Cisco 8010 Series Large Density Fixed Routers



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Contents

Product overview 3

Key product highlights 3

Key attributes 4

Key software feature support 6

Supported transceiver modules 10

Regulatory standards compliance 10

Ordering information 12

Service and support 15

Warranty information 15

Product sustainability 16

Cisco Capital 16

Document history 16

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Powered by the Cisco Silicon One™ A100 ASIC, the Cisco® 8010 Series Large Density Fixed Routers offer Class C timing support and end-to-end encryption, enabling seamless network growth and scalability. Built on the robust Cisco IOS® XR operating system, these routers are designed for use in dense metro access and pre-aggregation deployments, delivering both Capital Expenditure (CapEx) savings and enhanced operational simplicity.

Product overview

Building on the success of our Cisco 8000 Series Routers, which use the Cisco Silicon One™ ASIC, we are thrilled to introduce the Cisco 8010 Series, powered by the new A100 ASIC. This unified silicon architecture eliminates boundaries across a significant portion of the networking market, providing scalability from web-scale to service provider deployments. The Cisco 8010 Series offers versatile Ethernet interface options, ranging from 1G and 25G to 100G and 400G. These industrial-temperature devices support Class C timing and feature encryption capabilities, including MACsec at line rate on all ports and IPsec for data security.

It can also operate as an extension shelf of Cisco ASR 9000 Series Aggregation Services Routers, consolidating multiple layers in the network and dramatically reducing operational costs. Cisco 8010 devices as satellite port extender will be available with ASR 9000 5th Gen systems as host from IOS XR 26.2.1 release onwards. Please refer to Table 9 for ordering information.

Powered by the industry-leading, carrier-class version of Cisco IOS XR software, these routers are designed for operational efficiency and service agility. The Cisco 8010 Series uses the new Cisco IOS XR Flexible Consumption Model (FCM) 2.0, which consists of three main components: Hardware, Right to Use (RTU), and System-Level Software Innovation Access (SIA). For more details about FCM 2.0, please refer to the FCM 2.0 data sheet.

In line with our sustainability goals, these devices feature Gold-level efficient power supply units for improved power utilization and use minimal plastic labels and parts, helping to reduce your carbon footprint.

Key product highlights

- 1 Rack-Unit (1RU) fixed form factor
- Versatile Ethernet interface options: 1/10/25/50G and 40/100G/400G
- Low speed Ethernet options: 10/100/1000M
- G.8273.2 Class C Timing compliant
- Modular GNSS with Primary Reference Time Clock Class B (PRTC-B) for better performance
- MACsec and IPsec support for secure data communication[1]
- Rich packet Ethernet Operations, Administration, and Management (OAM) capabilities, including Y.1564 SADT
- Power-optimized router with advanced algorithms for reduced Operating Expenses (OpEx)
- Suitable for indoor or outdoor cabinets: Sealed IP65/IP66 cabinet with heat exchanger conforming to GR487 specs with sufficient cooling
- The devices are also used as satellite port extender with ASR 9000 5th Gen systems as host
- Based on Cisco IOS XR Flexible Consumption Model (FCM) 2.0

[1] Feature available post FCS.

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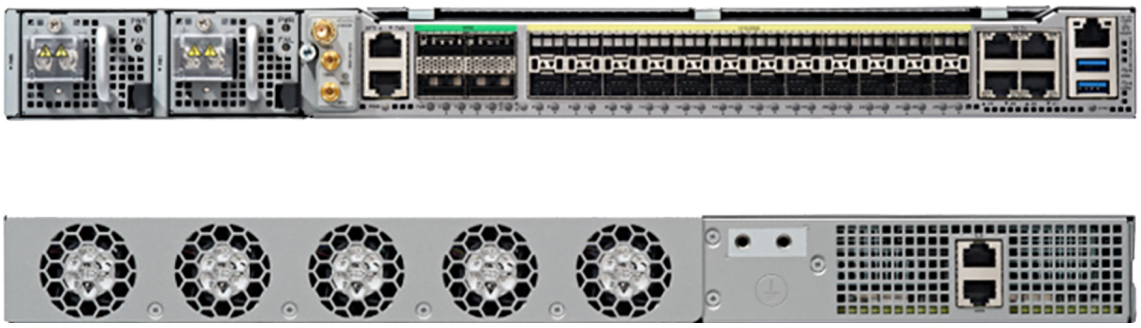


