

# Cisco 1000 Series Integrated Services Routers

---

# Contents

Primary features and benefits	4
Platform architecture and capabilities	5
Product specifications	7
System specifications	13
Cisco IOS Software licensing and packaging	20
For more information	25
Cisco and partner services	26
Ordering information	26
Cisco Capital	26
Document History	27

---

Cisco® 1000 Series Integrated Services Routers (ISRs) with Cisco IOS® XE Software combine Internet access, comprehensive security, and wireless services (LTE Advanced 3.0 wireless WAN and 802.11ac wireless LAN) in a single, high-performance device. The routers are easy to deploy and manage, with separate data and control plane capabilities.

The Cisco 1000 Series ISRs are well suited for deployment as Customer Premises Equipment (CPE) in enterprise branch offices, in service provider managed environments as well as smaller form factor and M2M use cases.

**Note:** Not all 1000 series SKU variants are available in every region with different technologies (check on CCW pricelist for your region).



**Figure 1.**  
Cisco 1100 Product Family Series



**Figure 2.**  
Cisco 1100-8P ISR with LTE advanced, back and front view



**Figure 3.**  
Cisco 1120 and 1160 with LTE pluggable and 802.11ac Wi-Fi options

## Primary features and benefits

**Table 1.** Business benefits

Business need	Features/description
<b>Lightweight, compact size with low power consumption</b>	<ul style="list-style-type: none"> <li>Can be deployed in many different environments where space, heat dissipation, and low power consumption are critical factors (Including Cisco Pluggable smaller form factor technology).</li> </ul>
<b>High performance to run concurrent services</b>	<ul style="list-style-type: none"> <li>High performance allows customers to take advantage of broadband network speeds while running secure, concurrent data, voice, video, and wireless services. C1160 models will have better overall performance.</li> </ul>
<b>High availability and business continuity</b>	<ul style="list-style-type: none"> <li>Redundant WAN connections for failover protection and load balancing.</li> <li>Dynamic failover protocols such as Virtual Router Redundancy Protocol (VRRP; RFC 2338), Hot Standby Router Protocol (HSRP), and Multigroup HSRP (MHSRP).</li> </ul>
<b>Consistent, high application performance levels</b>	<ul style="list-style-type: none"> <li>The router can run multiple services simultaneously with minimal performance degradation.</li> </ul>
<b>Risk mitigation with multilevel security</b>	<ul style="list-style-type: none"> <li>Network perimeter security with integrated application inspection firewall.</li> <li>Data privacy through high-speed IP Security (IPsec) Triple Data Encryption Standard (3DES), and Advanced Encryption Standard (AES) encryption.</li> <li>High-performance VPNs: DMVPN, FlexVPN, GETVPN.</li> <li>Encrypted Traffic Analytics (ETA) to identify malware communications in encrypted traffic using passive monitoring, extraction of relevant data elements, and supervised machine learning with cloud-based global visibility.</li> <li>Cisco Umbrella™ is a cloud security platform that provides the first line of defense against threats on the internet wherever users go.</li> <li>Security hardware acceleration.</li> <li>Trustworthy systems with Field-Programmable Gate Array (FPGA) and hardware anchor.</li> </ul>
<b>Unified control of wired and wireless networks from a common console for streamlined operations</b>	<ul style="list-style-type: none"> <li>Simplifies and centralizes configuration and management of wireless and wireline devices. Supports WLAN services without requiring a wireless LAN controller.</li> <li>Supports Mobility Express for WLAN-enabled routers.</li> </ul>
<b>Remote configuration and management to keep local IT staff lean</b>	<ul style="list-style-type: none"> <li>Supports separate console and USB ports. Can be configured to work with optional USB token.</li> <li>Supports TR-069.</li> </ul>
<b>Performance</b> <ul style="list-style-type: none"> <li>Throughput</li> <li>Service reliability</li> </ul>	<ul style="list-style-type: none"> <li>ISR 1100 can provide encrypted traffic performance greater than 350 Mbps.</li> <li>A distributed multicore architecture with the dedicated control plane and service plane.</li> <li>Remote installation of application-aware services that run identically to their counterparts in dedicated appliances (Future roadmap).</li> </ul>
<b>Lower WAN expenditures</b>	<ul style="list-style-type: none"> <li>Cisco Software-Defined WAN (SD-WAN) support for optimized WAN connection.</li> <li>Smaller form factor and Cisco Pluggable technology provide additional protection investment and flexibility.</li> </ul>
<b>Pay as you grow: IPsec performance upgrade model</b>	<ul style="list-style-type: none"> <li>Router IPsec capacity can be increased with a remote performance-on-demand license upgrade (no hardware upgrade) for exceptional savings and CapEx budget management.</li> </ul>
<b>IT consolidation, space savings, and improved Total Cost of Ownership (TCO)</b>	<ul style="list-style-type: none"> <li>Single converged branch platform integrates routing, switching, security, and performance management capabilities.</li> </ul>
<b>Business continuity and increased resiliency</b>	<ul style="list-style-type: none"> <li>The entire 1000 Series supports Power over Ethernet (PoE) and PoE+ power to endpoints (Not available on C1101 and C1109 smaller form factor series).</li> </ul>

**Table 2.** Support for Software-Defined WAN on ISR 1100

Cisco SD-WAN offers an entirely new way to manage and operate your WAN infrastructure. Cisco SDWAN is a cloud delivered architecture that offers secure, flexible and rich services with the following key benefits:

Cisco SD-WAN	Cisco SD-WAN capability can be enabled on ISR 1100 platform
Better user experience	<ul style="list-style-type: none"><li>• The ability to deploy applications in minutes, on any platform, with a consistent user experience. Deliver predictable performance for applications residing in the data center or in the cloud.</li></ul>
Greater agility	<ul style="list-style-type: none"><li>• Faster, easier deployment and operation of your WAN, and get faster performance using less bandwidth. Add new revenue generating services in minutes not months.</li></ul>
Advanced threat protection	<ul style="list-style-type: none"><li>• Securely connect your users to applications in minutes and protect your data from the WAN edge to the cloud. Secure segmentation for critical assets and multi-layer, robust security that encrypts all data.</li></ul>

IOS XE SD-WAN software enables important steps towards Intent Based Networking for WAN, i.e.

- Centralized management and operational simplicity
- Secure connectivity on the hybrid WAN
- Optimized access to SaaS and Public Cloud
- Predictable Application Quality of Experience with policy-based automation

## Platform architecture and capabilities

**Table 3.** Architectural highlights

Architectural feature	Benefits/description
Multicore processors	<ul style="list-style-type: none"><li>• High-performance multicore processors support high-speed WAN connections. The data plane uses a flow processor that delivers Application-Specific Integrated Circuit (ASIC)-like performance that does not degrade as services are added.</li></ul>
Embedded IPsec VPN hardware acceleration	<ul style="list-style-type: none"><li>• Increases scalability when combined with an optional Cisco IOS XE Software Security license, enables WAN link security and VPN services.</li></ul>
Integrated Gigabit Ethernet ports	<ul style="list-style-type: none"><li>• Provides up to 10 built-in 10/100/1000 Ethernet ports for WAN or LAN (1100-8P: 2 WAN and 8 LAN ports, 1100-4P: 2 WAN and 4 LAN ports, 1101-4P: 1WAN and 4 LAN ports, 1109-2P M2M: 1 WAN and 2 LAN ports, and 1109-4P M2M: 1 WAN and 4 LAN).</li><li>• All 1100-8P and 1100-4P platforms model have one 10/100/1000 Ethernet port that can support Small Form-Factor Pluggable (SFP)-based connectivity in addition to RJ-45 connections, enabling fiber or copper connectivity.</li><li>• Depending on the platform, PoE/PoE+ can be enabled on Gigabit Ethernet interfaces (4 PoE or 2 PoE+ ports on the 1100-8P and 2 PoE or 1 PoE+ ports on the 1100-4P), to provide power to external devices such as video endpoints and 802.11ac access points (Not available on C1101 and C1109 M2M smaller form factor models).</li><li>• Smaller form factor 1101-4P and 1109-4P with Cisco WAN LTE Pluggable technology option. Additional WAN options such as Cisco 12:1 High Speed Serial Pluggable.</li></ul>
USB-based console access	<ul style="list-style-type: none"><li>• A type B micro USB console port supports management connectivity when traditional serial ports are not available. Traditional console port is also available on selected models.</li></ul>
Optional PoE upgrade	<ul style="list-style-type: none"><li>• An optional upgrade to enable PoE capabilities on the integrated ethernet switch modules is available.</li><li>• PoE is not supported on 1101 and 1109.</li></ul>
Flash memory support	<ul style="list-style-type: none"><li>• The 1000 Series ship with a fixed 4GB or 8GB flash memory depending on the models selected.</li><li>• Type A USB 3.0 ports provide capabilities for convenient storage.</li></ul>

