

Cisco Integrated Services Routers Generation 2

Ordering Guide

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1 Cisco Integrated Services Routers Generation 2

Cisco's 1900, 2900 and 3900 Series Integrated Services Routers build on 25 years of innovation and product leadership. Generation 2 of the Integrated Services Routers are architected to enable the next wave of branch office evolution enabling richer media experiences with video, local compute resources for local application flexibility and survivability and Wide Area Network evolution. Adding to the rich breadth of services available on the existing integrated services routers, such as security, unified communications, wireless, and application optimization services, Generation 2 of the Integrated Services Routers enhance the reduction in overall Branch Office expenses with the introduction of flexible services "on demand" with software licensing and simplified IOS software packaging.

Generation 2 of the Integrated Services Router portfolio consists of three product families similar to the current generation of ISR: the Cisco 1900, 2900 and 3900 Series Integrated Services Routers. From the Cisco 1941 through the Cisco 3945, the routers in portfolio provide increasing performance, module slot density and features to match the needs of diverse branch offices running varying degrees of rich services.

The routers can be ordered as base systems or bundled systems for security, unified communications and/or application services. This ordering guide focuses on base system configurations and options but most of the elements are applicable to bundle ordering as well. To get a detailed list of advanced technology bundles on Integrated Services Routers Generation 2, please refer Section 4 of the ordering guide.

1.1 Ordering the 3900 Series Integrated Services Routers

The Cisco 3900 Series offers the highest performance and services density among the Integrated Services Routers portfolio. The Series comprises of Cisco 3925 and Cisco 3945 routers, which primarily differ in performance capabilities and Services Module (SM) slot count.

Both the Cisco 3925 and Cisco 3945 offer a field-replaceable Services Performance Engine (SPE) – an option uniquely available on the Cisco 3900 Series. The SPE is a modular motherboard that can be upgraded with higher performance engines developed in the future. The Cisco 3925 ships with the Cisco Services Performance Engine 100 and the Cisco 3945 ships with the Cisco Services Performance Engine 150.

Table 1.	Cisco 3900 Series	Routers and S	Services Perform	ance Engines

Ordering SKU	Description	Technical Service SKU (SMARTnet 8x5xNBD)
CISCO3925/K9	Cisco 3925 w/SPE100(3GE,4EHWIC,4DSP,2SM,256MBCF,1GBDRAM,IPB)	CON-SNT-3925
CISCO3945/K9	Cisco 3945 w/SPE150(3GE,4EHWIC,4DSP,4SM,256MBCF,1GBDRAM,IPB)	CON-SNT-3945
C3900-SPE100/K9=	Cisco Services Performance Engine 100 for Cisco 3925 ISR (Spare)	Not Applicable
C3900-SPE150/K9=	Cisco Services Performance Engine 150 for Cisco 3945 ISR (Spare)	Not Applicable

Both the Cisco 3925 and Cisco 3945 can be ordered with dual power supplies that can be configured for power supply redundancy or increased power for Power-Over-Ethernet (POE) devices when operated in a non-redundant POE Boost Configuration. The primary and the secondary power supplies can be AC, POE or DC or any combination thereof. In order to power ports on a switch module integrated into a router, it is important to order the router with POE Power Supply.

The Power Supply SKUs in Table 2 below can be ordered with the system or as spares. The POE Power Supply on Cisco 3925 and Cisco 3945 requires a C15 rated power cable for higher current rating of these power supplies.

Table 2. Cisco 3900 Series Router Power Supply Options (offered with the system and as spares)

Ordering SKU	Description
PWR-3900-AC	Cisco 3925/3945 AC Power Supply (Both system and spare)
PWR-3900-POE	Cisco 3925/3945 AC Power Supply with Power Over Ethernet (Both system and spare)

Ordering SKU	Description
PWR-3900-DC*	Cisco 3925/3945 DC Power Supply (Both system and spare)
PWR-3900-AC/2	Cisco 3925/3945 AC Power Supply (Secondary PS) – only as system
PWR-3900-POE/2	Cisco 3925/3945 AC Power Supply with Power Over Ethernet (Secondary PS) – only as system
PWR-3900-DC/2*	Cisco 3925/3945 DC Power Supply (Secondary PS) – only as system
C15-AC-xxx	AC Power Cord (country specific SKU), C15, 2.5m

^{*} The DC versions of Power Supply will be available in 1H'CY10

Both the Cisco 3925 and Cisco 3945 ship with a default memory of 1 GB DRAM and 256 MB Compact Flash. The 1 GB DRAM configuration is derived by the installation of 2 symmetrical DIMMs of 512 MB in each of the memory slots on the SPE of the Cisco 3900 Series routers. While upgrading memory to higher densities, it is necessary that both the DIMMs are populated with DIMMs of symmetrical type and density for high system performance. The Cisco 3900 Series does not support the use of different DRAM densities in the two available DIMM slots or the use of only one slot. The memory type and SKUs are shared between Cisco 3925 and Cisco 3945 as listed in Table 3.

Table 3. Cisco 3900 Series Routers DRAM (Factory Upgrades and Spares)

Ordering SKU	Description
MEM-3900-1GB-DEF	1GB DRAM (512MB+512MB) for Cisco 3925/3945 ISR (Default)
MEM-3900-1GU2GB	1GB to 2GB DRAM Upgrade (1GB+1GB) for Cisco 3925/3945 ISR
MEM-3900-512MB=	512MB DRAM for Cisco 3925/3945 ISR (only as spare)
MEM-3900-1GB=	1GB DRAM for Cisco 3925/3945 ISR (only as spare)

The Compact Flash SKUs in Table 4 below are shared across all the routers in the Integrated Services Routers Generation 2 portfolio. Compact Flash Slot 0 is populated with a 256 MB CF by default from the factory. There is an additional Compact Flash Slot 1 that can be optionally configured and ordered with another compact flash of desired density.

