Cisco 1800 Series Integrated Services Routers Fixed Configuration Models

Platform

General

Q. What are the Cisco® 1800 Series Fixed-Configuration models?

A. As part of the Cisco Systems® Integrated Services Router portfolio, the Cisco 1800 Series Fixed-Configuration models are designed to intelligently integrate data, security, and wireless services into a single resilient system for fast, scalable delivery of mission-critical business applications. The best in class Cisco 1800 Series Routers architecture has been designed specifically to meet requirements of small and medium-sized businesses (SMB) and small enterprise branch offices as well as service provider-managed services applications. The Cisco 1800 Series delivers secure concurrent services without compromising router performance and allows for lower operational and capital expenditures because of the high degree of integration and ease of installation, management, and deployment. The Cisco 1800 Fixed-Configuration routers are engineered specifically for customers that want a highly integrated solution to securely deploy multiple concurrent services with increased performance for broadband speeds with security and quality-of-service (QoS) features enabled.

Q. Why did Cisco introduce the Cisco 1800 Series Fixed-Configuration routers?

A. Cisco introduced the Cisco 1800 Series Fixed-Configuration routers to augment the new Cisco 1800 Series Modular routers. As fixed-configuration routers, they offer application-specific configurations for ease of ordering and deployment while delivering a single-box security and routing solution. Because they are fixed-configuration routers, customers realize ease of management and cost savings while acquiring powerful integrated services routers.

Q. How many Cisco 1800 Series Fixed Configuration Router models exist?

A. The Cisco 1800 Series Fixed Configuration routers comprise of the Cisco 1801, 1802, 1803, 1811, and 1812 routers. These products address asymmetric DSL (ADSL), symmetrical high-data rate DSL (G.SHDSL), security, and wireless solutions. Being fixed-configuration routers, each router is designed to meet the needs of a specific application, as shown in Tables 1 and 2.

Table 1. Non-Wireless Cisco 1800 Fixed Configuration Routers

Cisco 1800 Fixed Configuration Series Routers	Application	Technology Features
Cisco 1801 ADSL/POTS Router	ADSL	ADSL/basic telephone service (POTS) Interface with ISDN S/T Backup Port
Cisco 1801-M ADSL/POTS Annex M Router	ADSL	ADSL/basic telephone service (POTS) Annex M Interface with ISDN S/T Backup Port
Cisco 1802 ADSL/ISDN Router	ADSL	ADSL/ISDN Interface with ISDN S/T Backup Port
Cisco 1803 G.SHDSL Router	G.SHDSL	G.SHDSL 4 Wire Interface with ISDN S/T Backup Port
Cisco 1811 Security Router	Security Routing	10/100BASE-T Interfaces with Analog Modem Backup Port
Cisco 1812 Security Router	Security Routing	10/100BASE-T Interfaces with ISDN S/T Backup Port

Table 2.   Wireless Cisco 1800 Fixed Configuration Routers

Cisco 1800 Fixed Configuration Wireless Routers	Application	Technology Features
Cisco 1801W Wireless ADSL/POTS Router	ADSL with Wireless	802.11a/b/g support and ADSL/basic telephone service (POTS) Interface with ISDN S/T Backup Port
Cisco 1801WM Wireless ADSL/POTS Annex M Router	ADSL Annex M with Wireless	802.11a/b/g support and ADSL/basic telephone service (POTS) Annex M Interface with ISDN S/T Backup Port
Cisco 1802W Wireless ADSL/ISDN Router	ADSL with Wireless	802.11a/b/g support and ADSL/ISDN Interface with ISDN S/T Backup Port
Cisco 1803W Wireless G.SHDSL Router	G.SHDSL with Wireless	802.11a/b/g support and G.SHDSL 4 Wire Interface with ISDN S/T Backup Port
Cisco 1811W Wireless Security Router	Security Routing with Wireless	802.11a/b/g support and 10/100BASE-T Interfaces with Analog Modem Backup Port
Cisco 1812W Wireless Security Router	Security Routing with Wireless	802.11a/b/g support and 10/100BASE-T Interfaces with ISDN S/T Backup Port

Q. What is the End of Sales (EOS) plan for the Cisco 1701, 1711 and 1712 Fixed-Configuration routers?

A. The Cisco 1700 Fixed-Configuration routers have reached their EoS milestone. For more information, please refer to the Cisco 1700 Series EoL/EoS announcement.

