

Cisco 860 and 880 Series Integrated Services Routers

Product Overview and Positioning

Q. What are the Cisco® 860 and 880 Series Integrated Services Routers?

A. The Cisco 860 and 880 Series Integrated Services Routers are fixed-configuration routers that provide collaborative business solutions for secure voice and data communication to small businesses and enterprise teleworkers. The Cisco 860 and 880 Series Integrated Services Routers complement the current Cisco 800 Series Integrated Services Router portfolio by supporting advanced technologies such as 802.11n, unified wireless network architecture, 3G, and voice. Refer to the Cisco 860 and 880 Series data sheets to learn more about the advanced technologies supported by these platforms.

Q. What's the difference between Cisco 860 and 880 Series Integrated Services Routers?

A. The Cisco 880 Series supports advanced security, voice, wireless, quality of service (QoS), and high-availability features. It also provides higher performance required to support the advanced features.

Q. What's the difference between the new Cisco 860 and 880 Series and the Cisco 850 and 870 Series Integrated Services Routers?

A. The Cisco 860 and 880 Series complement the Cisco 850 and 870 Series by adding support for new technologies such as 3G wireless WAN, voice, and 802.11n wireless LAN to the Cisco 800 Series portfolio.

Q. Can I continue to use and order the Cisco 850 and 870 Series?

A. Yes. There are no planned end-of-sale dates for the Cisco 850 and 870 Series.

Hardware Features

Q. What are the different hardware options for the Cisco 860 and 880 Series?

A. The Cisco 860 and 880 Series routers are fixed-configuration integrated services routers. There are a number of different hardware options on WAN interfaces, LAN interfaces, and voice capabilities. The requirements for these options to support a network deployment need to be carefully considered at the time an order is placed. For details on hardware options for each model, refer to the [Cisco 860 and 880 Series data sheets](#).

Q. Are there any hardware upgrade options?

A. No. The Cisco 860 and 880 Series routers are fixed-configuration integrated services routers that do not have hardware upgrade options (except for memory). You must decide the hardware configuration of the router by selecting the desirable product SKU at the time of ordering.

Q. Is memory upgradable?

A. An appropriate amount of router flash memory has been integrated for the different Cisco 860 and 880 Series hardware models, and it is not upgradable. DRAM is upgradable on the Cisco 880 Series only. Refer to the [Cisco 860 and 880 Series data sheets](#) for default memory configurations and upgrade options.

Q. What is the Universal Serial Bus (USB) port being used for?

A. A single USB 1.1 port is available on the Cisco 880 Series only. This port enables important security and provisioning capabilities, including secure device authentication, storage of removable credentials for establishing secure VPN connections, secure distribution of configuration files, bulk flash storage for files and configuration, and booting from USB. The Cisco 880 Series supports two types of USB devices: USB flash and USB eToken. For a list of supported USB flash and eToken devices, refer to http://www.cisco.com/en/US/partner/prod/collateral/modules/ps6247/product_data_sheet0900_aecd80232473.html.

Q. What's the purpose of the reset button?

A. The reset button is used to restore the router to the default factory settings if pressed within 5 seconds of router powerup. Here is how it works:

- The router will not react to the reset button if pressed after the 5 seconds of powerup.
- When the reset button is pressed within 5 seconds of bootup and there is no valid xxx.cfg file in the flash memory, the router boots up with the factory defaults stored in NVRAM.
- When the reset button is pressed within 5 seconds of bootup and there is a valid xxx.cfg file in the flash, the router boots up with the xxx.cfg file and avoids the startup-config file in NVRAM.

Q. What is the virtual auxiliary port function?

A. On the Cisco 860 and 880 Series, the console port supports modem control signals. When an external modem is connected to this port, this interface can be used for out-of-band remote management of the router or as a backup WAN interface. An optional RJ-45 to DB-25 male straight-through cable is available as an orderable option to connect modems to this port. A limited set of modems and terminal adapters has been tested, but any Hayes-compatible modem or terminal adapter can be used to connect to this port. The console port will behave like a standard Cisco auxiliary (AUX) port if configured as such and can provide bitrates up to 115.2 kbps.