Architectural feature	Benefits/description
DRAM	<ul style="list-style-type: none"> <li>The 1000 Series comes with 4 GB or 8GB fixed DRAM depending on the models selected. The C1111, C1120, C1160 series have an option to include an 8 GB fixed DRAM for advanced SD-WAN security features.</li> </ul>

**Table 4.** Network management solutions

Operational phase	Application	Description
Cloud management user interface	vManage	<ul style="list-style-type: none"> <li>vManage provides a single cloud-based console to manage your network and SD-WAN security for faster deployments with automated provisioning and app assurance.</li> </ul>
Device staging and configuration	WebUI	<ul style="list-style-type: none"> <li>A GUI-based device-management tool for Cisco IOS and Cisco IOS XE Software-based access routers. This tool simplifies routing, firewall, VPN, unified communications, and WAN and LAN configuration through easy-to-use wizards.</li> </ul>
Networkwide deployment, configuration, monitoring, and troubleshooting	Cisco Prime® Infrastructure	<ul style="list-style-type: none"> <li>Offers comprehensive lifecycle management of wired and wireless access, campus, and branch-office networks; rich visibility into enduser connectivity; and application performance assurance.</li> <li>Provides wired lifecycle functions such as inventory, configuration, and image management; automated deployment; compliance reporting; integrated best practices; and reporting.</li> </ul>
Context-aware security configuration and monitoring	Cisco Prime Security Manager	<ul style="list-style-type: none"> <li>Management tool for configuring and managing context-aware security. The application supports both single- and multidevice manager form factors.</li> <li>Provides the ability to write and enforce granular context-aware security policies.</li> </ul>
Digitalized applications to become inherently network-aware and Application Policy Infrastructure Controller Enterprise Module	Cisco Digital Network Architecture (Cisco DNA Center) with APIC-EM	<ul style="list-style-type: none"> <li>Cisco DNA centers around a network infrastructure that is not only fully programmable and open to third-party innovation, but can also fully and seamlessly integrates the cloud as an infrastructure component.</li> <li>The Cisco DNA controller facilitates simple, automated and programmatic deployment of network services. It brings the notion of user- and application-aware policies into the foreground of network operations.</li> <li>With Cisco DNA, the network can provide continuous feedback to simplify and optimize network operations.</li> <li>Automate network configuration and setup APIC-EM is a central part of Cisco Digital Network Architecture. It delivers software-defined networking to the enterprise branch, campus, and WAN.</li> </ul>

**Table 5.** Embedded management capabilities

Feature	Description
Cisco IOS Embedded Event Manager ( <a href="#">EEM</a> )	<ul style="list-style-type: none"> <li>A distributed and customized approach to event detection and recovery.</li> <li>Offers the ability to monitor events and take informational, corrective, or any desired EEM.</li> <li>Action when the monitored events occur or when a threshold is reached.</li> </ul>
Cisco IOS XE IP Service-Level Agreements ( <a href="#">IP SLAs</a> )	<ul style="list-style-type: none"> <li>Helps assure the performance of new business-critical IP applications as well as IP services that use data and voice in an IP network.</li> </ul>
Simple Network Management Protocol ( <a href="#">SNMP</a> ), Remote Monitoring ( <a href="#">RMON</a> ), <a href="#">syslog</a> , <a href="#">NetFlow</a> , IP Flow Information Export (IPFix)	<ul style="list-style-type: none"> <li>Network monitoring and accounting tools. Enhanced 3G MIB with 4G MIB extension.</li> </ul>

Feature	Description
<b>LTE network management and diagnostics</b>	<ul style="list-style-type: none"> <li>• In-band and out-of-band management using Telnet (Cisco IOS XE Software Command Line Interface [CLI]) and SNMP, including MIB II and other extensions.</li> <li>• Industry-standard LTE diagnostics and monitoring tools (Qualcomm CDMA Air Interface Tester [CAIT] and Spirent Universal Diagnostic Monitor [UDM]).</li> </ul>

**Table 6.** Software features and protocols

Feature	Description
<b>Protocols</b>	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), 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, Multiprotocol Label Switching (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.
<b>Encapsulations</b>	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).
<b>Traffic management</b>	Quality of Service (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).
<b>Cryptographic algorithms</b>	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.

## Product specifications

**Table 7.** Cisco 1000 Series ISRs DSL and LTE SKUs

Model	WAN				Wi-Fi	LAN switch			Integrated Micro USB console	Pluggables
	GE	GE/SFP combo	ADSL2/VD SL2 + or G.FAST or G.SHDSL	Integrated LTE Advanced (CAT6)	802.11ac	GE	PoE or PoE+			
<b>C1101-4P</b>	1	NA	NA	NA	NA	4	NA	NA	Yes	NA
<b>C1109-2PLTEVZ</b>	1	NA	NA	NA	NA	2	NA	NA	Yes	Embedded builtin same CAT4 LTE technology as P-LTE-VZ

Model	WAN				Wi-Fi	LAN switch			Integrated Micro USB console	Pluggables
	GE	GE/SFP combo	ADSL2/VD SL2 + or G.FAST or G.SHDSL	Integrated LTE Advanced (CAT6)	802.11ac	GE	PoE or PoE+			
<b>C1109-2PLTEUS</b>	1	NA	NA	NA	NA	2	NA	NA	Yes	Embedded builtin same CAT4 LTE technology as P-LTE-US
<b>C1109-2PLTEGB</b>	1	NA	NA	NA Yes with Pluggable Technology NA	NA	2	NA	NA	Yes	Embedded builtin same CAT4 LTE technology as P-LTE-GB
<b>C1109-4PLTE2P</b>	1	NA	NA		NA	4	NA	NA	Yes	Yes (All), Dual Pluggables, Single P-1T Serial in Slot 0
<b>C1111-8P (C1111X-8P with 8 GB memory and flash for SD-WAN Advanced Security support)</b>	1	1	NA		NA	8	4	2	Yes	NA
<b>C1111-4P</b>	1	1	NA	NA	NA	4	2	1	Yes	NA
<b>C1112-8P</b>	NA	1	1 G.FAST (Annex B)	NA	NA	8	4	2	Yes	NA
<b>C1113-8P</b>	NA	1	1 G.FAST (Annex A)	NA	NA	8	4	2	Yes	NA
<b>C1113-8PM</b>	NA	1	1 G.FAST (Annex M)	NA	NA	8	4	2	Yes	NA
<b>C1116-4P</b>	NA	1	1 VA-DSL (Annex B/J)	NA	NA	4	2	1	Yes	NA
<b>C1117-4P</b>	NA	1	1 VA-DSL (Annex A)	NA	NA	4	2	1	Yes	NA
<b>C1117-4PM</b>	NA	1	1 VA-DSL (Annex M)	NA	NA	4	2	1	Yes	NA



Model	WAN				Wi-Fi	LAN switch			Integrated Micro USB console	Pluggables
	GE	GE/SFP combo	ADSL2/VD SL2 + or G.FAST or G.SHDSL	Integrated LTE Advanced (CAT6)	802.11ac	GE	PoE or PoE+			
<b>C1101-4PLTEP</b>	1	NA	NA	Yes with Pluggable Technology	NA	4	NA	NA	Yes	Yes (All), or Single P-1T Serial
<b>C1111-8PLTEEA</b>	1	1	NA	1 EMEAR and North America	NA	8	4	2	Yes	NA
<b>C1111-8PLTELA</b>	1	1	NA	1 LATAM and APAC	NA	8	4	2	Yes	NA
<b>C1111-4PLTEEA</b>	1	1	NA	1 EMEAR and North America	NA	4	2	1	Yes	NA
<b>C1111-4PLTELA</b>	1	1	NA	1 LATAM and APAC	NA	4	2	1	Yes	NA
<b>C1112-8PLTEEA</b>	NA	1	1 G.FAST (Annex B)	1 EMEAR and North America	NA	8	4	2	Yes	NA
<b>C1113-8PLTEEA</b>	NA	1	1 G.FAST (Annex A)	1 EMEAR and North America	NA	8	4	2	Yes	NA
<b>C1113-8PLTELA</b>	NA	1	1 G.FAST (Annex A)	1 LATAM and APAC	NA	8	4	2	Yes	NA
<b>C1113-8PMLTEEA</b>	NA	1	1 G.FAST (Annex M)	1 EMEAR and North America	NA	8	4	2	Yes	NA
<b>C1116-4PLTEEA</b>	NA	1	1 ADSL2/VD SL2 + (Annex B/J)	1 EMEAR and North America	NA	4	2	1	Yes	NA
<b>C1117-4PLTEEA</b>	NA	1	1 ADSL2/VD SL2 + (Annex A)	1 EMEAR and North America	NA	4	2	1	Yes	NA
<b>C1117-4PLTELA</b>	NA	1	1 ADSL2/VD SL2 + (Annex A)	1 LATAM and APAC	NA	4	2	1	Yes	NA
<b>C1117-4PMLTEEA</b>	NA	1	1 ADSL2/VD SL2 + (Annex M)	1 EMEAR and North America	NA	4	2	1	Yes	NA

