1. Cisco 4451-X Integrated Services Router

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

The Cisco 4451-X Integrated Services Router revolutionizes the delivery of application-aware services in a branch-office environment. This new member of the Cisco ISR Family provides extensive Layer 7 services hosted internally to the branch office while maximizing operating expenses (OpEx) savings.

You can order the platform as a base system or as a bundled system for security, unified communications, 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. For a detailed list of advanced technology bundles, please refer to section 4 of this ordering guide.

1.1 Ordering the Cisco 4451-X Integrated Services Router

The Cisco 4451-X offers the highest performance among the ISR portfolio.

Table 1 lists the part number for the Cisco 4451-X platform.

Table 1.   Cisco 4451-X Platform

Ordering SKU	Description	Technical Service SKU (Cisco SMARTnet 8x5xNBD)
ISR4451-X/K9	Cisco ISR4451 (4GE,3NIM,2SM,8G FLASH,4G DRAM)	CON-SNT-ISR45XK9

You can order each Cisco 4451-X platform with dual power supplies that you can configure for power-supply redundancy.

You can order the power supplies listed in Table 2 with the system or as spares.

Table 2.   Cisco 4451-X Power Supply Options (Offered with the System and as Spares)

Ordering SKU	Description
PWR-4450-AC	450W AC Power Supply for Cisco ISR 4451-X. Ships default with the system. Spare SKU should be ordered for a Secondary PS of a system already deployed
PWR-4450-AC/2	450W AC Power Supply (Secondary PS) for Cisco ISR 4451-X
PWR-COVER-4450=	Cover for empty 2nd Power Supply slot on Cisco ISR4450

The Cisco 4451-X ships with a default memory of 2-GB DRAM for data plane and 4-GB DRAM for the control plane in addition to 8GB of flash memory. The 4-GB DRAM configuration for the control plane is derived by the installation of two symmetrical dual in-line memory modules (DIMMs) of 2 GB in each of the memory slots of the Cisco 4451-X platform. When upgrading memory to higher densities, both memory slots must be populated with DIMMs of symmetrical type and density for high system performance. The Cisco 4451-X does not support the use of different DRAM densities in the 2 available DIMM slots or the use of only 1slot. The memory type and part numbers are as listed in Table 3.

Table 3.   Cisco 4451-X Router DRAM (Factory Upgrades and Spares)

Ordering SKU	Description
MEM-4400-2G=	2G DRAM (1 DIMM) for Cisco ISR4400, Spare
MEM-4400-DP-2G=	2G DRAM (1 DIMM) for Cisco ISR4400 Data Plane, Spare
MEM-4400-4G=	4G DRAM (1 DIMM) for Cisco ISR4400, Spare
MEM-4400-8G=	8G DRAM (1 DIMM) for Cisco ISR4400, Spare
MEM-4400-DP-2G	2G DRAM (1 DIMM) for Cisco ISR4400 Data Plane (Default)

4. Bundled Systems for Cisco 4451-X

You can also order the Cisco 4451-X as prepackaged bundled systems for deploying advanced technologies such as security, unified communications, and application services in the branch office.

4.1 Security Bundles

Cisco router security bundles deliver security features such as Cisco IOS Software-based firewall, VPN, 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 13 lists the security bundle for the Cisco 4451-X Router that comes with the Security technology license activated and the advanced security features available for use. By default, this bundle ships with the universal Cisco IOS Software image that supports payload cryptography.

Table 13. Security Bundle for Cisco 4451-X (Includes universalk9 Image and SEC License)

Ordering SKU	Description	Technical Service SKU (SMARTnet 8x5xNBD)
ISR4451-X-SEC/K9	Cisco ISR 4451-X Security Bundle w/SEC license PAK	CON-SNT-ISX451-X

4.2 Unified Communications Bundles

The Cisco 4451-X Voice and Voice Security bundle enables unified communications through a rich signaling and media-processing infrastructure, including a variety of protocols, media interworking, signal and media security, transcoding, conferencing, and quality of service (QoS). You can order these bundles with optional licenses for SRST.

All the Unified Communications bundles include the new Cisco Packet Voice DSP Module 4 (PVDM4), which has been optimized for concurrent voice support. The PVDM4 modules support all voice-gateway functions of earlier generations of PVDMs.

Table 14 lists the voice bundle for the Cisco 4451-X Router that comes with PVDM4, UC technology license, and the unified communications features available for use. By default, this bundle ships with the universal Cisco IOS Software image that supports payload cryptography.

Table 14. Voice and Video Bundle for Cisco 4451-X Router (Includes universalk9 Image, UC License, and PVDM4)

Ordering SKU	Description	Technical Service SKU (SMARTnet 8x5xNBD)
ISR4451-X-V/K9	Cisco ISR 4451-X Voice Bundle, PVDM4-64 w/ UC License PAK	CON-SNT-ISR4451-X

Table 15 lists the secure voice bundle for the Cisco 4451-X Router that comes with PVDM4, UC and SEC technology license, and the unified communications features available for use. By default, this bundle ships with the universal Cisco IOS Software image that supports payload cryptography.

Table 15. VSEC Bundle for Cisco 4451-X Router (Includes universalk9 Image, UC and SEC License, and PVDM4)

Ordering SKU	Description	Technical Service SKU (SMARTnet 8x5xNBD)
ISR4451-X-VSEC/K9	Cisco ISR 4451-X Voice Sec. Bundle, PVDM4-64 w/ UC and SEC License PAK	CON-SNT-ISR41-X

Information on the Cisco 4451-X Application Experience Bundle is captured in the AX Ordering guide.