Software Features**Q. Which Cisco IOS® Software release do the Cisco 860 and 880 Series support?**

A. The Cisco 860 and 880 Series are supported by Cisco IOS Software Release 12.4(20)T and above.

Q. What Cisco IOS Software image and feature sets are offered for the Cisco 860 and 880 Series?

A. The Cisco 860 and 880 Series support universal images and two feature sets. A universal image includes all features supported by a given platform. The active feature set is enabled with the Cisco Software Activation feature.

The following universal images are supported by the Cisco 860 and 880 Series:

- **c860-universalk9-mz:** universal image for the Cisco 860 Series
- **c880data-universalk9-mz:** universal image for the Cisco 880 Series data-only models
- **c880voice-universalk9-mz:** universal image for the Cisco 880 Series voice models

The following feature sets are supported by the Cisco 860 and 880 Series using the Cisco software activation feature:

- **Advanced Security:** Cisco 860 and 880 Series
- **Advanced IP Services:** Cisco 880 Series only

Q. What is the Cisco software activation feature?

A. Software activation authorizes and enables the usage of a Cisco software feature or feature sets. A special file contained in the device, called a license file, is examined by Cisco software when the device is powered on. Based on the license file installed, Cisco software enables the appropriate feature set(s).

Q. What features require software license and activation on the Cisco 860 and 880 Series?

A. The default feature set for the Cisco 860 and 880 Series is Advanced Security, with the exception of the 880SRST Series. The default feature set for the 880SRST Series is Advanced IP Services. The appropriate license file is installed on the platform by Cisco manufacturing to support the default feature set. An upgrade to the Advanced IP Services feature set on the Cisco 880 Series (non-SRST models) would require software license and activation. In addition, the subscription-based content filtering feature requires a calendar-based subscription.

Refer to the [Cisco 860 and 880 Series Software Activation Q&A](#) for more information.

Q. Does the Cisco 860 and 880 Series Advanced Security feature set offer the same features as the Advanced Security feature set supported by the Cisco 1800, 2800, and 3800 Series Integrated Services Routers?

A. The Advanced Security feature set supported by the Cisco 860 and 880 Series does not include features such as dynamic multipoint VPN (DMVPN), group encrypted transport VPN (GETVPN), Secure Sockets Layer (SSL) VPN, intrusion prevention system (IPS), and content filtering, which are available with the Advanced Security feature set of the Cisco 1800, 2800, and 3800 Series. Refer to the Cisco 860 and 880 Series data sheet for the list of features available for each feature set.

Q. Can I boot a Cisco IOS Software image and Cisco IOS Software configuration file from the USB flash installed on a Cisco 880 Series?

A. During the router reload process, the Cisco 880 Series will automatically search for a bootable Cisco IOS Software image on the USB flash if no bootable image is available on the onboard flash. A Cisco IOS Software configuration file can be booted from the USB flash only if the Cisco IOS Software command "boot config usbflash0:" is part of the router startup configuration stored in NVRAM.

Q. Do the Cisco 860 and 880 Series support Metro Ethernet deployments?

A. Metro Ethernet features and deployments are supported by the Cisco 880 Series only.

Q. What web-based or GUI tool is available for the Cisco 860 and 880 Series?

A. The Cisco 860 and 880 Series can be configured and managed by Cisco Configuration Professional.

Q. Will the Cisco 860 and 880 Series be supported by Cisco Security Manager?

A. The Cisco 881 and 888 platforms will be supported by Cisco Security Manager Version 3.2.1. The Cisco 860 Series will be supported by a later release of Cisco Security Manager.

Q. How is factory default configuration restored on the Cisco 860 and 880 Series?

A. Factory default configurations of the Cisco 860 and 880 Series can be restored using the Cisco Configuration Professional application or by using the reset button on the platform. Refer to the question “What’s the purpose of the reset button?” in the Hardware Features section on restoring factory default configurations with this button.

Q. Do the Cisco 860 and 880 Series support any out-of-band management capabilities?

A. The Cisco 860 and 880 Series support out-of-band management capabilities using the virtual auxiliary port with an external modem connected to it or using the ISDN S/T interface on the DSL models.