Model	WAN				Wi-Fi	LAN switch			Integrated Micro USB console	Pluggables
	GE	GE/SFP combo	ADSL2/VD SL2 + or G.FAST or G.SHDSL	Integrated LTE Advanced (CAT6)	802.11ac	GE	PoE or PoE+			
<b>C1118-8P</b>	NA	1	1 G.SHDSL	NA	NA	8	4	2	Yes	NA
<b>C1121-8P</b> (C1121X-8P with 8 GB memory and flash for SD-WAN Advanced Security support)	1	1	NA	NA	NA	8	4	2	Yes	NA
<b>C1121-8PLTEP</b> (C1121X-8PLTEP with 8 GB memory and flash for SD-WAN Advanced Security support)	1	1	NA	Yes with Pluggable Technology	NA	8	4	2	Yes	Yes (All)
<b>C1126-8PLTEP</b> (C1126X-8PLTEP with 8 GB memory and flash for SD-WAN Advanced Security support)	NA	1	1 ADSL2/VD SL2 + (Annex B/J)	Yes with Pluggable Technology	NA	8	4	2	Yes	NA
<b>C1127-8PLTEP</b> (C1127X-8PLTEP with 8 GB memory and flash for SD-WAN Advanced Security support)	NA	1	1 ADSL2/VD SL2 + (Annex A)	Yes with Pluggable Technology	NA	8	4	2	Yes	Yes (All)
<b>C1127-8PMLTEP</b> (C1127X-8PMLTEP with 8 GB memory and flash for SD-WAN Advanced Security support)	NA	1	1 ADSL2/VD SL2 + (Annex M)	Yes with Pluggable Technology	NA	8	4	2	Yes	Yes (All)
<b>C1161-8P</b> (C1161X-8P with 8 GB memory and flash for SD-WAN Advanced Security support)	1	1	NA	NA	NA	8	4	2	Yes	NA
<b>C1161-8PLTEP</b> (C1161X-8PLTEP with 8 GB memory and flash for SD-WAN Advanced Security support)	1	1	NA	Yes with Pluggable Technology	NA	8	4	2	Yes	Yes (All)

**Table 8.** Cisco 1000 Series ISRs DSL and Wi-Fi SKUs

Model	WAN				Wi-Fi	LAN switch			Integrated USB 3.0 console	Pluggable
	GE	GE/SFP combo	ADSL2/VDSL2+	LTE Advanced (CAT6)	802.11ac	GE	PoE or PoE+			
<b>C1109-4PLTE2PWZ***</b>	1	NA	NA	Yes with Pluggable Technology	2X2 MIMO	4	NA	NA	Yes	Yes (All), Dual Pluggables, Single P-1T Serial in Slot 0
<b>C1111-8PWY*</b>	1	1	NA	NA	2X2 MIMO	8	4	2	Yes	
<b>C1111-4PWX**</b>	1	1	NA	NA	2X2 MIMO	4	2	1	Yes	
<b>C1112-8PWE</b>	NA	1	1 G.FAST (Annex B)	NA	2X2 MIMO	8	4	2	Yes	
<b>C1113-8PWA</b>	NA	1	1 G.FAST (Annex A)	NA	2X2 MIMO	8	4	2	Yes	
<b>C1113-8PWB</b>	NA	1	1 G.FAST (Annex A)	NA	2X2 MIMO	8	4	2	Yes	
<b>C1113-8PWE</b>	NA	1	1 G.FAST (Annex A)	NA	2X2 MIMO	8	4	2	Yes	
<b>C1113-8PWZ</b>	NA	1	1 G.FAST (Annex A)	NA	2X2 MIMO	8	4	2	Yes	
<b>C1113-8PMWE</b>	NA	1	1 G.FAST (Annex M)	NA	2X2 MIMO	8	4	2	Yes	
<b>C1116-4PWE</b>	NA	1	1 ADSL2/VDSL2+ (ISDN) Annex B/J	NA	2X2 MIMO	4	2	1	Yes	
<b>C1117-4PWE</b>	NA	1	1 ADSL2/VDSL2+ (POTS) Annex A	NA	2X2 MIMO	4	2	1	Yes	
<b>C1117-4PWA</b>	NA	1	1 ADSL2/VDSL2+ (POTS) Annex A	NA	2X2 MIMO	4	2	1	Yes	
<b>C1117-4PWZ</b>	NA	1	1 ADSL2/VDSL2+ (POTS) Annex A	NA	2X2 MIMO	4	2	1	Yes	
<b>C1117-4PMWE</b>	NA	1	1 ADSL2/VDSL2+ (POTS) Annex M	NA	2X2 MIMO	4	2	1	Yes	

\* Wi-Fi domain WY; Y = A, B, E, F, H, N, Q, R, Z (S will be available with IOX XE 16.9 or later releases starting January, 2019)

\*\* Wi-Fi domain WX; X = A, B, D, E, F, H, N, Q, R, Z

\*\*\* Wi-Fi domain WZ; Z = A, B, D, E, Q, R, Z

Cisco WLAN Country Compliance Lookup <https://www.cisco.com/c/dam/assets/prod/wireless/wireless-compliance-tool/index.html>.

**Table 9.** Cisco 1000 Series ISRs LTE, Wi-Fi, and DSL SKUs

Model	WAN				Wi-Fi	LAN switch			Integrated USB 3.0 console	Pluggable
	GE	GE/SFP combo	ADSL2/VDSL2+	LTE Advanced (CAT6)	802.11ac	GE	PoE or PoE+			
<b>C1111-8PLTEEAWX*</b>	1	1	NA	1 EMEAR and North America	2X2 MIMO	8	4	2	Yes	NA
<b>C1111-8PLTELAZY**</b>	1	1	NA	1 LATAM and APAC	2X2 MIMO	8	4	2	Yes	NA
<b>C1112-8PLTEEAWE</b>	NA	1	1 G.FAST (Annex B)	1 EMEAR and North America	2X2 MIMO	8	4	2	Yes	NA
<b>C1113-8PLTEEAWE</b>	NA	1	1 G.FAST (Annex A)	1 EMEAR and North America	2X2 MIMO	8	4	2	Yes	NA
<b>C1113-8PLTEEAWE</b>	NA	1	1 G.FAST (Annex A)	1 EMEAR and North America	2X2 MIMO	8	4	2	Yes	NA
<b>C1113-8PLTEEAWE</b>	NA	1	1 G.FAST (Annex A)	1 EMEAR and North America	2X2 MIMO	8	4	2	Yes	NA
<b>C1113-8PLTELAZY</b>	NA	1	1 G.FAST (Annex A)	1 LATAM and APAC	2X2 MIMO	8	4	2	Yes	NA
<b>C1116-4PLTEEAWE</b>	NA	1	1 ADSL2/VDSL2+ (ISDN) Annex B/J	1 EMEAR and North America	2X2 MIMO	4	2	1	Yes	NA
<b>C1117-4PLTEEAWE</b>	NA	1	1 ADSL2/VDSL2+ (POTS) Annex A	1 EMEAR and North America	2X2 MIMO	4	2	1	Yes	NA
<b>C1117-4PLTEEAWE</b>	NA	1	1 ADSL2/VDSL2+ (POTS) Annex A	1 EMEAR and North America	2X2 MIMO	4	2	1	Yes	NA
<b>C1117-4PLTELAZY</b>	NA	1	1 ADSL2/VDSL2+ (POTS) Annex A	1 LATAM and APAC	2X2 MIMO	4	2	1	Yes	NA
<b>C1117-4PMLTEEAWE</b>	NA	1	1 ADSL2/VDSL2+ (POTS) Annex M	1 EMEAR and North America	2X2 MIMO	4	2	1	Yes	NA
<b>C1101-4PLTEPWX***</b>	1	NA	NA	Yes with Pluggable Technology	2X2 MIMO	4	NA	NA	Yes	Yes (All), or Single P-1T Serial

Model	WAN				Wi-Fi	LAN switch			Integrated USB 3.0 console	Pluggable
	GE	GE/SFP combo	ADSL2/VDSL2+	LTE Advanced (CAT6)	802.11ac	GE	PoE or PoE+			
<b>C1121-8PLTEPWX*</b>  (C1121X-8PLTEPWY* with 8 GB memory and flash for SD-WAN Advanced Security support)	1	1	NA	Yes with Pluggable Technology	2X2 MIMO	8	4	2	Yes	Yes (All)

C1111-8PLTEAWX \*

\* Wi-Fi domain WX; X = A, B, E, R

C1111-8PLTEAWY \*\*

\*\* Wi-Fi domain WY; Y = D, F, H, N, Q, Z (S, E and A will be available with IOX XE 16.9 or later releases starting January, 2019)

C1101-4PLTEPWX \*\*\*

\*\*\* Wi-Fi domain WX; X = A, B, D, E, Z

C1121-8PLTEPWX \*

\* Wi-Fi domain WX; X = B, E, Z, Q

C1121X-8PLTEPWY \*\*

\*\* Wi-Fi domain WY; Y = A, E, B, Z

Cisco WLAN Country Compliance Lookup <https://www.cisco.com/c/dam/assets/prod/wireless/wireless-compliance-tool/index.html>.