 Table 4.
 Cisco 3900 Series Routers Compact Flash (Factory Upgrades and Spares)

Ordering SKU	Description
MEM-CF-256U512MB	256MB to 512MB CF Upgrade for Cisco 1900, 2900, 3900 ISR
MEM-CF-256U1GB	256MB to 1GB Compact Flash Upgrade for Cisco 1900, 2900, 3900 ISR
MEM-CF-256U2GB	256MB to 2GB Compact Flash Upgrade for Cisco 1900, 2900, 3900 ISR
MEM-CF-256U4GB	256MB to 4GB Compact Flash Upgrade for Cisco 1900, 2900, 3900 ISR
MEM-CF-256MB=	256MB Compact Flash (Spare) for Cisco 1900, 2900, 3900 ISR (only as spare)
MEM-CF-512MB=	512MB Compact Flash (Spare) for Cisco 1900, 2900, 3900 ISR (only as spare)
MEM-CF-1GB=	1GB Compact Flash (Spare) for Cisco 1900, 2900, 3900 ISR (only as spare)
MEM-CF-2GB=	2GB Compact Flash (Spare) for Cisco 1900, 2900, 3900 ISR (only as spare)
MEM-CF-4GB=	4GB Compact Flash (Spare) for Cisco 1900, 2900, 3900 ISR (only as spare)

The Cisco 3900 Series routers ship with a default fan assembly that drives front-to-back airflow in the router chassis. For NEBS applications requiring a back-to-front airflow, there is a special fan assembly that can be ordered (which comes with an air filter and bezel). Both the fan assemblies can be configured along with the system or ordered as a spare if needed. The air filter is also orderable as a spare for periodic maintenance and replacement. The front bezel and the cover for the redundant power supply on the Cisco 3900 Series are orderable as a spare.

Table 5. Cisco 3900 Series Routers fan-related products

Ordering SKU	Description
3900-FANASSY	Cisco 3925/3945 Fan Assembly (Both system & spare)
3900-FANASSY-NEBS	Cisco 3925/3945 Fan Assembly for NEBS w/3900-FANFLTR-NEBS & Bezel (Both system & spare)
3900-BEZEL=	Cisco 3925/3945 Front Bezel (Replacement Plastic Bezel) (only as spare)
RPS-COVER-3900=	Cover for empty 2nd Power Supply slot on Cisco 3925/3945 (only as spare)

1.2 Ordering the 2900 Series Integrated Services Routers

The 2900 Series comprises of four platforms: the Cisco 2901, the Cisco 2911, the Cisco 2921, and the Cisco 2951 ISRs with ordering SKUs as in table 6.

Table 6. Cisco 2900 Series Integrated Services Routers

Ordering SKU	Description	Technical Service SKU (SMARTnet 8x5XNBD)
CISCO2901/K9	Cisco 2901 w/2 GE,4 EHWIC,2 DSP,256MB CF,512MB DRAM,IPB	CON-SNT-2901
CISCO2911/K9	Cisco 2911 w/3 GE,4 EHWIC,2 DSP,1 SM,256MB CF,512MB DRAM,IPB	CON-SNT-2911
CISCO2921/K9	Cisco 2921 w/3 GE,4 EHWIC,3 DSP,1 SM,256MB CF,512MB DRAM,IPB	CON-SNT-2921
CISCO2951/K9	Cisco 2951 w/3 GE,4 EHWIC,3 DSP,2 SM,256MB CF,512MB DRAM,IPB	CON-SNT-2951

Cisco 2911, 2921 and 2951 can be ordered with a power supply that is AC, POE or DC. The power supply type needs to be selected during product configuration along with power supply cable needed for use in a particular country. These 3 routers also offer power redundancy with the use of external RPS device (Cisco RPS 2300). A RPS adapter is needed in order to connect a Cisco 2911 or 2921 or 2951 to the external RPS device. The Cisco 2901 can be ordered with AC or POE type of power supply. The Cisco 2901 does not offer a DC version of power supply and it does not support external RPS.

The Power Supply and RPS Adapter SKUs in Table 7 below can be ordered with the router or as spares. In order to power ports on a switch module plugged into a router, it is important to order the router with POE Power Supply. Note that the SKUs are shared between Cisco 2921 and Cisco 2951.

Table 7. Cisco 2900 Series Router Power Supply and RPS Adapter Options (Factory Options & Spares)

Ordering SKU	Description
PWR-2921-51-AC	Cisco 2921/2951 AC Power Supply (Both system & spare)
PWR-2921-51-POE	Cisco 2921/2951 AC Power Supply with Power Over Ethernet (Both system & spare)
PWR-2921-51-DC*	Cisco 2921/2951 DC Power Supply (Both system & spare)
PWR-2911-AC	Cisco 2911 AC Power Supply (Both system & spare)
PWR-2911-POE	Cisco 2911 AC Power Supply with Power Over Ethernet (Both system & spare)
PWR-2911-DC*	Cisco 2911 DC Power Supply (Both system & spare)
PWR-2901-AC	Cisco 2901 AC Power Supply (Both system & spare)
PWR-2901-POE	Cisco 2901 AC Power Supply with Power Over Ethernet (Both system & spare)
RPS-ADPTR-2921-51	Cisco 2921/2951 RPS Adapter for use with External RPS (Both system & spare)
RPS-ADPTR-2911	Cisco 2911 RPS Adapter for use with External RPS (Both system & spare)

^{*} The DC versions of Power Supply will be available in 1H'CY10

All the Cisco 2900 Series routers ship with a default memory of 512 MB DRAM and 256 MB Compact Flash. The 512 MB memory configuration on Cisco 2951 is derived by the installation of a 512 MB DIMM in one of the two memory slots on the Cisco 2951. Memory upgrades on the Cisco 2951 can involve the increase in the density of that single

DIMM or a combination of DIMMs with both slots populated. The Cisco 2951 allows the use of asymmetric densities of DRAM in both slots. On Cisco 2901, 2911 and 2921, the default DRAM of 512 MB is soldered onto the motherboard. Hence, memory upgrades would populate the DIMMs added to the available modular DIMM slot in densities of 512MB, 1GB and 2GB. The DRAM SKUs are shared across Cisco 2921, 2911 and 2901 and they cannot be used on Cisco 2951 router. Likewise, the Cisco 2951 memory cannot be used on other Cisco 2900 Series routers.