Q. Do the Cisco 860 and 880 Series support dial backup?

A. The Cisco 860 and 880 Series provide dial backup support with 3G, ISDN, and external modem using the auxiliary port.

Q. Can the ISDN interface on the Cisco 880 Series DSL models be used as a primary interface?

A. Yes. The ISDN S/T interface on the Cisco 880 Series DSL models can be used as a primary interface with the default software feature set.

Security Features**Q. Is hardware-based encryption available on the Cisco 860 and 880 Series?**

A. Yes. Hardware-assisted IP Security (IPsec) Triple Data Encryption Standard (3DES) and Advanced Encryption Standard (AES) encryption is available on both the Cisco 860 and 880 Series; 128-bit, 192-bit, and 256-bit keys are supported for AES.

Q. Is hardware-based SSL VPN available on the Cisco 860 and 880 Series?

A. SSL VPN is supported on the Cisco 880 Series with the Advanced IP Services feature set only and is software based.

Q. How many IPsec tunnels are supported by the Cisco 860 and 880 Series?

A. The Cisco 860 Series supports 5 IPsec tunnels. The Cisco 880 Series supports 20 IPsec tunnels.

Q. What advanced security features are supported by the Cisco 860 and 880 Series?

A. With the Advanced Security feature set, Cisco 860 Series routers support basic security features such as site-to-site VPN, Easy VPN, and application inspection and control with Cisco IOS Firewall. With the Advanced IP Services feature set, the Cisco 880 Series routers also support advanced security features such as DMVPN, GETVPN, SSL VPN, IPS, and subscription-based content filtering.

Q. What is the subscription-based content filtering feature that is introduced with the Cisco 880 Series?

A. Cisco IOS Content Filtering on Cisco integrated services routers offers category-based URL blocking; keyword blocking; and protection against adware, malware, and spyware by restricting access to websites based on their reputation rating. This is a subscription-based hosted solution and integrates closely with Cisco IOS Software for a better user experience.

For more information about this feature, refer to the Cisco IOS Content Filtering data sheet and Q&A at <http://www.cisco.com/go/ioscontentfiltering>.

3G Features

Q. What kind of 3G modem is integrated with the Cisco 880 Series routers?

A. When ordered with the 3G SKU, the Cisco 880 Series is bundled with a modem branded by Cisco and supplied by Sierra Wireless: AC597E 3G modem for the CDMA network or Sierra Wireless AC880E 3G modem for the GSM network.

Q. Can I use my own 3G modem for the Cisco 880 Series 3G interface?

A. The 3G modems will be bundled with the Cisco 880 Series 3G routers. Cisco will not support any other modems not bundled with the platforms.

Q. Can the 3G interface be used as a primary interface?

A. The 3G interface of the Cisco 880 Series routers can be used as a primary interface to provide WAN connectivity for remote sites and temporary locations.

For more information on 3G support of the Cisco 880 Series, refer to the Cisco 880 Series 3G data sheet and Q&A.

Wireless LAN Features

Q. Which wireless LAN standard do the Cisco 860 and 880 Series support?

A. The Cisco 860 and 880 Series support 2.4-GHz 802.11b/g/n.

Q. What's the difference between the Cisco 860 and 880 Series integrated access point and the Cisco 850 and 870 Series integrated access point?

A. The integrated access point on the Cisco 860 and 880 Series is Wi-Fi 802.11n Draft 2.0 certified. The Cisco 880 Series offers both the autonomous and unified options, so it can be deployed as a standalone access point or as part of a Cisco Unified Wireless Network. (The Cisco 860 Series supports autonomous mode only.) The access point software on the Cisco 860 and 880 Series is independent of the platform software and offers feature parity with the software supporting Cisco Aironet® 1250 access points.

Q. Can the integrated access point on the Cisco 860 and 880 Series be managed by a wireless LAN controller?

A. The Cisco 880 Series can be managed by a wireless LAN controller when running in the unified mode. The Advanced IP Services feature set is required for the unified mode support. The Cisco 860 Series does not support this feature.