## System specifications

**Table 10.** LTE (3GPP Category 4) pluggable bands supported

Region or theater	Cisco LTE 2.5 for P-LTE-VZ	Cisco LTE 2.5 for P-LTE-US	Cisco LTE 2.5 for P-LTE-GB
<b>Bands</b>	LTE bands 4, 13. FDD LTE 700 MHz (band 13), 1700 MHz and 2100 MHz (band 4 AWS).	LTE bands 2, 4, 5, 12. FDD LTE 700 MHz (band 17), 700 MHz (band 12), 850 MHz (band 5 CLR), 1700 MHz and 2100 MHz (band 4 AWS).	LTE bands 1, 3, 7, 8, 20, 28. FDD LTE 700 MHz (band 28), 800 MHz (band 20), 900 MHz (band 8), 1800 MHz (band 3), 2100 MHz (band 1), and 2600 MHz (band 7).
<b>Theoretical Category 4 download/upload speeds</b>	150 Mbps/50 Mbps	150 Mbps/50 Mbps	150 Mbps/50 Mbps
<b>United States</b>	• Verizon	• ATT and T-Mobile	
<b>Europe</b>			•

**Table 11.** LTE Advanced (3GPP Category 6) pluggable bands supported (with Dying Gasp)



Region or theater	Cisco LTE Advanced 3.0 Pluggable P-LTEA-EA	Cisco LTE Advanced 3.0 Pluggable P-LTEA-LA
<b>Bands</b>	<p>LTE bands 1–5, 7, 12, 13, 20, 25, 26, 29, 30, and 41.</p> <p>FDD LTE 700 MHz (band 12), 700 MHz (band 29), 800 MHz (band 20), 850 MHz (band 5 CLR), 850 MHz (band 26 Low), 900 MHz (band 8), 1800 MHz (band 3), 1900 MHz (band 2), 1900 MHz (PCS band 25), 1700 MHz and 2100 MHz (band 4 AWS), 2100 MHz (band 1), 2300 MHz (band 30), or 2600 MHz (band 7).</p> <p>TDD LTE 2500 MHz (band 41).</p> <p><b>Carrier aggregation band combinations:</b> 1+8; 2+(2,5,12,13,29); 3+(7,20); 4+(4,5,12,13,29); 7+(7,20); 12+30, 5+30, and 41+41.</p>	<p>LTE bands 1, 3, 5, 7, 8, 18, 19, 21, 28, 38, 39, 40, and 41.</p> <p>FDD LTE 700 MHz (band 28), 850 MHz (band 5 CLR), 850 MHz (bands 18 and 19 Low), 900 MHz (band 8), 1500 MHz (band 21), 1800 MHz (band 3), 2100 MHz (band 1), or 2600 MHz (band 7).</p> <p>TDD LTE 1900 MHz (band 39), 2300 MHz (band 40), 2500 MHz (band 41), or 2600 MHz (band 38).</p> <p><b>Carrier aggregation band combinations:</b> 1+(8,18,19,21); 3+(5,7,19,28); 7+(5,7,28); 19+21, 38+38, 39+39,40+40, and 41+41.</p>
<b>Theoretical Category 6 download/upload speeds</b>	300 Mbps/50 Mbps	300 Mbps/50 Mbps
<b>United States</b>	•	
<b>Europe</b>	•	
<b>Canada</b>	•	
<b>Australia and New Zealand</b>		•
<b>Japan</b>		•
<b>India</b>		•

**Table 12.** LTE advanced bands supported

Region or theater	Cisco LTE Advanced 3.0 LTEEA (Category 6)	Cisco LTE Advanced 3.0 LTELA (Category 6)
<b>Bands</b>	<p>LTE bands 1–5, 7, 12, 13, 20, 25, 26, 29, 30, and 41.</p> <p>FDD LTE 700 MHz (band 12), 700 MHz (band 29), 800 MHz (band 20), 850 MHz (band 5 CLR), 850 MHz (band 26 Low), 900 MHz (band 8), 1800 MHz (band 3), 1900 MHz (band 2), 1900 MHz (PCS band 25), 1700 MHz and 2100 MHz (band 4 AWS), 2100 MHz (band 1), 2300 MHz (band 30), or 2600 MHz (band 7).</p> <p>TDD LTE 2500 MHz (band 41).</p> <p><b>Carrier aggregation band combinations:</b> 1+8; 2+(2,5,12,13,29); 3+(7,20); 4+(4,5,12,13,29); 7+(7,20); 12+30, 5+30, and 41+41.</p>	<p>LTE bands 1, 3, 5, 7, 8, 18, 19, 21, 28, 38, 39, 40, and 41.</p> <p>FDD LTE 700 MHz (band 28), 850 MHz (band 5 CLR), 850 MHz (bands 18 and 19 Low), 900 MHz (band 8), 1500 MHz (band 21), 1800 MHz (band 3), 2100 MHz (band 1), or 2600 MHz (band 7).</p> <p>TDD LTE 1900 MHz (band 39), 2300 MHz (band 40), 2500 MHz (band 41), or 2600 MHz (band 38).</p> <p><b>Carrier aggregation band combinations:</b> 1+(8,18,19,21); 3+(5,7,19,28); 7+(5,7,28); 19+21, 38+38, 39+39,40+40, and 41+41.</p>

Region or theater	Cisco LTE Advanced 3.0 LTEEA (Category 6)	Cisco LTE Advanced 3.0 LTELA (Category 6)
<b>Theoretical Category 6 download/upload speeds</b>	300 Mbps/50 Mbps	300 Mbps/50 Mbps
<b>United States</b>	•	
<b>Europe</b>	•	
<b>Canada</b>	•	
<b>Middle East with specific LTE bands/frequencies</b>	•	
<b>Australia and New Zealand</b>		•
<b>Japan</b>		•
<b>China</b>		•
<b>India</b>		•
<b>Southeast Asia</b>		•
<b>Latin America</b>		• Dependent upon specific operators supporting the LTE bands listed above.
<b>South Korea</b>		•

**Table 13.** Cisco LTE advanced 3.0 (3GPP Category 6) specifications

Item	Specification
<b>LTE modem form factor</b>	<ul style="list-style-type: none"> <li>• Embedded (included with the router) or LTE Pluggable Technology with LTEP PIDs.</li> <li>• Cisco LTE Advanced 3.0 LTEEA (CAT6) and Pluggable P-LTEA-EA SKU: FW-7455-LTE-VZ (Verizon) or FW-7455-LTE-AT (ATT) or FW-7455-LTE-ST (Sprint) or FW-7455-LTE-BE (Bell) or FW-7455-LTERO (Rogers) or FW-7455-LTE-TE (Telus) or FW-7455-LTE-GN (generic for T-Mobile, Europe, and Middle East) selection option.</li> <li>• Cisco LTE Advanced 3.0 LTELA (CAT6) and Pluggable P-LTEA-LA SKU: FW-7430-LTE-AU (Australia) or FW-7430-LTE-JN (Japan) or FW-7430-LTE-GN (generic) selection option.</li> </ul>
<b>Important LTE features</b>	<ul style="list-style-type: none"> <li>• Automatic switch failover between primary and backup link.</li> <li>• Multichannel-Interface-Processor (MIP) profile configuration.</li> <li>• Remotely initiated data callback using voice or Short Message Service (SMS).</li> <li>• Remote firmware upgrade over LTE.</li> <li>• SIM lock and unlock capabilities.</li> <li>• Dying gasp available on pluggable LTE modules.</li> </ul>
<b>Dual SIM support</b>	<ul style="list-style-type: none"> <li>• High reliability, and cellular multihoming support for dual micro (3FF) SIMs card socket; compliant with ISO-7816-2 (SIM mechanical), Auto SIM carrier capability with correct firmware selection (Fast SIM failover).</li> </ul>
<b>SMS and GPS</b>  	<ul style="list-style-type: none"> <li>• GPS antenna: SMA connector (separate active GPS antenna with SMA option).</li> <li>• Send and receive SMS (maximum 160 characters).</li> <li>• Standalone GPS and Assisted GPS (AGPS); needs line of sight.</li> </ul>