Figure 1. Cisco 8011-4G24Y4H-I

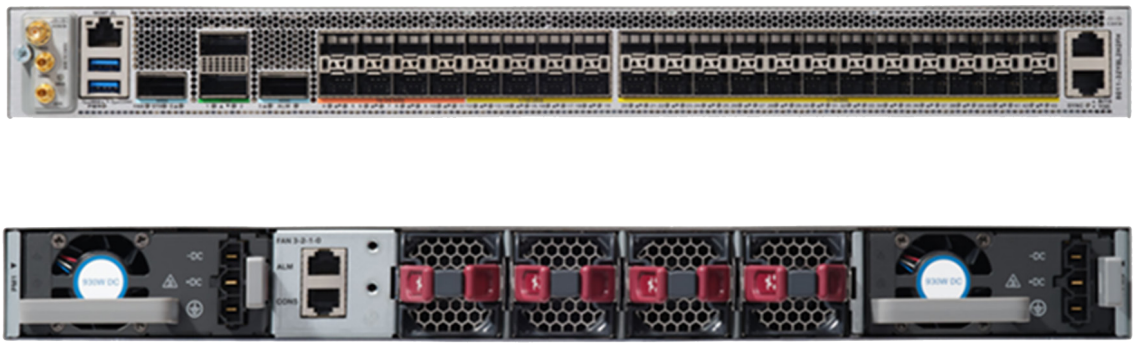


Figure 2. Cisco 8011-32Y8L2H2FH

Key attributes

Table 1. Key attributes of the 8011-4G24Y4H-I model

Chassis product ID	8011-4G24Y4H-I	8011-32Y8L2H2FH
CPU	4 cores 2.2GHz	4 cores 2.2GHz
Memory	16GB DRAM	16GB DRAM
Storage	38GB eMMC	38GB eMMC
Interfaces	4 ports 40/100G QSFP28 24 ports 1/10/25G SFP28 4 ports 10/100/1000M RJ-45	2 ports 400G QSFP56-DD 2 ports 100G QSFP28 8 ports 10/25/50G SFP56 32 ports 1/10/25G SFP28
Maximum NIF	1004G	1600G

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Chassis product ID	8011-4G24Y4H-I	8011-32Y8L2H2FH
Performance	Up to 480 Mpps	Up to 480 Mpps
Power supplies	Modular redundant (AC/DC)	Modular redundant (AC/DC)
Fans	Fixed fans with redundancy	Modular fans with redundancy
Airflow	Front to back	Front to back
Operating temperature range	I-Temp –40° to +65°C (–40° to +149°F)	C-Temp -5° to +55°C (+32° to +140°F)
Non-operating (storage) temperature	–40° to +70°C (–40° to +158°F)	-40° to +70°C (-40° to +158°F)
Operating humidity range	5% to 95% RH, noncondensing	5% to 85% RH, noncondensing
Storage (relative) humidity	5% to 95% at 40°C (104°F) per NEBS GR-63-Core	5% to 95% at 40°C (104°F) for 96 hours as per NEBS GR-63-Core
Altitude	Up to 3960 meters (13,000 feet)	Up to 3960 meters (13,000 feet)
Power	Worldwide ranging AC (90 to 264V; 50 to 60 Hz) Worldwide ranging DC (–40.8V to –72V)	Worldwide ranging AC (90 to 264V; 50 to 60 Hz) Worldwide ranging DC (–40.8V to –72V)
Surge rating*	DC: 2kV CM, 1kV DM AC: 2kV CM, 2kV DM	DC: 2kV CM, 1kV DM AC: 4kV CM, 2kV DM
Timing ports	Time of Day (ToD) and Building Integrated Timing Supply (BITS) 8000-TIC: 1 PPS, 10 MHz 8000-TIC-GNSS (internal GNSS PRTC-B module): 1 PPS, 10 MHz, ANT	Time of Day (ToD) and Building Integrated Timing Supply (BITS) 8000-TIC: 1 PPS, 10 MHz 8000-TIC-GNSS (internal GNSS PRTC-B module): 1 PPS, 10 MHz, ANT

