ISR4431/K9 Datasheet

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Overview

Cisco 4431 Integrated Services Router, which supports 3 Network Interface Modules (NIM) slots, delivers 500 Mbps to 1 Gbps aggregate throughput. This router also supports two kinds of DDRM, data plane and control/services plane, which make administrator easy to manage the router.

Quick Specs

**Figure 1 shows the appearance of Cisco ISR4431/K9.**

Table 1 shows the Quick Specs.

Product Code	Cisco ISR4431/K9
Aggregate Throughput	500 Mbps to 1 Gbps
Total onboard WAN or LAN 10/100/1000 ports	4
RJ-45-based ports	4
SFP-based ports	4
Enhanced service-module (SM-X) slot	0
NIM (Network Interface Modules) slots	3
Onboard ISC slot	1
DDRM (data plane)	2 GB (default) / 2 GB (maximum)
DDRM (control/services plane)	4 GB (default) / 16 GB (maximum)
Flash Memory	8 GB (default) / 32 GB (maximum)
Power-supply options	Internal: AC, DC, and PoE
Rack height	1 RU
Dimensions (H x W x D)	43.9 x 438.15 x 507.2 mm
Package Weight	20.88 Kg

Product Details

Figure 2 shows the front panel of Cisco ISR4431/K9.
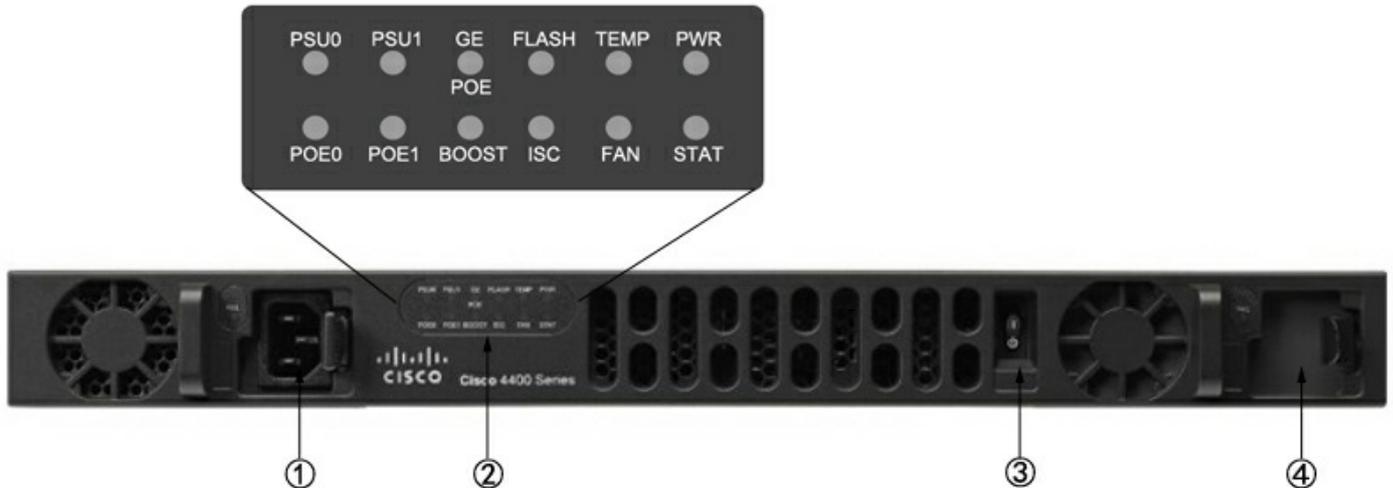
Note:

(1)	Power supply unit	(3)	Router power On/Off switch
(2)	LEDs	(4)	Optional power supply unit

·LEDs include 12 indicators.

Table 2 shows the LED descriptions.

LEDs	Represents	Color	Description
PSU	Power Supply Unit (P0 and P1) Status	Green	PSU is on and is providing power.
		Amber	PSU is on but with errors or in a failure condition.
		Off	Power supply is turned off.
GE POE	Internal PoE Daughter Card Status	Green	PSU is installed and providing power
		Amber	PSU is installed but in a failure condition.
		Off	PSU is off.
FLASH	System Flash Status	Blinking Green	Compact flash/eUSB flash is present and currently being accessed.
TEMP	Temperature Status	Solid green	All temperature sensors in the system are within acceptable range.
		Amber	One or more temperature sensors in the system are outside the acceptable range.
		Off	Temperature is not being monitored.
PWR	System Power	Green	System power is on and functioning correctly.
		Green blinking	System power is in the process of shutting down.
		Amber	System power is up, but low level initialization failed.
		Amber blinking	System power is up, but the system failed to come out of reset.
		Off	System power is off.
		Green	Two PoE power supplies are installed and operating in boost mode.