Item	Specification
Modem information	<b>Modem form factor:</b> (M.2) EM7455 or (M.2) EM7430 series for Cisco LTE Advanced 3.0, WP7600 series for Cisco LTE 2.5.
Wireless technologies supported (performance and throughput)	<b>Cisco LTE Advanced 3.0 LTEE and LTEA (Refer to above Table 9: LTE Advanced Bands Supported)</b> <b>Backward compatibility:</b> <ul style="list-style-type: none"> <li>• UMTS and HSPA+.</li> <li>• DC-HSPA+ speed download with Category 24 (42 Mbps) and upload up to Category 8 (11.5 Mbps). LTEA supports DC-HSPA+ band 1, 5, 6, 8, 9, 19. LTEE supports DC-HSPA+ band 1, 2, 3, 4, 5, 8.</li> <li>• TD-SCDMA 39 (LTEA China Mobile supports).</li> </ul> <b>Cisco LTE 2.5 (Refer to Table 10: LTE Bands Supported) Backward compatibility:</b> <ul style="list-style-type: none"> <li>• P-LTE-US: HSPA+ (Band 2, 4, 5).</li> <li>• P-LTE-GB: UMTS, HSPA+ (Band 1, 8), EDGE, GSM, GPRS (900/1800).</li> </ul>
Included antenna	<ul style="list-style-type: none"> <li>• Two multiband swivel-mount dipole antennas (LTE-ANTM-D) are included with all Cisco LTE Advanced 3.0 Pluggables and 1000 Series routers. Two multiband swivel-mount dipole antennas (LTE-ANTM-SMA-D) are included with all Cisco LTE 2.5 Pluggables 1101 and 1109 Series routers.</li> </ul> <p>For -N antenna and cable installation guidance, view the <a href="#">Connected Grid Antennas Installation Guide</a>.</p>
Carrier support	<ul style="list-style-type: none"> <li>• For a list of carriers that offer services on the Cisco 1000 Series LTE Advanced 3.0, please visit the <a href="#">Wireless Carrier Partners page</a>.</li> </ul>

**Table 14.** Cisco 1000 Series ISRs system specifications

Feature	Specification
Memory (default and maximum)	<div>DRAM: 4 GB</div> <div>Only C1111X-8P,C1121X-8P,C1126X,C1127X,C1161X models have 8GB DRAM</div> <div>Flash: 4 GB</div> <div>Only C1111X-8P,C1121X-8P,C1126X,C1127X,C1161X models have 8GB Flash</div>
Console	<ul style="list-style-type: none"> <li>• Micro USB console (Type A).</li> <li>• RJ45.</li> </ul>
Micro-USB port (reserved)	<ul style="list-style-type: none"> <li>• Micro-USB port to support remote LTE diagnostics and monitoring tools (Qualcomm CAIT and Spirent UDM) (USB 3.0).</li> </ul>
WLAN interfaces	<ul style="list-style-type: none"> <li>• Multiuser Multiple-Input Multiple-Output (MU-MIMO) allows transmission of data to multiple 802.11ac Wave 2-capable clients simultaneously to improve the client experience. Prior to MU-MIMO, 802.11n and</li> <li>• 802.11ac Wave 1 access points could transmit data to only one client at a time, typically referred to as Single-User MIMO (SU-MIMO).</li> <li>• 802.11ac Wave 2 with 2x2:2 MIMO technology uses two spatial streams when operating in SU-MIMO or MU-MIMO mode, offering 867-Mbps rates for more capacity and reliability than competing access points.</li> <li>• Flexible deployment through the <a href="#">Mobility Express solution</a> is ideal for small to medium-sized deployments. Easy setup allows the 1000 Series (similar to 1815i) to be deployed on networks without a physical controller.</li> <li>• For more information, view the <a href="#">Cisco Aironet 1815i Access Point Data Sheet</a>.</li> </ul>
Maximum clients	<ul style="list-style-type: none"> <li>• Maximum number of associated wireless clients: 200 per Wi-Fi radio; in total 400 clients per access point. C1109-4PLTEP and C1109-4PLTEW models come with default dual W-ANTM2050D-RPSMA external antenna and all modem have default 8.8 AP autonomous or Mobility Express release. Option to select 8.8 CAPWAP WLC image.</li> </ul>
Authentication and security	<ul style="list-style-type: none"> <li>• AES for Wi-Fi Protected Access 2 (WPA2).</li> <li>• 802.1X, RADIUS AAA.</li> </ul>



Feature	Specification			
	<ul style="list-style-type: none"> <li>802.11r and 802.11i.</li> </ul>			
802.11ac	<ul style="list-style-type: none"> <li>2x2 SU-MIMO/MU-MIMO with two spatial streams.</li> <li>Maximal Ratio Combining (MRC).</li> <li>20-, 40-, and 80-MHz channels.</li> <li>PHY data rates up to 866.7 Mbps (80 MHz on 5 GHz).</li> <li>Packet aggregation: A-MPDU (Tx/Rx), A-MSDU (Rx).</li> <li>802.11 Dynamic Frequency Selection (DFS).</li> <li>Cyclic Shift Diversity (CSD) support.</li> </ul>			
Software	<ul style="list-style-type: none"> <li>Cisco IOS Software feature set: Universal Cisco IOS XE 16.6.1 Software image or later. C1112, C1113, and C1101 models support starting with IOS XE 16.8.1 Software image or later. C1118, C1111X-8P and C1109 models support with IOS XE 16.9.1 Software image or later.</li> <li>Cisco IOS Software feature set: C1120 and C1160 models Universal Cisco IOS XE 16.11.1 Software image or later.</li> <li>Cisco Unified Wireless Network Software with AireOS Wireless Controllers Release 8.5 (migration to 8.8 starting March, 2019 and 8.8 for 1101 and 1109 Models) MR1 or later.</li> </ul>			
DSL interfaces	<p><b>C1116 and C1117</b></p> <ul style="list-style-type: none"> <li>Dying gasp.</li> <li>ITU G.993.2 (VDSL2) and supported profiles: 8a, 8b, 8c, 8d, 12a, 12b, and 17a.</li> <li>VDSL2 Vectoring.</li> <li>ADSL Annex A and Annex B ITU G. 992.1 (ADSL), G.992.3 (ADSL2), and G.992.5 (ADSL2+).</li> <li>ADSL Annex M G.992.3 (ADSL2) and G.992.5 (ADSL2+).</li> </ul> <p><b>C1112 and C1113</b></p> <ul style="list-style-type: none"> <li>G.FAST (spectrum up to 106MHz) Annex A, Annex B, Annex M and compatible with ADSL2/2+ and VDSL2.</li> <li>ITU G.993.2 (VDSL2) and supported profiles: 8a, 8b, 8c, 8d, 12a, 12b, 17a, and 35b.</li> <li>ITU G.9700/9701/997.2 G.FAST and supported profiles: 106a, and 106b.</li> </ul> <p><b>C1118</b></p> <ul style="list-style-type: none"> <li>G.SHDSL.</li> </ul>			
Serial WAN interface and protocol	<ul style="list-style-type: none"> <li>Support for both synchronous and bisync modes.</li> <li>Synchronous maximum speed of up to 8 Mbps.</li> <li>Support for bisync modes.</li> <li>Support for network clock synchronization.</li> <li>EIA-232, EIA-449, EIA-530, EIA-530A, V.35, and X.21.</li> </ul>			
Cisco Smart Serial Cabling	<b>Product Number</b>	<b>Cable Type</b>	<b>Length</b>	<b>Connector Type</b>
	CAB-SS-V35MT	V.35 DTE	10 ft (3m)	Male
	CAB-SS-V35FC	V.35 DCE	10 ft (3m)	Female
	CAB-SS-232MT	EIA/TIA-232 DTE	10 ft (3m)	Male
	CAB-SS-232FC	EIA/TIA-232 DCE	10 ft (3m)	Female
	CAB-SS-449MT	EIA/TIA-449 DTE	10 ft (3m)	Male
	CAB-SS-449FC	EIA/TIA-449 DCE	10 ft (3m)	Female
	CAB-SS-X21MT	X.21 DTE	10 ft (3m)	Male
	CAB-SS-X21FC	X.21 DCE	10 ft (3m)	Female
	CAB-SS-530MT	EIA/TIA-530 DTE	10 ft (3m)	Male
	CAB-SS-530AMT	EIA/TIA-530A DTE	10 ft (3m)	Male
				Male