Table 8. Cisco 2900 Series Routers DRAM (Factory Upgrades and Spares)

Ordering SKU	Description
MEM-2951-512MB-DEF	512MB DRAM (1 512MB DIMM) for Cisco 2951 ISR (Default)
MEM-2951-512U1GB	512MB to 1GB DRAM Upgrade (1 1GB DIMM) for Cisco 2951 ISR
MEM-2951-512U1.5GB	512MB to 1.5GB DRAM Upgrade (1GB+512MB) for Cisco 2951 ISR
MEM-2951-512U2GB	512MB to 2GB DRAM Upgrade (1 2GB DIMM) for Cisco 2951 ISR
MEM-2900-512MB-DEF	512MB DRAM for Cisco 2901-2921 ISR (Default)
MEM-2900-512U1GB	512MB to 1GB DRAM Upgrade (512MB+512MB) for Cisco 2901-2921
MEM-2900-512U1.5GB	512MB to 1.5GB DRAM Upgrade (1GB+512MB) for Cisco 2901-2921
MEM-2900-512U2.5GB	512MB to 2.5GB DRAM Upgrade (2GB+512MB) for Cisco 2901-2921
MEM-2951-512MB=	512MB DRAM for Cisco 2951 ISR (only as spare)
MEM-2951-1GB=	1GB DRAM for Cisco 2951 ISR (only as spare)
MEM-2951-2GB=	2GB DRAM for Cisco 2951 ISR (only as spare)
MEM-2900-512MB=	512MB DRAM for Cisco 2901, 2911, 2921 ISR (only as spare)
MEM-2900-1GB=	1 GB DRAM for Cisco 2901, 2911, 2921 ISR (only as spare)
MEM-2900-2GB=	2GB DRAM for Cisco 2901, 2911, 2921 ISR (only as spare)

The Compact Flash SKUs in Table 9 below are shared across all the routers in the Integrated Services Routers Generation 2 portfolio. Compact Flash Slot 0 is populated with a 256MB CF by default from the factory. There is an additional Compact Flash Slot 1 that can be optionally configured and ordered with another compact flash of desired density.

Table 9. Cisco 2900 Series Routers Compact Flash (Factory Upgrades and Spares)

Ordering SKU	Description
MEM-CF-256MB	256MB Compact Flash for Cisco 1900, 2900, 3900 ISR (Default)
MEM-CF-256U512MB	256MB to 512MB CF Upgrade for Cisco 1900, 2900, 3900 ISR
MEM-CF-256U1GB	256MB to 1GB Compact Flash Upgrade for Cisco 1900, 2900, 3900 ISR
MEM-CF-256U2GB	256MB to 2GB Compact Flash Upgrade for Cisco 1900, 2900, 3900 ISR
MEM-CF-256U4GB	256MB to 4GB Compact Flash Upgrade for Cisco 1900, 2900, 3900 ISR
MEM-CF-256MB=	256MB Compact Flash for Cisco 1900, 2900, 3900 ISR (only as spare)
MEM-CF-512MB=	512MB Compact Flash for Cisco 1900, 2900, 3900 ISR (only as spare)
MEM-CF-1GB=	1GB Compact Flash for Cisco 1900, 2900, 3900 ISR (only as spare)
MEM-CF-2GB=	2GB Compact Flash for Cisco 1900, 2900, 3900 ISR (only as spare)
MEM-CF-4GB=	4GB Compact Flash for Cisco 1900, 2900, 3900 ISR (only as spare)

The fan assemblies on all the Cisco 2900 Series can be ordered as a spare if needed. An air filter is offered on Cisco 2911 for NEBS deployments and is orderable along with the system or as a spare for periodic maintenance and replacement. The front bezel on the Cisco 2911 and the cover for the redundant power supply slot on the Cisco 2911, 2921 and 2951 are orderable as spares. The fan assembly is shared between Cisco 2921 and 2951 and similarly the fan blower assembly is shared between Cisco 2901 and 1941 routers.

Table 10. Cisco 2900 Series Routers fan-related products

Ordering SKU	Description
2921-51-FANASSY=	Cisco 2921/2951 Fan Assembly and Bezel (only as spare)
2911-FANASSY=	Cisco 2911 Fan Assembly (no Bezel included) (only as spare)
2911-FANFLTR-NEBS	Cisco 2911 Fan Filter for NEBS environment (Both system & spare)
2911-AIRCVTR-NEBS=	Cisco 2911 Front-to-Back Air Flow Converter for NEBS use (only as spare)
1941-2901-FANBLWR=	Cisco 1941/2901 Fan Blower Assembly (only as spare)
RPS-COVER-2921-51=	Cover for empty RPS Adapter slot on Cisco 2921/2951 (only as spare)
RPS-COVER-2911=	Cover for empty RPS Adapter slot on Cisco 2911 (only as spare)
2911-BEZEL=	Cisco 2911 Front Bezel (Replacement Plastic Bezel) (only as spare)

1.3 Ordering the 1900 Series Integrated Services Routers

The Cisco 1900 Series primarily has 2 models: the Cisco 1941 and the Cisco 1941 Wireless. The Wireless version of 1941 is delivered from Cisco with an internal module for 802.11 a/b/g/n WLAN Access Point. Since the radio settings are country and region-specific, there are 5 types of 1941 Wireless SKUs that can be ordered as listed in the table below.

Table 11. Cisco 1900 Series Routers

Ordering SKU	Description	Technical Service SKU (SMARTnet 8x5xNBD)
CISCO1941/K9	Cisco 1941 w/2 GE,2 EHWIC slots,256MB CF,512MB DRAM,IP Base	CON-SNT-1941
CISCO1941W-A/K9	Cisco 1941 Router w/ 802.11 a/b/g/n FCC Compliant WLAN ISM	CON-SNT-1941WA
CISCO1941W-E/K9	Cisco 1941 Router w/ 802.11 a/b/g/n ETSI Compliant WLAN ISM	CON-SNT-1941WE
CISCO1941W-P/K9	Cisco 1941 Router w/ 802.11 a/b/g/n Japan Compliant WLAN ISM	CON-SNT-1941WP
CISCO1941W-N/K9	Cisco 1941 Router w/802.11 a/b/g/n Aus,NZ Compliant WLAN ISM	CON-SNT-1941WN
CISCO1941W-C/K9	Cisco 1941 Router w/802.11 a/b/g/n China Compliant WLAN ISM	CON-SNT-1941WC

The Cisco 1941 can be ordered with AC or POE type of power supply. The Cisco 1941 does not offer a DC version of power supply and it does not support external RPS. In order to power ports on a switch module integrated into a router, it is important to order the router with POE Power Supply.