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Chassis product ID	8011-4G24Y4H-I	8011-32Y8L2H2FH
Physical specifications	Height: 43.6 mm (1.72 in.) Width: 439.4 mm (17.3 in.) Depth: 260 mm (10.24 in.) Weight: 4.5 kg (no PSU); 5.7 kg (with 2 PSUs)	Height: 43.6 mm (1.72 in.) Width: 439.4 mm (17.3 in.) Depth: 437 mm (17.2 in.) Weight: 6.7 kg (no PSU); 8.8 kg (with 2 PSUs)
Mounting options	19 in., 23 in., ETSI	19 in., 23 in., ETSI
Management interfaces	USB console port USB memory port RS-232 console port 10/100/1000M RJ-45 Ethernet out-of-band management port	USB console port USB memory port RS-232 console port 10/100/1000M RJ-45 Ethernet out-of-band management port

*** Requires external surge protection devices for installations where higher surge levels are expected. Failure to do so might lead to permanent damage.**

Key software feature support

Table 2. Key software feature support

Specification	Description
Layer 3	IPv4 and IPv6 unicast routing Virtual Routing and Forwarding (VRF) Open Shortest Path First (OSPF) v2, v3 Intermediate System to Intermediate System (IS-IS) for IPv4 and IPv6 Equal-Cost Multipath (ECMP) Virtual Router Redundancy Protocol (VRRP) Hot Standby Router Protocol (HSRP) Generic Routing Encapsulation (GRE) Policy-Based Routing (PBR) ACL-based Forwarding (ABF) L3 Virtual Private Network (L3VPN)

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Specification	Description
Layer 2	Ethernet Flow Point (EFP) Bridge Domains Virtual Private Wire Service (VPWS) Virtual Private LAN Service (VPLS) Ethernet VPN (EVPN) Ethernet VPN Virtual Private Wire Service (EVPN-VPWS)
Integrated Routing and Bridging (IRB)	Bridge Virtual Interfaces (BVI) Ethernet VPN IRB (EVPN-IRB)
MPLS	Multiprotocol Label Switching (MPLS) Label Distribution Protocol (LDP) MPLS Traffic Engineering (MPLS-TE) with RSVP-TE
Segment Routing (SR)	Segment Routing with MPLS data plane (SR-MPLS) Segment Routing with IPv6 data plane (SRv6) Segment Routing Traffic Engineering (SR-TE) Segment Routing Path Computation Element (SR-PCE) Topology-Independent Loop-Free Alternate (TI-LFA) Segment Routing On-Demand Next-Hop (SR-ODN) Segment Routing Performance Management (SR-PM) Segment Routing v6 Performance Management (SRv6-PM) Segment Routing Data Plane Monitoring (SR-DPM) Tree-SID Integrated Performance Monitoring (IPM)
Multicast	IPv4 and IPv6 multicast routing Protocol Independent Multicast – Sparse Mode (PIM-SM) PIM – Source Specific Multicast (PIM-SSM) Internet Group Management Protocol (IGMP) v3 Multicast Listener Discovery (MLD) v2 Multicast Label Distribution Protocol (mLDP) MPLS Point-to-Multipoint Traffic Engineering (MPLS P2MP-TE) Next Generation multicast VPN (NG mVPN)