Feature	Specification
Inline PoE	<ul style="list-style-type: none"> <li>Optional internal adapter for inline PoE on 4 switch ports for IP phones or external wireless access points; 802.3af-compliant PoE or 802.3at-compliant PoE+.</li> </ul>
External power supply	<p><b>Product power specifications:</b></p> <p><b>C111X, C1120 and C1160 Models</b></p> <ul style="list-style-type: none"> <li>AC input voltage: Universal 100 to 240 VAC.</li> <li>Frequency: 50 to 60 Hz.</li> <li>Maximum output power: 66W (default).</li> <li>Output voltages: 12 VDC.</li> <li>Optional PoE and PoE+: <ul style="list-style-type: none"> <li>Single 150W power supply required for Cisco 1100-8P series router</li> <li>Single 115W power supply required for Cisco 1100-4P series router</li> </ul> </li> <li>External output voltage: 48 VDC.</li> </ul> <p><b>C1101-4PLTEPWX and C1109-4PLTE2PWX Models:</b></p> <ul style="list-style-type: none"> <li>AC input voltage: Universal 100 to 240 VAC.</li> <li>Frequency: 50 to 60 Hz.</li> <li>Maximum output power: 66W (default iTemp for C1109-4PLTE2PWX Models).</li> <li>Output voltages: 12 VDC.</li> </ul> <p><b>C1101-4P, C1101-4PLTEP, C1109-2PLTE, and C1109-4PLTE2P Models:</b></p> <ul style="list-style-type: none"> <li>AC input voltage: Universal 100 to 240 VAC.</li> <li>Frequency: 50 to 60 Hz.</li> <li>Maximum output power: 30W (default iTemp for Models).</li> <li>Output voltages: 12 VDC.</li> </ul>
USB 3.0	<ul style="list-style-type: none"> <li>USB devices supported: <ul style="list-style-type: none"> <li>USB eTokens and USB flash memory</li> </ul> </li> <li>Devices USB 3.0 supports to be connected externally. View the <a href="#">USB Device Support Data Sheet</a>.</li> </ul>
LEDs	<ul style="list-style-type: none"> <li>WWAN (green/amber).</li> <li>SIM status (green/amber).</li> <li>Received signal strength indication (RSSI) bar (green).</li> <li>3G/LTE service (green/amber).</li> <li>GPS (green/amber).</li> <li>Speed and link for Gigabit Ethernet WAN port (green).</li> <li>Speed and link for all Fast Ethernet LAN ports (green).</li> </ul>
Physical dimensions (H x W x D)	<p><b>C111X Models</b></p> <ul style="list-style-type: none"> <li>1.75 x 12.7 x 9.6 in. (44 x 323 x 244 mm) (includes rubber feet on LTE models).</li> <li>1.75 x 12.7 x 9.03 in. (42 x 323 x 230mm) (includes rubber feet on non-LTE models).</li> </ul> <p><b>C1120 Models</b></p> <ul style="list-style-type: none"> <li>1.65 x 12.7 x 8.9 in. (41.9 x 322 x 226 mm).</li> </ul> <p><b>C1160 Models</b></p> <ul style="list-style-type: none"> <li>1.65 x 10.8 x 7.85 in. (41.9 x 274 x 199 mm).</li> </ul> <p><b>C1101-4PLTEP and C1101-4PLTEPWX Models</b></p> <ul style="list-style-type: none"> <li>1.73 x 9.75 x 6.6 in. (43.9 x 247.6 x 167.6 mm) (includes rubber feet models).</li> </ul> <p><b>C1101-4P Models</b></p> <ul style="list-style-type: none"> <li>1.1 x 7.5 x 6.0 in. (27.9 x 190.5 x 152.4 mm) (includes rubber feet models).</li> </ul>

Feature	Specification
	<p><b>C1109-2PLTE Models</b></p> <ul style="list-style-type: none"> <li>• 1.27 x 8.4 x 6.0 in. (32.3 x 213.4 x 152.4mm) (includes rubber feet models).</li> </ul> <p><b>C1109-4PLTE2P and C1109-4PLTE2PWX Models (ship default with dual W-ANTM2050DRPSMA Wi-Fi antennae)</b></p> <ul style="list-style-type: none"> <li>• 1.71 x 11.16 x 9.8 in. (43.4 x 283.5 x 248.9 mm) (includes rubber feet models).</li> </ul> <p><b>Pluggable</b></p> <ul style="list-style-type: none"> <li>• .85 x 2.5 x 3.88 in. (21.6 x 63.5 x 98.5 mm).</li> </ul>
Weight	<p><b>C111X Models</b></p> <ul style="list-style-type: none"> <li>• 1.94 lb to 4.59 lb (1.94kg to 2.08 kg).</li> <li>• 4.50 lb (2.04 kg) with LTE Advanced.</li> <li>• 4.76 lb (2.16 kg) with Wave 2 802.11ac Dual Radio.</li> <li>• 4.89 lb (2.22 kg) with LTE Advanced plus Wave 2 802.11ac Dual Radio.</li> </ul> <p><b>C1120 Models</b></p> <ul style="list-style-type: none"> <li>• 3.43 lb (1.56Kg). base model with 4 ports.</li> <li>• 3.7 lb (1.68Kg). with 4 ports and pluggable LTE.</li> <li>• 4.62 lb (2.1Kg). with LTE and WiFi.</li> <li>• 4.53 lb (2.06Kg). with LTE and VDSL.</li> <li>• 3.7 lb (1.68Kg). with 4 ports and pluggable LTE.</li> </ul> <p><b>C1160 Models</b></p> <ul style="list-style-type: none"> <li>• 3.48 lb (1.58Kg). base model with 8 ports.</li> <li>• 3.74 lb (1.7Kg). with 8 ports and pluggable LTE.</li> </ul> <p><b>C1101-4PLTEPWX Models</b></p> <ul style="list-style-type: none"> <li>• 3.78 lb (1.71kg).</li> </ul> <p><b>C1101-4PLTEP Models</b></p> <ul style="list-style-type: none"> <li>• 3.34 lb (1.51kg).</li> </ul> <p><b>C1101-4P Models</b></p> <ul style="list-style-type: none"> <li>• 1.89 lb (.86kg).</li> </ul> <p><b>C1109-2PLTE Models</b></p> <ul style="list-style-type: none"> <li>• 2.25 lb (1.02kg).</li> </ul> <p><b>C1109-4PLTE2PWX Models (Only C1109-4PLTE2PWX have external Wi-Fi antennae options)</b></p> <ul style="list-style-type: none"> <li>• 6.23 lb (2.83kg).</li> </ul> <p><b>C1109-4PLTE2P Models</b></p> <ul style="list-style-type: none"> <li>• 5.93 lb (2.69kg).</li> </ul> <p><b>Pluggable</b></p> <ul style="list-style-type: none"> <li>• CAT6 EM74XX.44 lb (.20kg).</li> <li>• CAT4 WP76XX.40 lb (.18kg).</li> </ul>
Standard safety certifications	<ul style="list-style-type: none"> <li>• UL 60950-1.and EN 60950-1.</li> <li>• CAN/CSA C22.2 No. 60950-1.</li> <li>• CB to IEC 60950-1, 2<sup>nd</sup> edition with all group differences and national deviations.</li> </ul>
EMC emissions	<ul style="list-style-type: none"> <li>• EN55022/CISPR22, CFR 47 Part 15, ICES003, VCCI-V-3, AS/NZS CISPR22, CNS13438, EN300-386, EN61000-3-2, EN61000-3-3, and EN61000-6-1.</li> </ul>
EMC immunity	<ul style="list-style-type: none"> <li>• EN55024/CISPR24, (EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11), and EN300-386.</li> </ul>

Feature	Specification
Radio immunity	<ul style="list-style-type: none"> <li>EN301 489-1, EN 301 489-7, and EN301 489-24.</li> </ul>
Cellular radio	<ul style="list-style-type: none"> <li>EN 301 908-1, EN 301 908-2, EN 301 511, 47 CFR Part 22, 47 CFR Part 24, and EN 301 908-13.</li> </ul>
Environmental operating range	<ul style="list-style-type: none"> <li>Nonoperating temperature: -4° to 149°F (-20° to 65°C).</li> <li>Nonoperating humidity: 5% to 95% relative humidity (noncondensing).</li> <li>Nonoperating altitude: 0 to 15,000 ft (0 to 4570 m).</li> <li>Operating temperature: 32° to 104°F (0° to 40°C). C1101 support 32° to 113°F (0° to 45°C). C1109-2PLTE support 32° to 122°F (0° to 50°C). C1109-4PLTE2P and C1109-4PLTE2PW models support -4° to 131°F (-20° to 55°C).</li> <li>Operating humidity: 10% to 85% relative humidity (noncondensing).</li> <li>Operating altitude: 0 to 10,000 ft (0 to 3000 m at 30°C). Operating altitude: 0 to 10,000 ft (0 to 3000 m at 35°C for C1109-2PLTE models). Operating altitude: 0 to 10,000 ft (0 to 3000 m at 40°C for C1109-4PLTE2P and C1109-4PLTE2PW models).</li> </ul>

## Cisco IOS Software licensing and packaging

### Universal Cisco IOS XE Image

A single Cisco IOS XE Universal image encompassing all functions is delivered with the platform. Advanced features can be enabled simply by activating a software license on the Universal image. Technology packages and feature licenses, enabled through right-to-use licenses, simplify software delivery and decrease the operational costs of deploying new features.