Table 12. Cisco 1900 Series Router Power Supply Options

Ordering SKU	Description
PWR-1941-AC	Cisco 1941 AC Power Supply (Both system & spare)
PWR-1941-POE	Cisco 1941 AC Power Supply with Power Over Ethernet (Both system & spare)

On Cisco 1941 and 1941 Wireless routers, the default DRAM of 512 MB is soldered onto the motherboard. Hence, memory upgrades are available as modular DIMMs in densities of 512MB, 1GB and 2GB.

Table 13. Cisco 1900 Series Routers DRAM

Ordering SKU	Description
MEM-1900-512MB-DEF	512MB DRAM for Cisco 1941 ISR (Default)
MEM-1900-512U1GB	512MB to 1GB DRAM Upgrade (512MB+512MB) for Cisco 1941 ISR
MEM-1900-512U1.5GB	512MB to 1.5GB DRAM Upgrade (1GB+512MB) for Cisco 1941 ISR
MEM-1900-512U2.5GB	512MB to 2.5GB DRAM Upgrade (2GB+512MB) for Cisco 1941 ISR
MEM-1900-512MB=	512MB DRAM for Cisco 1941/1941W ISR (only as spare)
MEM-1900-1GB=	1GB DRAM for Cisco 1941/1941W ISR (only as spare)
MEM-1900-2GB=	2GB DRAM for Cisco 1941/1941W ISR (only as spare)

The Compact Flash SKUs in Table 14 below are shared across all the routers in the Integrated Services Routers Generation 2 portfolio. Compact Flash Slot 0 is populated with a 256MB CF by default from the factory. There is an additional Compact Flash Slot 1 that can be optionally configured and ordered with another compact flash of desired density.

Table 14. Cisco 1900 Series Routers Compact Flash

Ordering SKU	Description
MEM-CF-256U512MB	256MB to 512MB CF Upgrade for Cisco 1900, 2900, 3900 ISR
MEM-CF-256U1GB	256MB to 1GB Compact Flash Upgrade for Cisco 1900, 2900, 3900 ISR
MEM-CF-256U2GB	256MB to 2GB Compact Flash Upgrade for Cisco 1900, 2900, 3900 ISR
MEM-CF-256U4GB	256MB to 4GB Compact Flash Upgrade for Cisco 1900, 2900, 3900 ISR
MEM-CF-256MB=	256MB Compact Flash for Cisco 1900, 2900, 3900 ISR (only as spare)
MEM-CF-512MB=	512MB Compact Flash for Cisco 1900, 2900, 3900 ISR (only as spare)
MEM-CF-1GB=	1GB Compact Flash for Cisco 1900, 2900, 3900 ISR (only as spare)
MEM-CF-2GB=	2GB Compact Flash for Cisco 1900, 2900, 3900 ISR (only as spare)
MEM-CF-4GB=	4GB Compact Flash for Cisco 1900, 2900, 3900 ISR (only as spare)

The fan blower on the Cisco 1941 can be ordered as a spare if needed.

Table 15. Table 15. Cisco 1900 Series Routers Fan-related products

(Ordering SKU	Description
	1941-2901-FANBLWR=	Cisco 1941/2901 Fan Blower Assembly (only as spare)

1.4 Ordering common items across Cisco 1900, 2900, 3900 Series Routers

Each of the router in the Generation 2 ISR portfolio ships with a default accessory kit consisting of

- · 19-inch rack mount brackets
- Regulatory & Compliance Safety Information (RCSI) guide

The default accessory kit does not include any Category 5 RJ45 Ethernet cables or cables for the router's console or auxiliary port. The console and auxiliary cables can be ordered as an option during router's configuration or as spares. Generation 2 of the Integrated Services Routers offer an innovative USB-based console port which needs a separate console cable.

The 23 inch rack mount brackets, the blank faceplates for module slots and slot dividers can be ordered as spares as listed in Table 16 below. There is a blank faceplate spare for SM slot (SM- BLANK-KIT=) that is unique to Cisco 2921 and 3925 to cover the gap left behind on removal of Double-Wide Service Module. This SKU is a combination of the SM Blank attached to the SM slot divider by a torx screw to create a L-shaped piece. Under normal usage with single-wide SMs, this area is covered by a blank faceplate and does not allow for insertion of any single-wide service

module. Similarly, for the Cisco 1941 router, there is HWIC blank faceplate spare (HWIC-BLANK-KIT=) to cover the gap left behind from the removal of Double-Wide HWIC. This SKU is a combination of the HWIC Blank attached to the HWIC slot divider by a torx screw to form a L-shaped piece.

There are opacity shields available on Cisco 2900 and 3900 routers that meet Federal Information Processing Standards Publications (FIPS) 140-3 Level 2 opacity requirement.

Table 16. Cables, Rack-mount brackets, Blank faceplates, FIPS shields for Cisco 1900, 2900, 3900 Series routers