POE BOOST	Power Over Ethernet Boost Mode	Off	This can mean one of the following: ·No PoE PSU installed. ·One PoE PSU installed. ·Two PoE PSUs installed and operating in redundant mode.
ISC	ISC Slot Status	Green	PVDM4 is present and enabled.
		Amber	Initialized with error.
		Off	Not present.
FAN	Fan Status	Green	All fans are operating.
		Amber	One fan has stopped working.
		Blinking Amber	Two or more fans have stopped working, or the fan tray has been removed.
		Off	Fans are not being monitored.
STAT	System Status	Solid green	System operating normally.
		Blinking amber	BIOS/Rommon is booting.
		Amber	BIOS/Rommon has completed booting, and system is at Rommon prompt or booting platform software.
		Off	System is not out of reset or BIOS image is not loadable.

Figure 3 shows the back panel of Cisco ISR4431/K9.
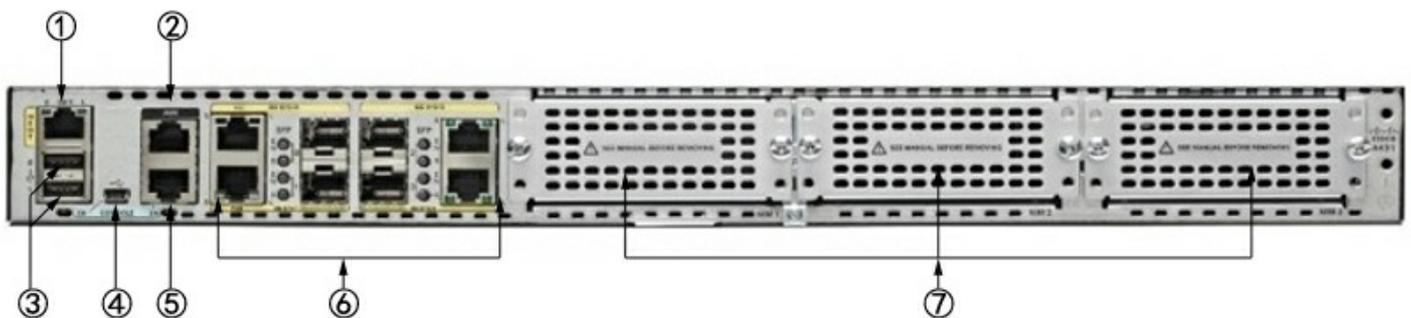
Note:

(1)	GE management port	(5)	Console port
(2)	Auxiliary port	(6)	GE Ports
(3)	USB Type A port	(7)	NIM Slots
(4)	USB Type B mini port		

·The NIMs support 2 single-wide or 1 double-wide.

·The GE Ports include 4 RJ45 ports and 4 SFP ports.

The Modules, Cards, Licenses & Accessories

Cisco ISR4431/K9 is one of the Cisco 4000 series routers, which support new modules & cards slots, such as NIM, ISC, etc. Besides, Cisco ISR4431/K9 can upgrade by licenses.

Table 3 shows some recommended modules, cards, licenses and several cables.

Items	Models	Descriptions
Console and Auxillary Cables	CAB-AUX-RJ45	Cisco CAB-AUX-RJ45 Auxiliary Cable 8ft with RJ45 and DB25M
	CAB-ETH-S-RJ45	Cisco Router Cable CAB-ETH-S-RJ45
	CAB-CONSOLE-RJ45	Cisco CAB-CONSOLE-RJ45 Console Cable 6ft with RJ45 and DB9F
	CAB-CONSOLE-USB	Cisco CAB-CONSOLE-USB Console Cable 6 ft with USB Type A and mini-B
Licenses	L-SL-44-APP-K9=	Cisco ISR 4431/4451 AppX license L-SL-44-APP-K9= with WAAS/vWAAS 1300/2500 conns RTU
Network Interface Modules	NIM-1MFT-T1/E1	Cisco Fourth-Generation Multiflex Trunk Voice and WAN network interface module
	NIM-2CE1T1-PRI	Cisco Multiflex Trunk Voice and WAN network interface module
	NIM-4E/M	Analog voice network interface card (ear and mouth)
	NIM-2FXS	Cisco Analog voice network interface card NIM-2FXS
	NIM-2FXS/4FXO	Cisco Analog voice network interface card NIM-2FXS/4FXO
	NIM-8MFT-T1/E1	Cisco Fourth-Generation Multiflex Trunk Voice and WAN network interface module
SFPs for On-Board GE Ports	GLC-SX-MMD	Cisco GLC-SX-MMD 1000BASE-SX SFP transceiver module, MMF, 850nm, DOM
	GLC-LH-SMD	Cisco GLC-LH-SMD 1000BASE-LX/LH SFP transceiver module, MMF/SMF, 1310nm, DOM
	GLC-ZX-SMD	Cisco GLC-ZX-SMD 1000BASE-ZX SFP transceiver module, SMF, 1550nm, DOM