Four major technology licenses are available on the Cisco 1000 Series; these licenses can be activated through the Cisco software activation process identified at <https://www.cisco.com/go/sa>. The following licenses are available:

- **IP Base**: This technology package is available as the default.
- **Application Experience (APP)**: This license includes data and application performance features.
- **Security (SEC) or Security with No Payload Encryption (SEC-NPE)**: This license includes features for securing network infrastructure.
- **IP Security (IPSEC)**: This license includes features that improve IP security performance multifold.

The Cisco SD-WAN subscriptions are aligned across three subscription licenses of **Cisco DNA Essentials**, **Cisco DNA Advantage** and **Cisco DNA Premier**, each expanding functionally. The **Cisco DNA Essentials** covers all types of connectivity and router life cycle management, support for Network and application visibility coupled with basic premise and transport security. The **Cisco DNA Advantage** provides for Advanced WAN topologies, Application aware policies supported by enhanced network security. The **Cisco DNA Premier** provides for Cloud connectivity with unlimited segmentation, Advanced Application optimization and Network Analytics, secured by advanced threat protection. There are separate SD-WAN promotional PIDs or using LIC-DNA-ADD option. For Cisco ONE, there is also C1-ISR-ADD option.

Cisco CVO is now supported on 1100-8P and 1100-4P models with SEC license.

For more information on Cisco SD-WAN please refer to:

<https://www.cisco.com/c/en/us/products/software/one-wan-subscription/index.html>.

**Table 15.** Cisco 1000 Series licenses

Part number	Bundles	Features
SL-1100-8P-IPB SL-1100-4P-IPB SL-1100-2P-IPB	IP Base (default)	Routing protocols, ACL, NAT, QoS, BFD, VRF Lite, IP SLA Responder.
SL-1100-8P-APP(=) SL-1100-4P-APP(=) SL-1100-2P-APP(=)	Application Experience (APP)	IP Base + advanced networking protocols: L2TPv3, MPLS. Application Experience: PfRv3, NBAR2, AVC, IPSLA Initiator. Hybrid Cloud Connectivity: LISP, Virtual Private LAN Services (VPLS), Ethernet over MPLS.
SL-1100-8P-SEC(=) SL-1100-8P-SECNPE(=) SL-1100-4P-SEC(=) SL-1100-4P-SECNPE(=) SL-1100-2P-SEC(=) SL-1100-2P-SECNPE(=)	Security (SEC)	IP Base + Advanced Security: Zone-based firewall, IPsec VPN, Dynamic Multipoint VPN (DMVPN), FlexVPN, GETVPN. Provides up to 50 Mbps IPsec performance. SEC license needed for CVO deployment option.
FL-VPERF-8P-200(=) FL-VPERF-4P-100(=)	IPSec Performance (VPERF)	IPsec Performance: Additional 100 Mbps for ISR 1100-4P and 200 Mbps for ISR 1100-8P. Not applicable on C1109-2PLTE models.
FL-1100-8P-HSEC(=) FL-1100-4P-HSEC(=) FL-1100-2P-HSEC(=)	IPSec HSEC	IPSEC HSEC License for Cisco ISR 1100 8P,ISR 1100 4P, and 1100 2P. Support with IOS XE 16.8.1 or later releases.
C1F1PISR1100S8PK9 C1F1PISR1100S4PK9	Cisco One S/W Bundle	APP, SEC, PRIME licenses (SL-1100-8P-IPB, C1-SL-11008P-APP, C1-SL-1100-8P-SEC or C1-SL-1100-8P-SECNPE, C1-PI-LFAS-ISR-K9, C1F1VISR1100S8P-01, C1-SL-1100-PAK) or (SL-1100-4P-IPB, C1-SL-1100-4P-APP, C1-SL1100-4P-SEC or C1-SL-1100-4P-SECNPE, C1-PI-LFASISR-K9, C1F1VISR1100S4P-01, C1-SL-1100-PAK). Cisco ONE selection option can also be order with separate SWSS PID under C1-ISR-ADD.

**Table 16.** Product part numbers and software images

Product part number	Description		
Router software images			
SISR1100UK9-166(=) SISR1100NPEUK9-166(=) SISR1100UK9-168(=) SISR1100NPEUK9-168(=) SISR1100UK9-169(=) SISR1100NPEUK9-169(=) SISR1100UK9-1610(=) SISR11NPEUK9-1610(=) SISR1100UK9-1611(=) SISR11NPEUK9-1611(=)	Cisco 1100 ISR Universal Image and Non-Pay load Encryptions Image.		
SD-WAN image			
SISR1100UCMK9-169(=) SISR1100UCMK9-1610(=) SISR1100UCMK9-1611(=)		SD-WAN Image for ISR 1100 platforms. Some models with -DNA value, -SPM promotional PIDs or certain models with separate LIC-DNA-ADD (or L-LIC-DNA-ADD) option.	
Access point software images			
AIR-AP1815-K9-ME-8-8-110-0.tar			Cisco 111X Models AP delivers industry-leading wireless performance with support for the latest Wi-Fi standard, IEEE’s 802.11ac Wave 2 and Mobility Express.
DSL firmware options			
A2pvbF039t.d26d		Annex A and M.	
B2pv6F039g1.d26d		Annex B and J.	
A2pvfbH043j		G.FAST Annex A and M.	
B2pvfbH043j		G.FAST Annex B.	
Power over Ethernet options			
ISR-1100-POE2(=)	1100-4P with 115W PSU (2 PoE or 1 PoE+).		
ISR-1100-POE4(=)	1100-8P with 150W PSU (4 PoE or 2 PoE+).		
Rack mount kit and RJ Console Adapter			
ACS-1100-RM-19(=)	Rack-mount kit for all 111X Series ISRs.		
CAB-CON-USBRJ45(=)	Micro USB to RJ45 Console Adapter (Only for 1101 and 1109 Models).		

Product part number	Description
<b>Pluggable</b>	
<b>P-LTEA-EA(=)</b>	System and spare CAT6 LTE Advanced Pluggable for North American and Europe.
<b>P-LTEA-LA(=)</b>	System and spare CAT6 LTE Advanced Pluggable for APAC, ANZ, and LATAM.
<b>P-LTE-VZ(=)</b>	System and spare CAT4 LTE Pluggable for Verizon. Single SIM slot. Spare need antenna selection option.
<b>P-LTE-US(=)</b>	System and spare CAT4 LTE Pluggable for ATT and T-Mobile. Spare need antenna selection option.
<b>P-LTE-GB(=)</b>	System and spare CAT4 LTE Pluggable for Europe. Spare need antenna selection option.
<b>P-1T(=)</b>	System and spare Cisco 12:1 High Speed serial WAN interface (sync and bisync).
<b>P-BLANK(=)</b>	System and spare blank Pluggable.

Small Form-Factor Pluggable	ISR 1100 8P	ISR 1100 4P	Description
<b>GLC-EX-SMD</b>	Yes	Yes	1000BASE-EX SFP transceiver module, SMF, 1310nm, DOM.
<b>GLC-LH-SM</b>	Yes	Yes	GE SFP, LC connector LX/LH transceiver.
<b>GLC-LH-SMD</b>	Yes	Yes	GE SFP, LC connector LX/LH transceiver; with DOM.
<b>GLC-SX-MM</b>	Yes	Yes	GE SFP, LC connector SX transceiver.
<b>GLC-SX-MMD</b>	Yes	Yes	GE SFP, LC connector SX transceiver; with DOM.
<b>GLC-ZX-SM</b>	Yes	Yes	1000BASE-ZX SFP.
<b>GLC-ZX-SMD</b>	Yes	Yes	1000BASE-ZX SFP; with DOM.
<b>GLC-FE-100FX</b>	Yes	Yes	100BASE-FX SFP for FE port.
<b>GLC-FE-100LX</b>	Yes	Yes	100BASE-LX SFP for FE port.
<b>GLC-FE-100ZX</b>	Yes	Yes	100BASE-ZX SFP (80km).
<b>GLC-FE-100EX</b>	Yes	Yes	100BASE-EX SFP (40km).
<b>GLC-FE-100BX-D</b>	Yes	Yes	100BASE-BX10-D SFP.
<b>GLC-FE-100BX-U</b>	Yes	Yes	100BASE-BX10-U SFP.
<b>GLC-GE-100FX</b>	Yes	Yes	100FX SFP on GE ports.
<b>GLC-BX80-D-I</b>	Yes	Yes	1000BASE-BX80 SFP, 1570NM.
<b>GLC-BX80-U-I</b>	Yes	Yes	1000BASE-BX80 SFP, 1490NM.
<b>GLC-BX40-D-I</b>	Yes	Yes	1000BASE-BX40 SFP, 1550NM.