Ordering SKU	Description
CAB-CONSOLE-RJ45	Console Cable 6ft with RJ45 and DB9F (Both system and spare)
CAB-AUX-RJ45	Auxiliary Cable 8ft with RJ45 and DB25M (Both system and spare)
CAB-CONSOLE-USB	Console Cable 6 ft with USB Type A and mini-B connectors (Both system and spare)
ACS-3900-RM-23=	23 inch rack mount kit for Cisco 3925/3945 ISR (only as spare)
ACS-2900-RM-23=	23 inch rack mount kit for Cisco 2911/2921/2951 ISR (only as spare)
ACS-2901-RM-23=	23 inch rack mount kit for Cisco 2901 ISR (only as spare)
SM-S-BLANK=	Removable faceplate for SM slot on Cisco 2900, 3900 ISR (only as spare)
SM-BLANK-KIT=	Blank faceplate for SM slot with divider on Cisco 2951 & 3925 (only as spare)
HWIC-BLANK=	Blank faceplate for HWIC/EHWIC slot on Cisco ISR (only as spare)
HWIC-BLANK-KIT=	Blank faceplate for HWIC slot with divider for Cisco1941 ISR (only as spare)
HWIC-SLOT-DIVIDER=	HWIC/EHWIC Slot Divider (Guide) for Cisco 1900, 2900, 3900 ISR (only as spare)
SM-SLOT-DIVIDER=	SM Slot Divider (Guide) for Cisco 2900, 3900 ISR (only as spare)
ACS-CF-COVER=	Compact Flash Cover (Guard) for Cisco 1900, 2900, 3900 ISR (only as spare)
FIPS-SHIELD-3900=	FIPS opacity shield for Cisco 3925/3945 ISR
FIPS-SHIELD-2921=	FIPS opacity shield for Cisco 2921 ISR
FIPS-SHIELD-2951=	FIPS opacity shield for Cisco 2951 ISR
FIPS-SHIELD-2911=	FIPS opacity shield for Cisco 2911 ISR
FIPS-SHIELD-2901=	FIPS opacity shield for Cisco 2901 ISR

Cisco Configuration Professional is the device configuration tool that supports configuration of the Generation 2 of the Integrated Services Routers. By default, the routers come installed with CCP Express on the router flash (ISR-CCP-EXP). To order a full copy of the CCP software, select one of the CD option SKUs during router configuration or order as a spare later.

Table 17. Cisco Configuration Professional for Cisco 1900, 2900, 3900 Series routers

Ordering SKU	Description
ISR-CCP-EXP	Cisco Config Pro Express on Router Flash
ISR-CCP-EXP-NOCONF	Cisco Config Pro Express on Router Flash w/o default config
ISR-CCP-CD	Cisco Config Professional on CD, CCP-Express on Router Flash (Both system and spare)
ISR-CCP-CD-NOCONF	Cisco Config Pro on CD, CCP-Express on CF w/o default config

2 Ordering Cisco IOS Software Images and Licenses

Integrated Services Routers deliver innovative technologies running on industry-leading Cisco IOS Software.

Integrated Services Routers Generation 2 ship with a universal IOS image that contains all the features available for use on the routers. The specific feature set is activated by the use of technology package licenses such as Security, Unified Communications and Data.

Data
MPLS, L2TPv3, BFD, IP SLA,
SNA, Legacy Protocols

Unified Communications (UC)
IP Telephony,
Voice and Video

Security*
IOS Firewall, IPS, IPSec
(3DES & AES), SSL VPN

IPBase
Entry Level IOS functionality

Figure 1. IOS Packaging Model for 1900, 2900 and 3900 Series Integrated Services Routers

IOS Universal Image

There will be 2 types of universal images supported on ISR G2 routers:

- Universal images with the universalk9 in the image name: This universal image offers all the Cisco IOS
 features including strong payload cryptography features such as IPSec VPN, SSL VPN, and Secure Unified
 Communications.
- 2. Universal images with the universalk9_npe in the image name: The strong control of encryption capabilities by Cisco Software Activation helps meet U.S. export control requirements for cryptography. However, some countries have import requirements that require that the platform does not support any strong payload cryptography. To satisfy the import requirements of those countries, the router can be ordered with 'npe' universal image does not support any strong payload encryption. This image supports security features like Zone-Based Firewall, Intrusion Prevention through SECNPE-K9 license.

For a given type and version of universal IOS image, both the Cisco 3925 and Cisco 3945 share the same IOS image. Similarly, the Cisco 1941 and Cisco 1941 Wireless routers share the same universal IOS image. Within the Cisco 2900 Series product family, Cisco 2901, 2911 and 2921 share the universal IOS images for a given type and version. Cisco 2951 has its own unique IOS image different from rest of the Cisco 2900 Series images.

Table 18.	Universal IOS image Cisco 1900, 2900, 3900 Series routers -	- 15.0(1)M SKUs
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Ordering SKU	Description
S39UK9-15001M	Cisco IOS Universal Image for 3925/3945
S2951UK9-15001M	Cisco IOS Universal Image for 2951
S29UK9-15001M	Cisco IOS Universal Image for 2901-2921
S19UK9-15001M	Cisco IOS Universal Image for 1941
S39NPEK9-15001M	Cisco IOS Univ. Image (No Payload Encryption) for 3925/3945
S2951NPEK9-15001M	Cisco IOS Universal Image (No Payload Encryption) for 2951
S29NPEK9-15001M	Cisco IOS Univ. Image (No Payload Encryption) for 2901-2921
S19NPEK9-15001M	Cisco IOS Universal Image (No Payload Encryption) for 1941

By default, all the routers ship with an IP Base license. The routers can be ordered from the factory with technology licenses pre-installed using the Paper license SKUs (start with keyword 'SL'). Alternately, if the advanced technology features are to be deployed later, the required licenses can be ordered as spares. Spares for technology licenses can be ordered as paper licenses or e-delivery licenses (start with keyword 'L-SL').

^{*}Security license is also offered in NPE version that maps to the universal image with No Payload Encryption

For a given technology, the license product SKUs are common for routers in a particular product family e.g. The IP Base license SKU is common across Cisco 2901, 2911, 2921 and 2951 within the 2900 Series Integrated Services Routers. The SKUs vary across platform family as listed in Table 19 below.

Table 19. IP Base Licenses for Cisco 1900, 2900, 3900 Series routers – maps to both types of universal images

Ordering SKU	Description
SL-39-IPB-K9	IP Base License (Paper) for Cisco 3925/3945
SL-29-IPB-K9	IP Base License (Paper) for Cisco 2901-2951
SL-19-IPB-K9	IP Base License (Paper) for Cisco 1941

The security licenses in Table 20 can be used to activate the advanced security features offered on the Cisco 1900, 2900 and 3900 Series routers. These SKUs can be ordered only for the universal image that supports payload cryptography.

