

Cisco 4000 Family Integrated Services Router



ENABLING THE ULTIMATE APPLICATION EXPERIENCE

Cisco® Integrated Services Routers (ISR) are built on 30 years of our innovation and product leadership.

The Cisco 4000 Integrated Services Router family revolutionizes the delivery of application-aware services in a branch-office environment. This family provides up to 2 Gigabit performance with extensive Layer 7 services hosted internally to the branch office while maximizing operating expenses (OpEx) savings.

The Cisco 4000 family offers a multicore CPU architecture running modular Cisco IOS® XE Software that quickly adapts to the changing needs of your branch-office environment, and enables IT to roll out services at the speed of business. The separation of the control, services and data planes provides the ability to deliver application-aware network services while maintaining a stable platform and a high level of performance during periods of heavy network load. With the ability to integrate application-aware services and the ability to scale performance without a complete equipment upgrade, the Cisco 4000 offers exceptional total cost of ownership (TCO) savings and network agility through the intelligent integration of market-leading security, unified communications, and application services.

Cisco Family Overview

4000 family offers encryption acceleration, voice- and video-capable architecture, application firewall, call processing, and embedded services. In addition, the platform supports a range of wired connectivity options such as T1/E1, T3/E3, and fiber Gigabit Ethernet. This platform offers superior performance and flexibility for network deployments across large and medium-sized enterprise offices.

Key Business Benefits

Cisco ISRs provide superior services integration and agility. Designed for scalability, the modular architecture of this platform enables you to evolve and adapt with your growing business needs. The business benefits of the Cisco ISR 4000 family include the following:

- **Rich services integration:** The Cisco 4000 Router offers services integration with voice, video, security, data, and embedded services.
- **Pay-as-you-grow services:** The Cisco 4000 industry-first internal services plane allows for remote installation of application-aware services without compromise. Applications run and are managed identically to their counterparts in dedicated appliances.

- **High performance with integrated services:** The Cisco 4000 enables deployment in high-speed WAN environments with concurrent services enabled up to 2 Gbps.
- **Network agility:** The Cisco 4000 gives you the performance and services needed to accommodate the changes in the business environment brought about by the migration to cloud-based services.
- **Application aware:** The Cisco 4000 provides comprehensive application services for visibility, control, and optimization to enable customers to successfully deploy, monitor, and troubleshoot applications from anywhere.
- **Pervasive security:** The Cisco 4000 enables organizations to extend the Internet edge to the branch office with industry-leading VPN, including the FlexVPN unified configuration, robust threat defense with firewall and intrusion-prevention services, and consistent policy enforcement with Cisco TrustSec® security.
- **Investment protection:** The Cisco 4000 maximizes investment protection by supporting a rich set of Cisco IOS XE Software features delivered in a single, universal image.

Cisco ISR 4000 Positioning

With a unique combination of services and performance flexibility, the Cisco ISR 4000 fills a critical role in the Cisco ISR portfolio. The 4000 brings the best of the rich services offered by the Cisco Integrated Services Routers Generation 2 (ISR G2) portfolio and the hardware-based performance of the Cisco ASR 1000 Aggregation Services Router to a platform designed for services deployment into a high-speed WAN environment.

Cisco Services for the Branch Office

Services from Cisco and our certified partners can help you transform the branch-office experience and accelerate business innovation and growth with Borderless Networks. We have the depth and breadth of expertise to create a clear, replicable, optimized branch-office footprint across technologies that will help you:

- Increase the accuracy, speed, and efficiency of deployment
- Improve operational efficiency, save money, and mitigate risk
- Continuously improve performance

For more information, please refer to the table on page 2 or visit www.cisco.com/go/isr4000.



Feature	4321	4331	4351	4431	4451
Form Factor	1 RU Desktop	1 RU	2 RU	1 RU	2 RU
Integrated WAN Ports	1GE/SFP, 1GE	1GE/SFP, 1GE, 1SFP	2 PoE GE/SFP, 1GE/SFP	2 PoE GE/SFP, 2GE/SFP	2 PoE GE/SFP, 2GE/SFP
Performance	50Mbps, Upgradable to 100Mbps	100Mbps, Upgradable to 300Mbps	200Mbps, Upgradable to 400Mbps	500Mbps, Upgradable to 1Gbps	1Gbps, Upgradable to 2Gbps
Management Port	1 GE (Integrated Out of Band)				
Network Interface Modules (NIM)	2	2	3	3	3
Enhanced Services Module (SM-X)	N/A	1 Single Wide	2 Single or 1 Double Wide	N/A	2 Single or 1 Double Wide
Integrated Services Card (ISC) Slots	1 (PVDM 4)				
Server Virtualization Platform (UCS E-Series)	N/A	2 or 4 cores single-wide	2 or 4 cores single-wide, 6 or 8 core double-wide	N/A	2 or 4 cores single-wide, 6 or 8 core double-wide
Local Conferencing	Yes				
Cisco Unified Survivable Remote Site Telephony Support	Up to 50	Up to 100	Up to 750	Up to 1200	Up to 2000
Cisco Unified Communications Manager Express Support	Up to 50	Up to 100	Up to 250	Up to 350	Up to 450
Cisco Unified Border Element (CUBE) (SIP/H.323 Sessions)	100	400	1000	3000	6000
Digital Voice and Video (T1/E1 Channels)	Up to 240	Up to 360	Up to 720	Up to 720	Up to 1200
Analog/BRI Voice	Up to 8 ports (FXS, FXO, E/M, BRi)	Up to 12 ports (FXS, FXO, E/M, BRi)	Up to 20 ports (FXS, FXO, E/M, BRi)	Up to 12 ports (FXS, FXO, E/M, BRi)	Up to 20 ports (FXS, FXO, E/M, BRi)
IPv4 Routing Protocols	RIP v1/v2, EIGRP, OSPF, BGP, PBR, Pfr				
Multicast Routing Protocols	PIM-SM, mroute (static route), and MLD				
IPv6 Routing Protocols	EIGRP, RIP, OSPFv3, IS-IS, BGP and PBR				
PoE Support with PoE Boost	260W	530W	990W	500W	950W
Route Optimization	Pfr				
Network Contention Control	QoS, HQoS				
Application Visibility	NBAR v2				
WAN Optimization	ISR-WAAS	ISR-WAAS, vWAAS on UCS E-Series	ISR-WAAS, vWAAS on UCS E-Series	ISR-WAAS	ISR-WAAS, vWAAS on UCS E-Series
Akamai Connect	N/A	Yes	Yes	Yes	Yes
Cisco Application Centric Infrastructure	Application Performance Infrastructure Controller (APIC) with Enterprise Module				