

# ISR4461/K9 Datasheet

## Overview

ISR4461/K9 is the Cisco ISR 4461 with 4 onboard GE, 3 NIM slots, 1 ISC slot, 3 SM slots, 8 GB Flash Memory default, 2 GB DRAM default (data plane), 4 GB DRAM default (control plane). The Cisco 4000 Series Integrated Services Routers (ISR) revolutionize WAN communications in the enterprise branch. With new levels of built-in intelligent network capabilities and convergence, the routers specifically address the growing need for application-aware networking in distributed enterprise sites. These locations tend to have lean IT resources. But they often also have a growing need for direct communication with both private data centers and public clouds across diverse links, including Multiprotocol Label Switching (MPLS) VPNs and the Internet.

## Quick Spec

Table 1 shows the quick spec.

Technical Specifications	ISR4461/K9
Aggregate Throughput	1.5Gbps
Total onboard WAN or LAN 10/100/1000 ports	4
Total onboard WAN or LAN 10Gbps ports	2
RJ-45-based ports	4
SFP-based ports	4
Enhanced service-module slots	3
Doublewide service-module slots	2
NIM slots	3
OIR (all I/O modules)	Yes
Onboard ISC slot	1
Dimensions (H x W x D)	3.5 x 17.25 x 18.5 in (88.9 x 438.15 x 469.9 mm)
Rack height	2 Rack Units (2RU)

## The Modules, Cards, Licenses

Table 2 shows the recommended products.

Model	Description
<a href="#">MEM-4460-8G</a>	8G DRAM (1 DIMM) for Cisco ISR 4460
<a href="#">MEM-4460-16G</a>	16G DRAM (1 DIMM) for Cisco ISR 4461
<a href="#">MEM-4460-32G</a>	32G DRAM (1 DIMM) for Cisco ISR 4460
<a href="#">MEM-FLSH-8GU16G</a>	8G to 16G Flash Memory Upgrade for Cisco ISR 4400
<a href="#">MEM-FLSH-8GU32G</a>	8G to 32G Flash Memory Upgrade for Cisco ISR 4460
<a href="#">NIM-1MFT-T1/E1</a>	Cisco Fourth-Generation Multiflex Trunk Voice and WAN network interface module
<a href="#">NIM-2MFT-T1/E1</a>	2 port Multi-flex Trunk Voice/Clear-channel Data T1/E1 Module
<a href="#">NIM-4MFT-T1/E1</a>	Voice/WAN Module (4-port T1/E1)
<a href="#">NIM-8MFT-T1/E1</a>	Cisco Fourth-Generation Multiflex Trunk Voice and WAN network interface module

<a href="#">NIM-1CE1T1-PR1</a>	Cisco Multiflex Trunk Voice and WAN network interface module
<a href="#">NIM-2CE1T1-PR1</a>	Cisco Multiflex Trunk Voice and WAN network interface module
<a href="#">FL-44-HSEC-K9=</a>	U.S. Export Restriction Compliance license for 4400 series

## Compare to Similar Items

Table 3 shows the comparison.

Technical Specifications	<a href="#">ISR4461/K9</a>	<a href="#">ISR4451-X/K9</a>	<a href="#">ISR4431/K9</a>	<a href="#">ISR4351/K9</a>	<a href="#">ISR4331/K9</a>	<a href="#">ISR4321/K9</a>	<a href="#">ISR4221/K9</a>
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
Total onboard WAN or LAN 10Gbps ports	2	No	No	No	No	No	No
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 [ISR4461/K9](#)?

Contact us now via [Live Chat](#) or [sales@router-switch.com](mailto:sales@router-switch.com).

## Specification

ISR4461/K9 Specification	
Aggregate Throughput	1.5Gbps
Total onboard WAN or LAN 10/100/1000 ports	4
Total onboard WAN or LAN 10Gbps ports	2
RJ-45-based ports	4
SFP-based ports	4
Enhanced service-module slots	3
Doublewide service-module slots	2

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)	4 GB
Maximum memory DDR3 ECC DRAM (data plane)	4 GB
Default memory DDR3 ECC DRAM (control/services plane)	8 GB
Maximum memory DDR3 ECC DRAM (control/services plane)	32 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
<b>Power Specifications</b>	
AC input voltage	100 to 240 VAC auto ranging
AC input frequency	47 to 63 Hz
AC input current range, AC power supply (maximum)	7.1 to 3.0A
AC input surge current	60 A peak and less than 5 Arms per half cycle
Typical power (no modules) (watts)	-
Maximum power with AC power supply (watts)	1000W (no PoE)
Maximum power with PoE power supply (platform only) (watts)	1000 with PoE redundant 1450 with PoE boost no redundancy
Maximum endpoint PoE power available from PoE power supply (watts)	500 W with optional redundancy
Maximum endpoint PoE power capacity with PoE boost (watts)	950 W no redundancy
<b>Sizes and Weights</b>	
Dimensions (H x W x D)	3.5 x 17.25 x 18.5 in 88.9 x 438.15 x 469.9 mm)
External Power Supply Dimensions (H x W x D)	N/A
Rack height	2 Rack Units (2RU)
Rack-mount 19in. (48.3 cm) EIA	Included
Rack-mount 23in. (58.4 cm) EIA	Optional