Table 20. Security Licenses for Cisco 1900, 2900, 3900 Series routers - map to universalk9 image

Ordering SKU	Description
SL-39-SEC-K9	Security License (Paper) for Cisco 3925/3945 (Both system & spare)
SL-29-SEC-K9	Security License (Paper) for Cisco 2901-2951 (Both system & spare)
SL-19-SEC-K9	Security License (Paper) for Cisco 1941 (Both system & spare)
L-SL-39-SEC-K9=	Security PAK (E-Delivery) for Cisco 3925/3945 (only as spare)
L-SL-29-SEC-K9=	Security PAK (E-Delivery) for Cisco 2901-2951 (only as spare)
L-SL-19-SEC-K9=	Security PAK (E-Delivery) for Cisco 1941 (only as spare)

For activating security features on the universal image with no payload encryption, the security license SKUs are unique as listed in Table 21 below.

Table 21. Security Licenses (No Payload Encryption) for Cisco 1900, 2900, 3900 Series routers – map to universalk9_npe image

Ordering SKU	Description	
SL-39-SECNPE-K9	Security No Payload Encryption (Paper) License for Cisco 3925/3945 (System & spare).	
SL-29-SECNPE-K9	ecurity No Payload Encryption (Paper) License for Cisco 2901-2951 (System & spare).	
SL-19-SECNPE-K9	Security No Payload Encryption (Paper) License for Cisco 1941 (System & spare).	
L-SL-39-SECNPE-K9=	Security No Payload Encryption PAK (E-Delivery) for Cisco 3925/3945(only as spare)	
L-SL-29-SECNPE-K9=	Security No Payload Encryption PAK (E-Delivery) for Cisco 2901-2951(only as spare)	
L-SL-19-SECNPE-K9=	Security No Payload Encryption PAK (E-Delivery) for Cisco 1941(only as spare)	

For activating Unified Communications features on the Cisco 2900 and 3900 Series routers, the UC license SKUs are as listed in Table 22 below.

 Table 22.
 Unified Communications License for Cisco 1900, 2900, 3900 Series routers – maps to both images

Ordering SKU	Description	
SL-39-UC-K9	Unified Commn. License (Paper) for Cisco 3925/3945 (Both system & spare)	
SL-29-UC-K9	Unified Commn. License (Paper) for Cisco 2901-2951 (Both system & spare)	
L-SL-39-UC-K9=	Unified Commn. PAK (E-Delivery) for Cisco 3925/3945 (only as spare)	
L-SL-29-UC-K9=	Unified Commn. PAK (E-Delivery) for Cisco 2901-2951 (only as spare)	

The Data license in Table 23 can be used to activate the data features offered on the Cisco 1900, 2900 and 3900 Series routers.

Table 23. Data Licenses for Cisco 1900, 2900, 3900 Series routers – maps to both universal images

Ordering SKU	Description
SL-39-DATA-K9	Data License (Paper) for Cisco 3925/3945 (Both system & spare)
SL-29-DATA-K9	Data License (Paper) for Cisco 2901-2951 (Both system & spare)
SL-19-DATA-K9	Data License (Paper) for Cisco 1941 (Both system & spare)
L-SL-39-DATA-K9=	Data PAK (E-Delivery) for Cisco 3925/3945 (only as spare)
L-SL-29-DATA-K9=	Data PAK (E-Delivery) for Cisco 2901-2951 (only as spare)
L-SL-19-DATA-K9=	Data PAK (E-Delivery) for Cisco 1941 (only as spare)

The Cisco 1900, 2900, 3900 Series routers also offer a wide variety of feature and subscription licenses for advanced security and unified communications functions such as CME, SRST, CUBE, SSL VPN, IOS IPS. These licenses are needed in addition to the technology license for a given solution deployment. Please refer to the Licensing Deployment Guide for a complete list of feature and subscription licenses.

3 Ordering Modules for Integrated Services Routers Generation 2

Majority of the existing modules from the Integrated Services Routers are supported on Generation 2 of the portfolio. For a complete list of supported and unsupported modules, please refer to the relevant Cisco Modules and Interfaces for each product family.

In order to integrate an existing Network Modules (NM, NME) or Extended Voice Modules (EVM) into the Services Module (SM) slot on the Generation 2 ISRs, a network module adapter is required. Similarly, to insert an existing Packet Voice Digital Modules (PVDM2) into the PVDM3 slot of the Cisco 2900 and 3900 Series routers, a PVDM adapter is needed. One adapter is needed for each module that needs to be plugged in and can be ordered during system configuration in the Configuration Tool. These adapters can also be ordered as spares in order to insert any existing modules from current ISRs in use.

Table 24. Module Adapters for Cisco 2900 and 3900 Series routers (Factory Option and Spares)

Ordering SKU	Description	
SM-NM-ADPTR	Network Module Adapter for SM Slot on Cisco 2900, 3900 ISR (Both system & spare)	
PVDM2-ADPTR PVDM2 Adapter for PVDM Slot on Cisco 2900, 3900 Series ISR (Both system & spare)		

4 Bundled Systems for Integrated Services Routers G2

The ISR G2 portfolio can also be ordered as pre-packaged bundled systems for deploying advanced technologies like security, unified communications and application services in the branch. Many of the bundled systems are being preserved from the current ISRs and are being updated for the ISR G2 routers as illustrated in Figure 2.

Figure 2. Bundled System Offerings for 1900, 2900 and 3900 Series Integrated Services Routers

SRE Bundle

- Includes UC and Security License for 2900, 3900; Security License for 1941
- Includes entry-level PVDM3 (DSPs) for 2900, 3900
- Includes SRE Module (SM-700 on 2921-2945, ISM-300 on 1941-2911)

CME/SRST Bundle

- Includes UC Software License
- Includes entry-level PVDM3 (DSPs)
- Includes 25 CME/SRST licenses

VSEC Bundle

- Includes UC and Security Software License
- Includes entry-level PVDM3 (DSPs)
- High performance IPSec/SSL onboard acceleration

V Bundle

- Includes UC Software License
- Includes entry-level PVDM3 (DSPs)

SEC Bundle

- Includes Security Software License
- High performance IPSec/SSL onboard acceleration



Base Systems

Includes IP Base Software License

4.1 Security Bundles

Cisco[®] router security bundles deliver security features such as Cisco IOS[®] Software-based intrusion prevention systems (IPS), firewall, VPN, content filtering and infrastructure security services over numerous WAN access technologies, offering high levels of performance, scalability, and availability to meet today's growing business requirements. Table 25 lists the ISR G2 security bundles for the Cisco 1900, 2900 and 3900 Series routers that come with the Security technology license activated and the advanced security features available for use. By default, these bundles will ship with the universal IOS image that supports payload cryptography.