Q. How do the Cisco 1800 Fixed-Configuration routers compare to the Cisco 1700 Fixed-Configuration routers?

A. The Cisco 1800 Fixed-Configuration routers are the next generation of best in class platform to the Cisco 1700 Fixed-Configuration routers. These new routers provide significant additional value compared to the Cisco 1700 Series by offering increased performance and integrated switching and security while simultaneously supporting multiple services such as wireless, security, and QoS. New models are available offering ADSL/basic telephone service, ADSL/ISDN and G.SHDSL interfaces. All new models will offer with optional integrated wireless and power over Ethernet (PoE) capability.

Q. What are the key applications for the Cisco 1800 Series fixed-configuration routers?

A. The Cisco 1800 Series offers a comprehensive feature set ideal for applications and solutions requiring the following:

- Secure broadband access for branch and small offices
- Integrated ISDN Basic Rate Interface (BRI), analog modem, or Ethernet backup port for redundant WAN links and load balancing
- Secure WLAN option for simultaneous 802.11a and 802.11b/g operations with use of multiple antennas
- Advanced security including:
    - Stateful Inspection Firewall
    - IP Security (IPSec) VPNs Triple Data Encryption Standard (3DES) or Advanced Encryption Standard (AES)
    - Intrusion Prevention System (IPS)
- 8-port 10/100 managed switch with VLAN support and optional PoE
- Easy deployment and remote management capabilities through Web-based tools and Cisco IOS® Software

Q. Do the Cisco 1800 Fixed-Configuration routers offer a WAN interface card (WIC)/high-speed WIC (HWIC) or virtual interface card (VIC) modular slot?

A. No. The Cisco 1800 Fixed-Configuration routers are not modular routers and do not offer a slot for interface cards.

Q. **Are Advanced Integration Modules (AIM) supported?**

A. No. AIM slots are not available.

Voice Support

Q. **Do the Cisco 1800 Fixed-Configuration routers support voice processing or protocols?**

A. No. The Cisco 1800 Fixed-Configuration routers are data-only routers but can support native voice over IP (VoIP).

Q. **Can IP Phones be plugged into the 10/100 switch ports?**

A. Yes. The switch ports also support optional PoE supplying power for the IP phones in a centralized Cisco CallManager deployment scenario.

Power Supply

Q. **What type of power supplies does the Cisco 1800 Series use?**

A. The Cisco 1800 Series uses one universal internal standard power supply that is applicable for all countries. No country-specific power supplies exist. The AC input voltage of this universal standard power supply spans from 100V to 240V, the frequency from 50 to 60 Hz, and the AC input current is 2.0A.

The Cisco 1800 Fixed Configuration routers also support in-line power (PoE) as an optional upgrade.

Q. **What is IEEE 802.3af PoE?**

A. IEEE 802.3af, also known as PoE, defines a way to build Ethernet power-sourcing equipment and powered terminals. The specification involves delivering 48V of AC power over unshielded twisted-pair wiring. It works with existing Ethernet cable plan, including Category 3, 5, 5e, or 6; horizontal and patch cables; patch panels; outlets; and connecting hardware, without requiring modification. The IEEE 802.3af standard specifies support for two power levels, low-power powered devices at 7W per port and high-power powered devices at 15W per port.

Q. **What is Cisco pre-standard inline power?**

A. Cisco implemented a pre-standard version of inline power to Ethernet devices to support Cisco IP phones and wireless access points in the years while the IEEE developed an industry standard. The Cisco implementation uses Cisco Discovery Protocol to determine how much power a device needs and can provide up to 10W per port, with most powered devices requiring only 7W. Devices that were developed to support the pre-standard inline power cannot support PoE devices.

