR807.

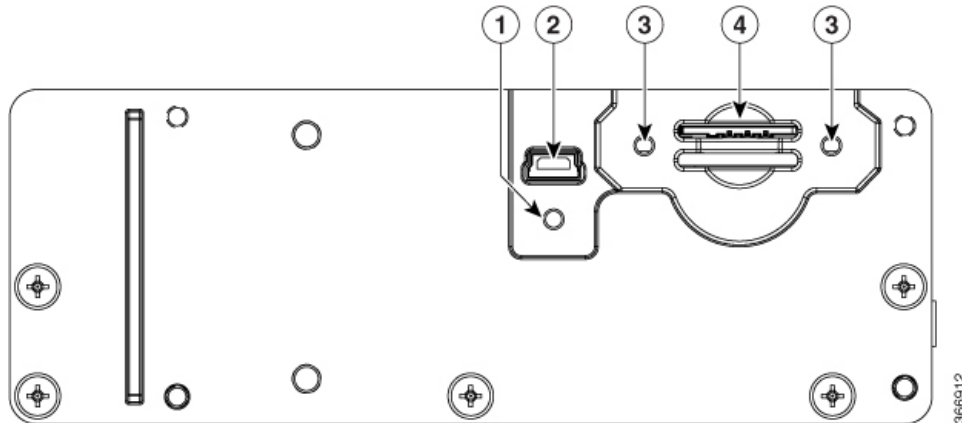
Figure 1: Cisco IR807 Front Panel



1	Antenna 1 (TNC) MAIN	7	Antenna 2 (TNC)
2	USB Console (Type B)	8	Reset Button
3	USB Type A	9	FE1 10/100
4	S0 (DTE)	10	S1 (DCE)
5	FE0 10/100 Base-T RJ-45	11	External DC
6	GPS (SMA)		

Figure 2: IR807 Back Panel, on page 6 shows the back panels details of the IR807.

Figure 2: IR807 Back Panel



1	Screw hole for protective cover over USB
2	USB Type B (under a protective cover) Reserved to be used with Modem for external provision
3	Screw holes for protective cover over SIMs (one on each side)
4	SIM0 (bottom) and SIM1 (top) Card Slots

IR807 USB Ports

The Console port is mini-USB type B port. If your laptop or PC warns you that you do not have the proper drivers to communicate with the router, you can obtain them from your computer's manufacturer, or go here: <https://www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers>

The USB Type A interface provides access to an external USB FLASH device (also known as a thumb drive or a USB key). The Cisco IOS software provides standard file system access to the flash device: read, write, erase, and copy, as well as formatting of the flash device with a FAT file system. The router can be booted from the USB drive.

Software Overview

The IR807 offers a rich IOS feature set. This marketing data sheet provides a complete list of all of the features. <https://www.cisco.com/c/en/us/products/routers/807-industrial-integrated-services-routers/index.html>

Antenna Recommendations

The IR807 is not shipped with antennas. They must be ordered separately.

NOTE: Poorly installed SIMO antennas, such that the two (or more in case of 3x3, 4x4 SIMO) antennas have a strong correlation coefficient. This may cause the two streams to interfere with each other (otherwise known as lack of diversity), since the system has trouble separating the two.

For detailed information about Cisco Antennas, please refer to the following guides:

Cisco Industrial Routers and Industrial Wireless Access Points Antenna Guide:

<https://www.cisco.com/c/en/us/td/docs/routers/connectedgrid/antennas/installing-combined/industrial-routers-and-industrial-wireless-antenna-guide.html>

Cisco Aironet Antennas and Accessories Reference Guide

http://www.cisco.com/c/en/us/products/collateral/wireless/aironet-antennas-accessories/product_data_sheet09186a008008883b.html

Related Documentation

The following documentation is available:

- Cross-Platform Release Notes for Cisco IOS:

<https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/15-7m/release/notes/15-7-3-m-rel-notes.html>

- All of the Cisco IR800 Industrial Integrated Services Router documentation can be found here:

<http://www.cisco.com/c/en/us/support/routers/800-series-industrial-routers/tsd-products-support-series-home.html>