Table 25. Security Bundles for Cisco 1900, 2900, 3900 Series routers – include universalk9 image and SEC license

Ordering SKU	Description	Technical Service SKU* (SMARTnet 8x5xNBD or Cisco Services for IPS 8x5xNBD)
CISCO1941-SEC/K9	Cisco 1941 Security Bundle w/SEC license PAK	CON-SNT-1941SEC or CON-SU1-1941SEC
CISCO2901-SEC/K9	Cisco 2901 Security Bundle w/SEC license PAK	CON-SNT-2901SEC or CON-SU1-2901SEC
CISCO2911-SEC/K9	Cisco 2911 Security Bundle w/SEC license PAK	CON-SNT-2911SEC or CON-SU1-2911SEC
CISCO2921-SEC/K9	Cisco 2921 Security Bundle w/SEC license PAK	CON-SNT-2921SEC or CON-SU1-2921SEC
CISCO2951-SEC/K9	Cisco 2951 Security Bundle w/SEC license PAK	CON-SNT-2951SEC or CON-SU1-2951SEC
CISCO3925-SEC/K9	Cisco 3925 Security Bundle w/SEC license PAK	CON-SNT-3925SEC or CON-SU1-3925SEC
CISCO3945-SEC/K9	Cisco 3945 Security Bundle w/SEC license PAK	CON-SNT-3945SEC or CON-SU1-3945SEC

^{*} Customers can purchase either the Cisco SMARTnet Service (CON-SNT-XXX) or the Cisco Services for IPS (CON-SU1-XXX) which includes SMARTnet Service and Signature Updates for Intrusion Prevention System (IPS).

4.2 Unified Communications Bundles

Cisco[®] ISR G2 Voice and Voice Security bundles enable unified communications through a rich signaling and media-processing infrastructure, including a variety of protocols, media interworking, signal and media security, transcoding, conferencing, and QoS. These bundles can be ordered with optional licenses for Cisco Communications Manager Express (CME) or Survivable Remote Site Telephony (SRST).

All the Unified Communications Bundles on Cisco 2900 and 3900 Series routers include the new Cisco[®] High-Density Packet Voice Digital Signal Processor (DSP) Module (PVDM3), which has been optimized for concurrent voice and video support. The PVDM3 modules support all voice-gateway functions of earlier generations of PVDMs, and add higher density and more processing power to support emerging rich-media applications.

Table 26 lists the ISR G2 voice bundles for the Cisco 2900 and 3900 Series routers that come with entry-level PVDM3, UC technology license and the unified communications features available for use. By default, these bundles will ship with the universal IOS image that supports payload cryptography.

Table 26. V Bundles for Cisco 2900, 3900 Series routers – include universalk9 image, UC license and PVDM3

Ordering SKU	Description	Technical Service SKU (SMARTnet 8x5xNBD)
CISCO2901-V/K9	Cisco 2901 Voice Bundle, PVDM3-16, UC License PAK	CON-SNT-2901V
CISCO2911-V/K9	Cisco 2911 Voice Bundle, PVDM3-16, UC License PAK	CON-SNT-2911V
CISCO2921-V/K9	Cisco 2921 Voice Bundle, PVDM3-32, UC License PAK	CON-SNT-2921V
CISCO2951-V/K9	Cisco 2951 Voice Bundle, PVDM3-32, UC License PAK	CON-SNT-2951V
CISCO3925-V/K9	Cisco 3925 Voice Bundle, PVDM3-64, UC License PAK	CON-SNT-3925V
CISCO3945-V/K9	Cisco 3945 Voice Bundle, PVDM3-64, UC License PAK	CON-SNT-3945V

Table 27 lists the ISR G2 CME-SRST bundles for the Cisco 2900 and 3900 Series routers that come with the entry-level PVDM3, UC technology license and also right to use licenses for 25 seats of CME or SRST.

Table 27. CME-SRST Bundles for Cisco 2900, 3900 Series – include universalk9 image, UC & CME/SRST license, PVDM3

Ordering SKU	Description	Technical Service SKU (SMARTnet 8x5xNBD)
C2901-CME-SRST/K9	2901 Voice Bundle w/ PVDM3-16,FL-CME-SRST-25, UC License PAK	CON-SNT-2901CMST
C2911-CME-SRST/K9	2921 Voice Bundle w/ PVDM3-16,FL-CME-SRST-25, UC License PAK	CON-SNT-2911CMST
C2921-CME-SRST/K9	2921 Voice Bundle w/ PVDM3-32,FL-CME-SRST-25, UC License PAK	CON-SNT-2921CMST
C2951-CME-SRST/K9	2951 Voice Bundle w/ PVDM3-32,FL-CME-SRST-25, UC License PAK	CON-SNT-2951CMST
C3925-CME-SRST/K9	3925 Voice Bundle w/ PVDM3-64,FL-CME-SRST-25, UC License PAK	CON-SNT-3925CMST
C3945-CME-SRST/K9	3945 Voice Bundle w/ PVDM3-64,FL-CME-SRST-25, UC License PAK	CON-SNT-3945CMST

Table 28 lists the ISR G2 voice security bundles for the Cisco 2900 and 3900 Series routers that come with the entry-level PVDM3, Unified Communications and Security technology license activated. By default, these bundles will ship with the universal IOS image that supports payload cryptography.