Q. **Do the Cisco 1800 Series Fixed-Configuration routers support IEEE 802.3af PoE and Cisco pre-standard inline power?**

A. Yes.

Q. **How do you add IEEE 802.3af POE to these routers?**

A. Cisco 1800 Series Fixed-Configuration routers can be ordered from the factory with the POE option (POE-180X or POE-181X) or they can be field-upgraded by ordering POE-180X= or POE-181X= separately. The PoE options provide a POE daughter card and external power supply.

Memory

Q. **What kind of DRAM memory do the Cisco 1800 Fixed-Configuration routers use?**

A. The Cisco 1800 Series uses Double-Data-Rate Small Outline dual in-line memory modules (DDR SODIMMs).

Q. **What is the default and maximum DRAM memory in the Cisco 1800 Fixed-Configuration routers?**

A. The default DRAM was 128 MB when the Cisco 1800 Fixed-Configuration routers first became available. The maximum supportable DRAM is 384 MB. The default DRAM was increased to 256 MB effective December 18, 2008. For more details, please refer to the product bulletin on this default memory increase.

Q. **What kind of Flash memory do the Cisco 1800 Fixed-Configuration routers use?**

A. The Cisco 1800 Series has a single external removable compact Flash memory card. This is the only Flash memory for the system and should never be removed when the ROM monitor is being updated with a new image or configurations or when the "CF" (compact Flash) LED is illuminated.

Q. **For what is the Flash memory used?**

A. Flash memory is used as a storage device for many applications. Following are some examples of files that can be stored on the Cisco 1800 Fixed-Configuration router flash. The number of files and applications that can be stored on flash depends on the size of flash and available storage space.

- Cisco IOS Software

- Cisco IOS configuration files

- Web based GUI tool

- IPS signature files

Q. **What is the default and maximum compact Flash memory in the Cisco 1800 Fixed-Configuration routers?**

A. The default Flash memory was 32 MB when the Cisco 1800 Fixed-Configuration routers first became available. The maximum Flash memory card supported is 128 MB. The default Flash memory was increased to 64 MB effective December 18, 2008. For more details, please refer to the product bulletin on this default memory increase.

Q. **What is the ROM monitor?**

A. The ROM monitor is a ROM-based program that is executed upon system power up or reset. It performs various functions, including power-on confidence test, hardware initialization, system boot process, system failure debug, and file system support.

Q. **What is required to upgrade the ROM monitor?**

A. The boot Flash device on the Cisco 1800 Series is a 4 MB fixed Flash device that is not field-replaceable. The ROM monitor image can be upgraded by downloading new software. The first image in ROM is a read-only image that cannot be erased. The upgrade image is a read-write image that is stored in ROM Flash as the second image. You can configure the router to boot ROM monitor from either of the two images, primary or secondary if it exists, in the Flash memory. To upgrade the ROM monitor on the Cisco 1800 Series, you must have a ROM monitor image available to copy from a remote server or from the internal Compact Flash memory.

Interfaces

Q. **What LAN interfaces are supported on the Cisco 1800 Fixed Configuration routers?**

A. All Cisco 1800 Series Fixed Configuration routers are equipped with an 8 port 10/100BASE-T Manageable Switch. The 10/100 switch ports can connect LAN devices such as PCs, servers, printers, IP phones, and wireless access points. The Cisco 1811 and 1812 routers have two 10/100BASE-T ports that can be used for WAN access by connecting DSL or cable modems. In addition to the DSL WAN interface, the Cisco 1801, 1802, and 1803 also have an additional 10/100BASE-T port that can be used for WAN Access.