Wall-mount	No
Weight with 1, 450-WAC power supply (no modules)	-
Weight with 1 1,000-WAC power supply+ 1 PoE power module (no other modules)	-
Weight with AC PS (no modules)	-
Weight with AC PS with POE (no modules)	-
Typical weight (fully loaded with modules)	-
Airflow	I/O side to bezel side
MTBF (Hours)	480770
<b>Environmental Specifications</b>	
<b>Operating Conditions</b>	
Temperature	32 to 104°F (0 to 40°C)
Altitude (China)	0 – 6,560 ft. (0 – 2,000 m)
Altitude (Rest of the world)	0 – 10,000 ft. (0 – 3,050 m)
Relative humidity	5% to 85%
Short-term humidity	5% to 90%, not to exceed 0.024 kg water/kg of dry air
Acoustics: Sound pressure (Typical/maximum)	50.6/73.1 dBA
Acoustics: Sound power (Typical/maximum)	58.2/78.8 dBA
<b>Nonoperating Conditions</b>	
Temperature	-40 to 158°F (-40 to 70°C)
Relative humidity	5% to 95%
Altitude	15,584 ft (4750m)
<b>Regulatory and Compliance</b>	
Safety	UL 60950-1 CAN/CSA C22.2 No. 60950-1 EN 60950-1 AS/NZS 60950-1 IEC 60950-1
EMC	47 CFR, Part 15 ICES-003 Class A EN55032 Class A CISPR32 Class A AS/NZS CISPR 32 Class A VCCI V-3 CNS 13438 EN 300-386 EN 61000 (Immunity) EN 55024, CISPR 24 KN22, KN24

<b>Telecom</b>	<p>T1  IC CS-03:2004  TIA-968-B:2009  HKTA 2028:2010  HKTA 2017:2010  HKTA 2015: 2006  G.703:2001  ID0002:2007  IS6100:2004  DSPR Gray Book:2000  DSPR Technical Condition: 2004  E1  AS/ACIF S016: 2001  AS/ACIF S038: 2001  G.703:2001  TBR 4:1995  TBR 12:1993  TBR 13:1996  RRA 2009-38  (RRL 2005-96)  IDA TS DLCN:2011  IDA TS ISDN PRA:2005  IS6100: 2004  PTC 220:2008  Ethernet  IEEE 802.3  ANSA X3.263</p>
<b>Cisco IOS XE Software</b>	
<b>Protocols</b>	<p>IPv4, IPv6, static routes, Routing Information Protocol Versions 1 and 2 (RIP and RIPv2), Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), Border Gateway Protocol (BGP), BGP Router Reflector, Intermediate System-to-Intermediate System (IS-IS), Multicast Internet Group Management Protocol Version 3 (IGMPv3), Protocol Independent Multicast sparse mode (PIM SM), PIM Source-Specific Multicast (SSM), Resource Reservation Protocol (RSVP), Cisco Discovery Protocol, Encapsulated Remote Switched Port Analyzer (ERSPAN), Cisco IOS IP Service-Level Agreements (IPSLA), Call Home, Cisco IOS Embedded Event Manager (EEM), Internet Key Exchange (IKE), access control lists (ACL), Ethernet Virtual Connections (EVC), Dynamic Host Configuration Protocol (DHCP), Frame Relay (FR), DNS, Locator ID Separation Protocol (LISP), Overlay Transport Virtualization (OTV), Hot Standby Router Protocol (HSRP), RADIUS, authentication, authorization, and accounting (AAA), Application Visibility and Control (AVC), Distance Vector Multicast Routing Protocol (DVMRP), IPv4-to-IPv6 Multicast, MPLS, Layer 2 and Layer 3 VPN, IPsec, Layer 2 Tunneling Protocol Version 3 (L2TPv3), Bidirectional Forwarding Detection (BFD), IEEE 802.1ag, and IEEE 802.3ah</p>
<b>Encapsulations</b>	<p>Generic routing encapsulation (GRE), Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR) (FR.15 and FR.16), High-Level Data Link Control (HDLC), Serial (RS-232, RS-449, X.21, V.35, and EIA-530), and PPP over Ethernet (PPPoE)</p>
<b>Traffic management</b>	<p>QoS, Class-Based Weighted Fair Queuing (CBWFQ), Weighted Random Early Detection (WRED), Hierarchical QoS, Policy-Based Routing (PBR), Performance Routing (PfR), and Network-Based Application Recognition (NBAR)</p>
<b>Cryptographic algorithms</b>	<p>Encryption: DES, 3DES, AES-128 or AES-256 (in CBC and GCM modes); Authentication: RSA (748/1024/2048 bit), ECDSA (256/384 bit); Integrity: MD5, SHA, SHA-256, SHA-384, SHA-512</p>