Table 28. VSEC Bundles for Cisco 2900, 3900 Series routers – include universalk9 image, UC & SEC license and PVDM3

Ordering SKU	Description	Technical Service SKU (SMARTnet 8x5xNBD or Cisco Services for IPS 8x5xNBD)
C2901-VSEC/K9	Cisco 2901 Voice Sec. Bundle, PVDM3-16, UC and SEC License PAK	CON-SNT-2901VSEC or CON-SU1-2901VSEC
C2911-VSEC/K9	Cisco 2911 Voice Sec. Bundle, PVDM3-16, UC and SEC License PAK	CON-SNT-2911VSEC or CON-SU1-2911VSEC
C2921-VSEC/K9	Cisco 2921 Voice Sec. Bundle, PVDM3-32, UC and SEC License PAK	CON-SNT-2921VSEC or CON-SU1-2921VSEC
C2951-VSEC/K9	Cisco 2951 Voice Sec. Bundle, PVDM3-32, UC and SEC License PAK	CON-SNT-2951VSEC or CON-SU1-2951VSEC
C3925-VSEC/K9	Cisco 3925 Voice Sec. Bundle, PVDM3-64, UC and SEC License PAK	CON-SNT-3925VSEC or CON-SU1-3925VSEC
C3945-VSEC/K9	Cisco 3945 Voice Sec. Bundle, PVDM3-64, UC and SEC License PAK	CON-SNT-3945VSEC or CON-SU1-3945VSEC

4.3 Application Services (SRE) Bundles

The Cisco Services Ready Engine modules are high-performance router blades for Cisco Integrated Services Routers Generation 2 that provides the capability to host Cisco, third-party, and custom applications. The modules have their own processors, storage, network interfaces, and memory that operate independently of the host router resources, helping to ensure maximum concurrent routing and application performance.

The Cisco Services Ready Engine modules support an on-demand deployment model that enables you to provision integrated service and branch-office application on the modules at any time. This solution can help your organization to reduce the cost of integrated service deployment, future-proof your network, and quickly deploy new branch-office applications when and where they are needed.

Table 29 lists the ISR G2 SRE bundles for the Cisco 1900, 2900 and 3900 Series routers. The 1941 SRE Bundle includes the ISM-SRE-300-K9 module along with the Security technology license. The 2900 and 3900 SRE Bundles are based on VSEC configurations and hence include the UC and Security technology license and the entry-level PVDM3 in each router. The 2901 and 2911 VSEC-SRE Bundles include the ISM-SRE-300-K9 module while the 2921, 2951, 3925 and 3945 SRE Bundles include SM-SRE-700-K9 module for deployment of application services in the branch. By default, these bundles will ship with the universal IOS image that supports payload cryptography.

Table 29. SRE Bundles for Cisco 1900, 2900, 3900 Series routers – include SRE module

Ordering SKU	Description	Technical Service SKUs* (SMARTnet 8x5xNBD, Software Application Support with Upgrades (SASU)
C1941-SEC-SRE/K9	Cisco 1941 SRE Bundle, SRE 300, SEC license PAK	CON-SNT-1941SEC, CON-SAU-ISRE300
C2901-VSEC-SRE/K9	Cisco 2901 SRE Bundle, SRE 300, PVDM3-16, UC and SEC License PAK	CON-SNT-2901VSEC, CON-SAU-ISRE300
C2911-VSEC-SRE/K9	Cisco 2911 SRE Bundle, SRE 300, PVDM3-16, UC and SEC License PAK	CON-SNT-2911VSEC, CON-SAU-ISRE300
C2921-VSEC-SRE/K9	Cisco 2921 SRE Bundle, SRE 700, PVDM3-32, UC and SEC License PAK	CON-SNT-2921VSEC, CON-SAU-SMSRE700
C2951-VSEC-SRE/K9	Cisco 2951 SRE Bundle, SRE 700, PVDM3-32, UC and SEC License PAK	CON-SNT-2951VSEC, CON-SAU-SMSRE700
C3925-VSEC-SRE/K9	Cisco 3925 SRE Bundle, SRE 700, PVDM3-64, UC and SEC License PAK	CON-SNT-3925VSEC, CON-SAU-SMSRE700
C3945-VSEC-SRE/K9	Cisco 3945 SRE Bundle, SRE 700, PVDM3-64, UC and SEC License PAK	CON-SNT-3945VSEC, CON-SAU-SMSRE700

^{*} Customers can purchase Cisco SMARTnet Service (CON-SNT-XXX) for technical support on SRE Bundle which covers the router and the modules including the 'blank' SRE module. SASU Service is necessary for the application running on the SRE module.

5 Cisco and Partner Services for the Branch

Transform the branch experience and accelerate business innovation and growth in the Borderless Network using intelligent, personalized services from Cisco and our partners. We have the depth and breadth of expertise to create a clear, replicable, optimized branch footprint across technologies. Planning and design services align technology with business goals and can increase the accuracy, speed, and efficiency of deployment. Technical services help improve operational efficiency, save money, and mitigate risk. Optimization services are designed to continuously improve performance and help your team succeed with new technologies.

5.1 Technical Services Available for ISR G2 Products

Cisco® SMARTnet® Service: Provides comprehensive technical support services for the ISR G2 platforms (both base systems and bundled systems), OS software and feature licenses, and modules including Services Ready Engine (SRE) module. Cisco SMARTnet Services includes advance hardware replacement, OS updates, online tools and resources, and TAC support.

Cisco Application Support plus Upgrades (SASU): Provides technical support services including updates and upgrades for any Cisco software application running on the SRE module. Applications might include Cisco Unity Express, Cisco AXP, Cisco WLC, Cisco WAAS, and Cisco Video Surveillance.

Cisco Services for Intrusion Prevention System (IPS): Provides Cisco SMARTnet Service deliverables including hardware support, OS updates, online tools and resources, plus provides signature updates and additional services for ISR G2 routers with a security feature set with IPS or an IPS network module.

Table 30. Technical Services Use Cases

If you buy an ISR G2 base or bundled system with:	You need:
Any IOS software including technology or feature licenses for IOS	Cisco SMARTnet Service
Any modules including 'blank' SRE modules	Cisco SMARTnet Service
An application running on an SRE module	Cisco SMARTnet Service + SASU
A security feature set and do not require IPS signature updates	Cisco SMARTnet Service
A security feature set with IPS or a chassis with an IPS network module	Cisco Services for IPS
A security feature set with IPS or a chassis with an IPS network module feature set with an application running on an SRE module	Cisco Services for IPS + SASU

6 Additional Information and Marketing Contacts

To obtain current information about prices for products in ISR G2 portfolio, please refer to the Cisco price list.

For more information about the Cisco Integrated Services Routers Generation 2, visit http://www.cisco.com/go/isrG2

For more information about Cisco Technical Services, visit http://www.cisco.com/go/ts.



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