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Specification	Description
Quality of Service (QoS)	Virtual Output Queueing (VOQ) with deep packet buffering Class-based 3-level hierarchical QoS Policing, shaping, remarking Multilevel priority queuing Random Early Detection (RED), Weighted RED (WRED) Dual Queue Limit (DQL)
Timing	Enhanced Synchronous Ethernet (eSyncE) Enhanced Ethernet Synchronization Message Channel (eESMC) Internal PRTC-B GNSS receiver (optional HW module) External GNSS receiver IEEE 1588-2008 Precision Time Protocol (PTP): T-GM, T-BC, Virtual Port, A-PTS G.8275.1, G.8275.2, G.8265.1, G.8273.2 Class C Network Time Protocol (NTP)
Security	MACsec and IPsec Control Plane Protection (CoPP) Management Plane Protection (MPP) Local Packet Transport Services (LPTS) Authentication, Authorization, and Accounting (AAA) Access Control Lists (ACL) for IPv4, IPv6, and L2 BGP FlowSpec Unicast Reverse Path Forwarding (uRPF) 802.1X

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Specification	Description
OAM	Link Layer Discovery Protocol (LLDP) Cisco Discovery Protocol (CDP) Internet Control Message Protocol (ICMP) Dynamic Host Configuration Protocol (DHCP), DHCP Relay Bidirectional Forwarding Detection (BFD) v4, v6 MPLS OAM Connectivity Fault Management (CFM) Y.1731 Delay Measurement (DM) Y.1731 Synthetic Loss Measurement (SLM) Two-Way Active Measurement Protocol (TWAMP, TWAMP Lite) IP SLA (Service-Level Agreement) NetFlow, sFlow, IPFIX 315 Switch Port Analyzer (SPAN, ERSPAN, SPAN to file) Dying Gasp
Manageability	Command-Line Interface (CLI) SSH, Telnet, SCP, FTP, TFTP Simple Network Management Protocol (SNMP) Network Configuration Protocol (NETCONF) gRPC (Remote Procedure Calls) YANG models (OpenConfig, IETF) Model/event-Driven Telemetry (MDT) RPM-based software infrastructure Embedded Event Manager (EEM) Zero-Touch Provisioning (ZTP) Secure Zero-Touch Provisioning (sZTP)

Note: Some features are not supported at FCS.

Note: When used as satellite port extenders, all forwarding occurs on the host. Therefore, some of these features will not apply when device operates in satellite mode.

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Supported transceiver modules

Please refer to the Transceiver Module Group (TMG) Compatibility Matrix for the transceivers supported by the 8010 Series.

Regulatory standards compliance

Table 3. Regulatory standards compliance

Specification	8010 Series Large Density Routers
Regulatory compliance	Products comply with CE Markings according to directives 2014/30/EU and 2014/35/EU
Network Equipment Building Standards (NEBS)	GR-63-CORE GR-1089-CORE 8011-32Y8L2H2FH: GR-3108 Class-1 8011-4G24Y4H-I: GR-3108 Class-2
ATIS TEER certification	ATIS-0600015.03.2009
Safety	ANSI/UL 60950-1 CAN/CSA C22.2 No. 60950-1 ANSI/UL 62368-1 CAN/CSA C22.2 No. 62368-1 EN/IEC 62368-1
EMC standards (Emissions)	47 CFR Part 15:2016 CISPR32:2012:Ed:1 CISPR32:2015:Ed:2 CNS 15936:2016 EN 55032:2012 EN 55032:2015 EN 61000-3-3:2013+A1:2019 EN IEC 61000-3-2:2019+A1:2020 EN300 386:2012:V1.6.1 EN300 386:2021:V2.1.23 ICES-003:2020:Iss:7