Small Form-Factor Pluggable	ISR 1100 8P	ISR 1100 4P	Description
GLC-BX40-U-I	Yes	Yes	1000BASE-BX40 SFP, 1310NM.
GLC-BX-D	Yes	Yes	1000BASE-BX SFP, 1490NM.
GLC-BX-U	Yes	Yes	1000BASE-BX SFP, 1310NM.
GLC-TE	Yes	Yes	10/100/1000BASE-T.
GLC-T	Yes	Yes	10/100/1000BASE-T.
SFP-GE-S	Yes	Yes	1000BASE-SX SFP transceiver module for MMF, 850-nm wavelength, extended operating temperature range and DOM support, dual LC/PC connector.
SFP-GE-T	Yes	Yes	10/100/1000BASE-T SFP (NEBS 3 ESD).
CWDM-SFP-1470	Yes	Yes	CWDM 1470 NM SFP Gigabit Ethernet and 1G/2G FC.
CWDM-SFP-1490	Yes	Yes	CWDM 1490 NM SFP Gigabit Ethernet and 1G/2G FC.
CWDM-SFP-1510	Yes	Yes	CWDM 1510 NM SFP Gigabit Ethernet and 1G/2G FC.
CWDM-SFP-1530	Yes	Yes	CWDM 1530 NM SFP Gigabit Ethernet and 1G/2G FC.
CWDM-SFP-1550	Yes	Yes	CWDM 1550 NM SFP Gigabit Ethernet and 1G/2G FC.
CWDM-SFP-1570	Yes	Yes	CWDM 1570 NM SFP Gigabit Ethernet and 1G/2G FC.
CWDM-SFP-1590	Yes	Yes	CWDM 1590 NM SFP Gigabit Ethernet and 1G/2G FC.
CWDM-SFP-1610	Yes	Yes	CWDM 1610 NM SFP Gigabit Ethernet and 1G/2G FC.
DWDM-SFP-3033	Yes	Yes	DWDM SFP 1530.33 nm SFP (100 GHz ITU grid).
DWDM-SFP-3112	Yes	Yes	DWDM SFP 1531.12 nm SFP (100 GHz ITU grid).
DWDM-SFP-3190	Yes	Yes	DWDM SFP 1531.90 nm SFP (100 GHz ITU grid).
DWDM-SFP-3268	Yes	Yes	DWDM SFP 1532.68 nm SFP (100 GHz ITU grid).
DWDM-SFP-3425	Yes	Yes	DWDM SFP 1534.25 nm SFP (100 GHz ITU grid).
DWDM-SFP-3504	Yes	Yes	DWDM SFP 1535.04 nm SFP (100 GHz ITU grid).
DWDM-SFP-3582	Yes	Yes	DWDM SFP 1535.82 nm SFP (100 GHz ITU grid).
DWDM-SFP-3661	Yes	Yes	DWDM SFP 1536.61 nm SFP (100 GHz ITU grid).
DWDM-SFP-3819	Yes	Yes	DWDM SFP 1538.19 nm SFP (100 GHz ITU grid).
DWDM-SFP-3898	Yes	Yes	DWDM SFP 1538.98 nm SFP (100 GHz ITU grid).
DWDM-SFP-3977	Yes	Yes	DWDM SFP 1539.77 nm SFP (100 GHz ITU grid).
DWDM-SFP-4056	Yes	Yes	DWDM SFP 1540.56 nm SFP (100 GHz ITU grid).



Small Form-Factor Pluggable	ISR 1100 8P	ISR 1100 4P	Description
DWDM-SFP-4214	Yes	Yes	DWDM SFP 1542.14 nm SFP (100 GHz ITU grid).
DWDM-SFP-4294	Yes	Yes	DWDM SFP 1542.94 nm SFP (100 GHz ITU grid).
DWDM-SFP-4373	Yes	Yes	DWDM SFP 1543.73 nm SFP (100 GHz ITU grid).
DWDM-SFP-4453	Yes	Yes	DWDM SFP 1544.53 nm SFP (100 GHz ITU grid).
DWDM-SFP-4612	Yes	Yes	DWDM SFP 1546.12 nm SFP (100 GHz ITU grid).
DWDM-SFP-4692	Yes	Yes	DWDM SFP 1546.92 nm SFP (100 GHz ITU grid).
DWDM-SFP-4772	Yes	Yes	DWDM SFP 1547.72 nm SFP (100 GHz ITU grid).
DWDM-SFP-4851	Yes	Yes	DWDM SFP 1548.51 nm SFP (100 GHz ITU grid).
DWDM-SFP-5012	Yes	Yes	DWDM SFP 1550.12 nm SFP (100 GHz ITU grid).
DWDM-SFP-5092	Yes	Yes	DWDM SFP 1550.92 nm SFP (100 GHz ITU grid).
DWDM-SFP-5172	Yes	Yes	DWDM SFP 1551.72 nm SFP (100 GHz ITU grid).
DWDM-SFP-5252	Yes	Yes	DWDM SFP 1552.52 nm SFP (100 GHz ITU grid).
DWDM-SFP-5413	Yes	Yes	DWDM SFP 1554.13 nm SFP (100 GHz ITU grid).
DWDM-SFP-5494	Yes	Yes	DWDM SFP 1554.94 nm SFP (100 GHz ITU grid).
DWDM-SFP-5575	Yes	Yes	DWDM SFP 1555.75 nm SFP (100 GHz ITU grid).
DWDM-SFP-5655	Yes	Yes	DWDM SFP 1556.55 nm SFP (100 GHz ITU grid).
DWDM-SFP-5817	Yes	Yes	DWDM SFP 1558.17 nm SFP (100 GHz ITU grid).
DWDM-SFP-5898	Yes	Yes	DWDM SFP 1558.98 nm SFP (100 GHz ITU grid).
DWDM-SFP-5979	Yes	Yes	DWDM SFP 1559.79 nm SFP (100 GHz ITU grid).
DWDM-SFP-6061	Yes	Yes	DWDM SFP 1560.61 nm SFP (100 GHz ITU grid).

## For more information

For more information about the Cisco 1000 Series ISRs, visit: <https://www.cisco.com/go/ISR1000> or contact your local Cisco account representative.

To learn more about Cisco SD-WAN Security, visit: <https://www.cisco.com/c/en/us/solutions/enterprise-networks/sd-wan/sd-wan-security.html>.

For additional information and details about Cisco IOS Software licensing and packaging on the Cisco 1000 Series, please visit:

<https://www.cisco.com/c/en/us/support/routers/1110-integrated-services-router/model.html#LicensingInformation>.

---

For the Cisco 1000 Series ISR Hardware and Software Installation Guide, Go to:

<https://www.cisco.com/c/en/us/support/routers/1110-integrated-services-router/model.html#InstallandUpgradeGuides>.

<https://www.cisco.com/c/en/us/support/routers/1110-integrated-services-router/model.html#ConfigurationGuides>.

## Cisco and partner services

Services from Cisco and our certified partners can help you reduce the cost and complexity of branch office deployments. Cisco Smart Net Total Care™ technical support for the Cisco 1000 Series ISRs is available on a one-time or annual contract basis. Support options range from help-desk assistance to proactive, onsite consultation.

For more information, visit <https://www.cisco.com/go/services>.

## Ordering information

To place an order, visit the [Cisco Ordering Home Page](#). To download software, visit the [Cisco Software Center](#).

## Cisco Capital

### **Flexible payment solutions to help you achieve your objectives**

Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. [Learn more](#).

## Document History

New or revised topic	Described in	Date
Add support for additional SFPs	<a href="#">Table 16</a>	August 2, 2019
Add support for P-1T high speed serial pluggable module and update some corrections	Updated throughout document	April 18, 2019
Add support for C1109-4PLTE2P models, LIC-DNA-ADD option, SDWAN promotional PIDs, and C1-ISR-ADD option	Updated throughout document	January 11, 2019
Add support for new platforms, add available date	C1118-8P, C1111X-8P, C1109-2PLTEXX	October 05, 2018

**Americas Headquarters**  
Cisco Systems, Inc.  
San Jose, CA

**Asia Pacific Headquarters**  
Cisco Systems (USA) Pte. Ltd.  
Singapore

**Europe Headquarters**  
Cisco Systems International BV Amsterdam,  
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at <https://www.cisco.com/go/offices>.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: <https://www.cisco.com/go/trademarks>. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)