For more information on the Cisco 860 and 880 Series integrated access points, refer to the [Cisco 860 and 880 Series integrated access point Q&A](#).

Voice Features

Q. What are the voice options offered by the Cisco 860 and 880 Series?

A. Voice support is only available on the Cisco 880SRST Series routers. There are several Survivable Remote Site Telephony (SRST) models for enterprise teleworker and enterprise small branch deployments. Four-port FXS is supported on all the SRST models for analog connectivity. FXO is available on the Ethernet SRST model, and voice BRI is available on the DSL SRST models for PSTN fallback.

Q. Is Cisco Unified Communications Manager Express supported on the Cisco 880SRST Series routers?

- A.** No. The Cisco 880 Series routers do not support Cisco Unified Communications Manager Express. They support SRST only.
- Q. Which version of Unified SRST is supported by the Cisco 880SRST Series routers?**
- A.** Unified SRST Version 7.0.
- Q. Can the Cisco 880SRST Series voice ports (FXS, FXO, and BRI) be managed by Cisco Unified Communications Manager?**
- A.** The Cisco 880SRST Series is supported by Cisco Unified Communications Manager Release 6.1(3) when used as a gateway.
- Q. Can voice support be added to a Cisco 880 Series data model?**
- A.** A voice model must be ordered for SRST support, as well as FXS, FXO, and voice BRI connectivities. With a Cisco 880 Series data-only model, IP phones can be connected to the integrated switchports to register with a centrally located Cisco Unified Communications Manager. There will be no failover support with SRST on a data-only model.

For more information on voice support of the Cisco 880SRST Series, refer to the Cisco Unified SRST data sheet at

http://www.cisco.com/en/US/products/sw/voicesw/ps2169/products_data_sheets_list.html

and Q&A at

http://www.cisco.com/en/US/prod/collateral/voicesw/ps6788/vcallcon/ps2169/prod_qas0900aecd8028d113.html.

DSL Features

- Q. Which kinds of xDSL are supported by the Cisco 860 and 880 Series?**

A. The Cisco 888 platform supports a G.SHDSL WAN interface.

- Q. Will the Cisco 860 and 880 Series DSL models work with any DSLAM?**

A. Refer to the Cisco 860 and 880 Series data sheet for a list of supported DSLAMs.

For more information on DSL specifications, refer to the [Cisco 860 and 880 Series data sheets](#).

Switch Features

- Q. What are the differences between the Cisco 860 and 880 Series integrated switch and the Cisco 850 and 870 Series integrated switches?**

A. The following features have been added to the Cisco 860 and 880 Series with integrated switches:

- Dynamic and static port security
- Secure MAC addresses
- MAC filtering
- Two-VLAN support for the Cisco 860 Series and eight-VLAN support for the Cisco 880 Series with all feature sets

Refer to the [Cisco 860 and 880 Series data sheets](#) for the availability of these features per feature set.

Q. Is Power over Ethernet (PoE) supported on the switchports?

A. Yes, 802.3af and Cisco compliant optional two-port PoE is available on the Cisco 880 Series routers only. With this option, PoE will be available on Fast Ethernet 0 and Fast Ethernet 1 interfaces. The Cisco 880 Series does not support PoE on all four port switches.

Q. Does the Cisco 880 Series support Cisco Enhanced PoE?

A. Cisco Enhanced PoE is an extension of the 802.3af standard, delivering between 15.4W and 20W per port. The Cisco 880 Series does not support Cisco Enhanced PoE, which is required by the Cisco Aironet 1250 Series access points and similar devices.

Q. What 802.1x features are supported by the Cisco 860 and 880 Series integrated switchports?

A. 802.1x support for the integrated switchports is available on the Cisco 880 Series routers only. 802.1x feature support on the Cisco 880 Series is compatible with the support for the Cisco 870 Series today as documented at

http://www.cisco.com/en/US/partner/prod/collateral/routers/ps5853/prod_white_paper0900aecd806c6d65.html with the following exceptions:

- 802.1x single host mode is supported on the Cisco 880 Series
- 802.1x port security will work as described for the Cisco 1800 Series at the above URL



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