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Specification	8010 Series Large Density Routers
	KS C 9610-3-2:2020 KS C 9610-3-3:2020 KS C 9832:2019 VCCI-CISPR 32:2016 1TR9:2016 EN50121-4:2016 EN50121-4:2016:A1:2019 IEC62236-4:2018:Ed:3.0 TEC 11016:2016_TEC/SD/DD/EMC-221/05/OCT16 EN 301 489-1:2019:V2.2.3 EN 301 489-19:2022:V:2.2.1
EMC standards (Immunity)	CISPR24:2010+A1:2015 CISPR35:2016:Ed:1 EN 55035:2017 EN IEC61000-6-1:2019 EN300 386:2012:V1.6.1 EN300 386:2021:V2.1.23 EN61000-6-1:2007 EN61000-6-2:2005 EN61000-6-2:2019 IEC61000-6-1:2016:Ed:3 IEC61000-6-2:2016:Ed:3 KS C 9835:2019 1TR9:2005 1TR9:2016 EN50121-4:2016 EN50121-4:2016:A1:2019 IEC62236-4:2018:Ed:3.0 TEC 11016:2016_TEC/SD/DD/EMC-221/05/OCT16 EN 301 489-1:2019:V2.2.3 EN 301 489-19:2022:V:2.2.1

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Specification	8010 Series Large Density Routers
ETSI	ETS/EN 300 119 Part 4 ETS/EN 300 019 – Storage: Class 1.2, Transportation: Class 2.3, In-Use/Operational: Class 3.2 ETS/EN 300 753
RoHS	The product is RoHS-6 compliant with exceptions for leaded-Ball Grid-Array (BGA) balls and lead press-fit connectors.

Ordering information

Table 4. Ordering information

Router product ID	8011-4G24Y4H-I	8011-32Y8L2H2FH
Description	Cisco 8010 4x1G Cu, 24x25G, 4x100G QSFP28	Cisco 8010 32x25G, 8x50G, 2x100G QSFP28, 2x400G QDD
Power supply for AC variant	PWR-400-AC	PWR-650-AC-R
Power supply for DC variant	PWR-400-DC	PWR-930-DC-R
Fans	Not Applicable	FAN-1RU-PI-V3
Timing card	8000-TIC 8000-TIC-GNSS (optional)	8000-TIC 8000-TIC-GNSS (optional)
FCS software	Cisco IOS XR 25.1.1	Cisco IOS XR 25.4.1

Table 5. Accessory kit for 8011-4G24Y4H-I

Accessories	Description
CBL-BRKT-V1	Cable Management Bracket for 8010 Series
RCKMT-19-V1	19-inch Rack Mounting Kit for 8010 Series
RCKMT-ETSI-V1	21-inch (ETSI) Rack Mounting Kit for 8010 Series
RCKMT-23-V1	23-inch Rack Mounting Kit for 8010 Series

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Table 6. Accessory kit for 8011-32Y8L2H2FH

Product ID	Description
CBL-BRKT-V2	Cable Management Bracket for 8010 Series Router
RCKMT-19-KIT1	2 Post 19-inch Rack Mounting Kit for 8010 Series
RCKMT-19-KIT2	4 Post 19-inch Rack Mounting Kit for 8010 Series
RCKMT-ETSI-KIT1	2 Post 21-inch (ETSI) Rack Mounting Kit for 8010 Series
RCKMT-ETSI-KIT2	4 Post 21-inch (ETSI) Rack Mounting Kit for 8010 Series
RCKMT-23-KIT1	2 Post 23-inch Rack Mounting Kit for 8010 Series
RCKMT-23-KIT2	4 Post 23-inch Rack Mounting Kit for 8010 Series
CAB-48DC-40A-8AWG	C-Series -48VDC PSU Power Cord, 3.5M, 3 Wire, 8AWG, 40A

Table 7. Ordering information for software licenses available on Cisco 8010 Series

Product ID	Description
ESS-NGA-10G-RTU	Access Network SW&Autom Ess 1.0 Perp RTU (per 10G)
ADN-NGA-10G-RTU	Access Network SW&Autom Adn 1.0 Perp RTU (per 10G)
PRM-NGA-10G-RTU	Access Network SW&Autom Prm 1.0 Perp RTU (per 10G)
NGA-L-SIA-3	SIA per system for 3 years - Large
NGA-L-SIA-5	SIA per system for 5 years – Large

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Table 8. Ordering information for power cables supported