Q. **Does the 8 port switch support IEEE 802.1Q VLAN functions, and Spanning Tree Protocol?**

A. Yes. Up to 8 VLANs are supported.

Q. **Are all 10/100BASE-T ports auto-sensing?**

A. Yes. They auto-sense for 10 Mbps or 100 Mbps speed and full or half duplex operation.

Q. **For what are the Universal Serial Bus (USB) ports on the Cisco 1811 and 1812 routers used?**

A. The Cisco 1811 and 1812 routers have two integrated USB 2.0 ports. These USB ports will be configurable in the future to work with an optional USB memory token for secure configuration distribution and off-platform storage of VPN credentials. Note: The Cisco 1801, 1802, and 1803 models do not provide USB ports.

Q. **Can I use the USB ports as a console port?**

A. No, the USB ports are not available for use as a console port. If your computer has only a USB interface, you must use a USB-to-serial conversion cable to access the console port on the router.

Q. **What are the supported USB Tokens and Product Numbers?**

A. Please refer to the USB eToken and USB Flash Features Support page for the list of USB devices supported by the Cisco 1800 Series Fixed-Configuration routers.

System Architecture

Q. **What is new about the architecture of the Cisco 1800 Series Fixed-Configuration routers?**

A. The Cisco 1800 Series was designed as a high-performance routing platform to integrate and support secure concurrent multiple services. The entire architecture provides significant performance increases over the Cisco 1700 Series as well as security through the hardware-based encryption on the motherboard enabled with Cisco IOS Security Software feature set. Combining faster discrete components such as CPU and memory with a higher bus speed and custom silicon, the Cisco 1800 Series can maintain high throughput levels while running a complex set of services.

Q. **Does the Cisco 1800 Fixed Configuration router architectural design include a real-time clock?**

A. Yes. The real-time clock keeps an accurate value of date and time for applications that require an accurate time stamp such as logging, debugging, and digital certificates.

Security Support

Q. **What security functions are available for the Cisco 1800 Fixed Configuration routers?**

A. By default, the Cisco 1800 Series includes hardware-based encryption that is enabled with a Cisco IOS security software image (except for CISCO1801 which ships with IOS IP Broadband image). This security image supports IPSec encryption (DES/3DES/AES) and also provides Cisco IOS Firewall and Intrusion Prevention Services (IPS) support. Other standard security features supported are access control lists (ACLs); authentication, authorization, and accounting (AAA) features such as Password Authentication Protocol (PAP) and Challenge Handshake Authentication Protocol (CHAP), TACACS+, RADIUS, and token authentication; and Lock and Key. Please refer to the Cisco 1800 Fixed Configuration routers datasheet for more details.

Q. **Can I use the Cisco 1800 Fixed Configuration routers as a firewall?**

A. Yes. The Cisco IOS Firewall feature set is supported in the Cisco 1800 Series. The Cisco IOS Firewall has been certified by the Internet Computer Security Association (ICSA) and is offered by default on the Advanced IP Services and Advanced Enterprise Services images. It includes enhanced firewall functions such as Zone Based Policy Fireall, Application Firewall and Transparent Firewall.

Q. **Do the Cisco 1800 Fixed Configuration routers work with the Cisco VPN client?**

A. Yes, Easy VPN Server is supported to terminate VPN client sessions by these routers.

Q. **Do the Cisco 1800 Fixed Configuration routers function with Cisco Easy VPN remote client-server mode?**

A. Yes. The term Easy VPN client denotes any customer premises equipment (CPE) that receives IPSec configuration from an Easy VPN server. The Cisco 1800 Series can serve both as an Easy VPN server and an Easy VPN client. The Cisco 1800 Series can push IPSec configurations to an Easy VPN client and can receive IPSec configurations from another Easy VPN server.

Q. **Do the Cisco 1800 Fixed Configuration routers support 802.1x on the switchports?**

A. Starting with Cisco IOS Software Release 12.4(11)T, the Cisco 1800 Fixed-Configuration routers support 802.1x VLAN Assignment, 802.1x Guest VLAN, and 802.1x with VVID.