Compare to Similar Items

Technical Specifications	ISR4461/K9	ISR4451-X/K9	ISR4431/K9	ISR4351/K9	ISR4331/K9	ISR4321/K9	ISR4221/K9
Aggregate Throughput	1.5Gbps	1 Gbps to 2 Gbps	500 Mbps to 1 Gbps	200 Mbps to 400 Mbps	100 Mbps to 300 Mbps	50 Mbps to 100 Mbps	35 Mbps to 75 Mbps
Total onboard WAN or LAN 10/100/1000 ports	4	4	4	3	3	2	2
RJ-45-based ports	4	4	4	3	2	2	2
SFP-based ports	4	4	4	3	2	1	1
Enhanced service-module slots	3	2	0	2	1	0	0
Doublewide service-module slots	2	1 (assumes no singlewide SM-X modules installed)	0	1 (assumes no singlewide SM-X modules installed)	0	0	0
NIM slots	3	3	3	3	2	2	2
OIR (all I/O modules)	Yes	Yes	Yes	Yes	Yes	Yes	No
Onboard ISC slot	1	1	1	1	1	1	No

Get more information

Do you have any question about the Cisco ISR4431/K9?

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Specification

Cisco ISR4431/K9 Specification	
Aggregate Throughput	500Mbps to 1Gbps
Total onboard WAN or LAN 10/100/1000 ports	4
RJ-45-based ports	4
SFP-based ports	4
Enhanced service-module slots	0
Doublewide service-module slots	0
NIM slots	3
OIR (all I/O modules)	Yes
Onboard ISC slot	1
Default memory double-data-rate 3 (DDR3) error-correction-code (ECC) DRAM (Combined control/services/data planes)	NA
Maximum memory DDR3 ECC DRAM (Combined control/services/data planes)	NA
Default memory DDR3 ECC DRAM (data plane)	2 GB
Maximum memory DDR3 ECC DRAM (data plane)	2 GB
Default memory DDR3 ECC DRAM (control/services plane)	4 GB
Maximum memory DDR3 ECC DRAM (control/services plane)	16 GB
Default flash memory	8 GB
Maximum flash memory	32 GB
External USB 2.0 slots (type A)	2
USB console port -type B mini (up to 115.2 kbps)	1
Serial console port - RJ45 (up to 115.2 kbps)	1
Serial auxiliary port - RJ45 (up to 115.2 kbps)	1
Power-supply options	Internal: AC, DC, and PoE
Redundant power supply	Internal: AC, DC, and PoE
AC input voltage	100 to 240 VAC autoranging
AC input frequency	47 to 63 Hz
AC input current range, AC power supply (maximum)	3 to 1.3A
AC input surge current	60 A peak and less than 5 Arms per half cycle
Typical power (no modules) (watts)	65

Maximum power with AC power supply (watts)	250 (no PoE)
Maximum power with PoE power supply (platform only) (watts)	500 with PoE redundant
Maximum endpoint PoE power available from PoE power supply (watts)	250 W with optional redundancy

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Support and Resources

📄 **Cisco ISR 4000 Series Router Datasheet**

📄 **Comparison of Cisco ISR 4000 Models**

📄 **Cisco 4000 Series Integrated Services Routers Frequency Asked Question**

📄 **Cisco 4000 Series Integrated Services Routers Configuration Guide**

Transition Guide

📄 **Guide to Select New Cisco Routers**

📄 **Guide to Upgrade Your ISR G1 and ISR G2 Routers to ISR 4000**

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