Part number	Description
CAB-AC-SA	Power Cord - South Africa, 16/10A, 250V, 1830mm, -40C to +85C
CAB-AC-ARG	Power Cord - Argentina, 10A, 250V, 2500mm, -40C to +85C
CAB-AC-ISR	Power Cord - Israel, 16/10A, 250V, 2500mm, -40C to +85C
CAB-AC-TAI	Power Cord - Taiwan, 15/10A, 125V, 2500mm, -40C to +85C
CAB-AC-CHI	Power Cord - China, 10A, 250V, 2500mm, -40C to +85C
CAB-AC-KOR	Power Cord - Korea, 16/10A, 125V, 2500mm, -40C to +85C
CAB-AC-EUR	Power Cord - Europe, 16/10A, 250V, 2500mm, -40C to +85C
CAB-AC-ITL	Power Cord - Italy, 10A, 250V, 2500mm, -40C to +85C
CAB-AC-UK	Power Cord - UK, 13/10A, 250V, 2500mm, -40C to +85C
CAB-AC-AUS	Power Cord - Australia, 10A, 250V, 2500mm, -40C to +85C
CAB-AC-US	Power Cord - US, 15A, 125V, 2500mm, -40C to +85C
CAB-AC-BRA	Power Cord - Brazil, 10A, 250V, 2500mm, -40C to +85C
CAB-AC-IND	Power Cord - India, 16/10A, 250V, 2500mm, -40C to +85C
CAB-AC-SUI	Power Cord - Swiss, 10A, 250V, 2500mm, -40C to +85C

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Table 9. 8011-4G24Y4H-I and 8011-32Y8L2H2FH as satellite port extenders

Port Extender PIDs	8011-4G24Y4H-I-SAT
	801132Y8L2H2FH-SAT
Host	ASR 9000 5th Gen Systems
Minimum Supported Release	IOS XR 26.2.1
Access ports on Satellite (Port extender)	1/10/25GE
Inter-chassis Links (ICLs)	10/100/400GE
Host Licenses (ASR 9000)	**FCM:** Advantage RTU /SIA licenses based on the usage of the satellite port extender (ADN-ED-100G-RTU1 and ADN-ED-100G-SIA5 / ADN-ED-100G-SIA3) **BAU:** nV satellite licenses based on the number of satellite port extenders connected to the host (S-A9K-NVSAT1-LIC, S-A9K-NVSAT5-LIC, S-A9K-NVSAT20-LIC)

Service and support

Cisco offers a wide range of services to help accelerate your success in deploying and optimizing the Cisco 8010 Series. These innovative Cisco Customer Experience (CX) offerings are delivered through a unique combination of people, processes, tools, and partners, and they are focused on helping you increase operating efficiency and improve your network operation. Cisco CX helps you resolve mission-critical problems with direct access at any time to Cisco network experts and award-winning resources. Spanning the entire network lifecycle, Cisco CX offerings help increase investment protection, optimize network operations, support migration operations, and strengthen your IT expertise.

Warranty information

The Cisco 8010 Series Large Density Fixed Routers has a 1-year limited hardware warranty. The warranty includes hardware replacement with a 10-day turnaround from receipt of a Return Materials Authorization (RMA).

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Product sustainability

Information about Cisco's Environmental, Social, and Governance (ESG) initiatives and performance is provided in Cisco's CSR and sustainability reporting.

Table 10. Cisco environmental sustainability information

Sustainability Topic		Reference
General	Information on product-material-content laws and regulations	Materials
	Information on electronic waste laws and regulations, including our products, batteries, and packaging	WEEE Compliance
	Information on product takeback and reuse program	Cisco Takeback and Reuse Program
	Sustainability inquiries	Contact: csr_inquiries@cisco.com
Material	Product packaging weight and materials	Contact: environment@cisco.com

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Document history

New or revised topic	Described in	Date
Updated key attributes	Table 1. Key attributes of the 8011-4G24Y4H-I mode	October 10, 2025
Added 8011-4G24Y4H-I and 8011-32Y8L2H2FH as satellite port extenders	Table 9	June 24, 2026

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