For more information on 802.1x support, visit
http://www.cisco.com/en/US/prod/collateral/routers/ps5853/prod_white_paper0900aecd806c6d65.html and
http://www.cisco.com/univercd/cc/td/doc/product/software/ios124/124newft/124t/124t11/ht_8021x.htm

Q. **What is the maximum throughput performance of the Cisco 1800 Fixed-Configuration routers?**

A. The maximum IPSec VPN performance supported by the Cisco 1800 Fixed-Configuration routers is 40 Mbps 3DES @ 1400 byte packets. For IOS Firewall performance on the Cisco 1800 Fixed-Configuration routers, please refer to the Cisco IOS Firewall Performance Guideline document.

ADSL Support

Q. **Which Cisco 1800 series fixed configuration router supports ADSL over basic telephone service?**

A. The Cisco 1801 and Cisco 1801-M ADSL routers supports ADSL over basic telephone service (POTS).

Q. **Which Cisco 1800 series fixed configuration router supports ADSL over ISDN?**

A. The Cisco 1802 ADSL router supports ADSL over ISDN.

Q. **What ADSL chipset is used on Cisco 1801 and Cisco 1802 routers?**

A. The Cisco 1801 and Cisco 1802 routers use the ST Micro (previously known as Alcatel Microelectronics) MTK20196 chipset.

Q. **What's the difference between the Cisco 1801 and Cisco 1801-M?**

A. Cisco 1801M provides annex M support with the MTK20196P chipset. Cisco 1801 cannot be upgraded to provide annex M support.

Q. **What is Annex-M?**

A. Annex-M is an enhancement of the G.992.3 standard that doubles the upstream bandwidth by 'borrowing' 32 additional tones from the downstream frequency range. This feature enables service providers to provision symmetric data rates for ADSL2 and ADSL2+ services with data rates up to 2Mbps. The achievable upstream rates are a function of loop length and specific DSLAM Annex-M implementation.

Q. **What does the term "mask" imply in Annex-M?**

A. The mask refers to the submode power spectral density (PSD) mask applicable for Annex-M. Service providers use the mask to minimize the cross-talk between adjacent pairs to an acceptable level. G.992.3 specifies the masks, as shown in 3.

Table 3.   Annex-M Masks

Upstream Mask Number	Designator	Cutoff Frequency f1 (kHz)	Upstream Tones	Downstream Tones
1	EU-32	138.00	6–32	58–255
2	EU-36	155.25	6–36	58–255
3	EU-40	172.50	6–40	58–255
4	EU-44	189.75	6–44	58–255
5	EU-48	207.00	6–48	58–255
6	EU-52	224.25	6–52	58–255
7	EU-56	241.50	6–56	58–255
8	EU-60	258.75	6–60	61–255
9	EU-64	276.00	6–64	65–255

Q. **What mask does Cisco 1801-M support?**

A. Cisco 1801-M is optimized for Mask M-9. It can operate in other masks, but the performance may be lower than a CPE that is optimized for that mask.

Q. **Does Cisco 1801-M support the PSD mask required to comply with the Annex M standards in the United Kingdom?**

A. No. Currently there are no plans to support this.

Q. **What is INP?**

A. INP stands for Impulse Noise Protection. Support for INP allows the CPE to provide error-correction capability for impulse noise. The unit for this parameter is in number of symbols. Support for up to 16 symbols is provided by an amendment to the original G.992.5 standard and is referred to as *extended INP function* (G992.5-addemdum II edited on May 2005). Support for optional INP capability of at least 16 DMT symbols (INP = 16) protects against impulse noise of up to 4 milliseconds. Increasing the INP also increases the latency.

Q. **Does the Cisco 1800 Fixed-Configuration series support** *extended INP functions***?**

A. All the platforms support INP, but only Cisco 1801-M supports the *extended INP functions*.

Q. **What do I need to know about INP support on the Cisco 1800 series Fixed-Configuration routers?**

A. With Cisco 1800 Fixed-Configuration routers, customers may experience lower than expected downstream rate when INP is enabled on the DSLAM. This is due to a limitation with the MTK20196 chipset. This issue is addressed with the Cisco 1801-M platform, using the newer MTK20196P chipset.

Q. **Which DSL access multiplexers (DSLAMs) do the Cisco 1801 and Cisco 1802 ADSL routers support?**

A. Please refer to the Cisco 1800 Series Integrated Services Routers Fixed Configuration Models datasheet for the list of supported DSLAMs

Q. **Do the Cisco 1801 and 1802 ADSL routers provide 2, 10/100BASE-T operational WAN ports?**

A. No. The Cisco 1801 and 1802 ADSL routers only provide 1, 10/100BASE-T operational WAN port.

G.SHDSL Support

Q. **Which Cisco 1800 series Fixed-Configuration router supports G.SHDSL?**

A. The Cisco 1803 G.SHDSL router supports either 2-wire or 4-wire G.SHDSL operations.

Q. **What specifications does the Cisco 1803 G.SHDSL router support?**

A. The Cisco 1803 G.SHDSL router supports the same standards as the WIC-1SHDSL-V2 and is based on International Telecommunication Union (ITU) Recommendation G.991.2 (Accepted Worldwide).

Q. **Which DSLAMs does the Cisco 1803 G.SHDSL router support?**

A. Please refer to the Cisco 1800 Series Integrated Services Routers Fixed Configuration Models datasheet for the list of supported DSLAMs.

Q. **What key features does the Cisco 1803 G.SHDSL router support?**

A. The Cisco 1803 G.SHDSL router offers the following key features:

- Symmetrical WAN speeds over a single or two copper pairs

- Support for "Dying Gasp," utilizes power status bit (section 7.1.2.5.3 of G.991.2) for signaling

- Support for Wetting Current (Section A.5.3.3 of G.991.2)

- Extensive ATM Class of Service (CoS) and IP QoS support

- Operates back-to-back or over DSLAM

- Sustains up to 23 virtual circuits per WAN Interface Card

Q. **Does the Cisco 1803 G.SHDSL router provide 2, 10/100BASE-T operational WAN ports?**

A. No. The Cisco 1803 G.SHDSL router only provide 1, 10/100BASE-T operational WAN port.

Wireless Support

Q. **What wireless SKUs are EOS?**

A. The following "E" SKUs have been EOS

- CISCO1801W-AG-E/K9

- CISCO1802W-AG-E/K9

- CISCO1803W-AG-E/K9

- CISCO1812W-AG-E/K9

- CISCO1801WM-AG-E/K9

Q. **What are the reasons for the EOS?**

A. Due to new regulatory change in EU/ETSI in the 5 GHz radio spectrum that came into effect as of April 1, 2009. The radio supported on the SKUs listed above do not comply with these new requirements.

Q. **What are the migration products?**

A.

- CISCO1812W-AG-E/K9: Cisco 892W-AGN-E-K9 (Cisco 892W Gigabit Ethernet Security Router w/802.11n ETSI Comp)

- CISCO1803W-AG-E-K9: CISCO888GW-GN-E-K9 (Cisco 888 G.SHDSL Sec Router w/ 3G B/U 802.11n ETSI Comp)

- CISCO1801W-AG-E-K9: CISCO1801/K9 with stand-alone APs (AIR-AP1131AG-E-K9)

- CISCO1802W-AG-E-K9: CISCO1802/K9 with stand-alone APs (AIR-AP1131AG-E-K9)

- CISCO1801WM-AG-E-K9: CISCO1801-M/K9 with stand-alone APs (AIR-AP1131AG-E-K9)

Q. **What radio bands are supported on the wireless versions of Cisco 1800 Series Fixed-Configuration routers?**

A. Both 802.11a and 802.11b/g are supported simultaneously.

Q. **Can each radio band be ordered separately?**

A. No. The default configuration provides both 802.11a and 802.11b/g to be supported on the wireless routers.

Q. **What wireless compliance standards will be certified?**

A. The compliance standards to be supported are U.S. Federal Communication Commission (FCC), Australia/New Zealand (ANZ) and China.

Q. **Will all wireless models support all wireless compliance standards?**

A. No. See Table 4 for a listing of wireless router models and supported compliance standards.

Table 4. Cisco 1800 Fixed Configuration Wireless Routers and Supported Compliances

Cisco 1800 Fixed-Configuration Wireless Routers	Wireless Compliance Standard Supported/Region
Cisco 1801W Wireless ADSL/POTS Router	FCC/USA, Middle East, and Africa (EMEA), Australia/New Zealand (ANZ), China
Cisco 1803W Wireless G.SHDSL Router	FCC/USA
Cisco 1811W Wireless Security Router	FCC/USA, ANZ, China
Cisco 1812W Wireless Security Router	China

Q. **Can nonwireless routers be upgraded to support wireless capabilities?**

A. No. The Cisco 1800 Fixed-Configuration routers are not field upgradeable to include wireless support. Customers or partners must specify at the time of ordering whether a wireless or non-wireless model is desired. After it is ordered, a nonwireless router cannot be upgraded to support wireless operation in the field.

Q. **Will wireless models ship with default antennas?**

A. Yes. All wireless models will ship with a default set of multiband removable antennas. If desired, the default antennas can be removed and replaced with alternative antennas can be attached to the threaded naval connector (TNC) connectors mounted on the router.

Q. **What alternative antennas are supported?**

A. Optional Cisco multiband ceiling and wall mount antennas can be ordered and attached to wireless routers.

Q. **Are the wireless routers Wi-Fi certified?**

A. Yes, all Cisco 1800 wireless routers are Wi-Fi 802.11 certified.

Q. **What software is used to configure the integrated 802.11 access points?**

A. The software used to configure the access points in the Cisco 1800 Series is either Cisco SDM, Cisco Works LMS, or Cisco IOS command-line interface (CLI).

Q. **Is the Cisco 1800 Series part of the Unified Wireless Network?**

A. No.

Q. **Is there Wireless VLAN capability?**

A. VLANs are available on WLANs on the Cisco 1800 Series Fixed ISRs with the default image (Advanced Security feature set).

Q. **What is the maximum number of VLANs supported on WLAN?**

A. Maximum number of supported VLANs is 16, with up to 8 being encrypted VLANs.

Q. **How many MBSSIDs are supported?**

A. The Cisco 1800 Series Fixed Configuration ISR s support only up to 8 MBSSIDs

Q. What is Universal Client Mode?

A. Universal Client Mode allows the AP in the Cisco 1800 Series to be configured as a wireless client which can connect to an 802.11b/g/a WLAN. The router can then utilize this wireless link to connect wired devices to that wireless LAN (or it can connect wireless devices with the radio, either 802.11b/g or 802.11a, not configured as the universal client). An example is using an Outdoor Wireless Mesh Network offered by a Service Provider. This 802.11b/g network can be used as a WAN link for the router and the router AP's 2nd radio can connect WLAN devices or devices can be connected to ports on the router.

Q. What WLAN security features are available on Cisco 1800 Series Fixed Configuration ISRs?

A. WLAN security features available include WPA/WPA2, 802.1X, Cisco Extensible Authentication Protocol (LEAP), Protected EAP (PEAP), EAP-Transport Layer Security (EAP-TLS), EAP-Flexible Authentication via Secure Tunneling (EAP-FAST), EAP-SIM (Subscriber Identity Module), EAP MD5 (RFC 3748), EAP-TTLS (Tunneled Transport Layer Security), static and dynamic Wired Equivalent Privacy (WEP), TKIP, and RADIUS accounting for wireless clients.

Network Management

Q. How are the Cisco 1800 Series routers managed?

A. Like all Cisco routers, the Cisco 1800 Series routers can be managed with Simple Network Management Protocol (SNMP), with a Telnet session, and through a directly connected terminal or PC running terminal emulator software.

Q. Do the Cisco 1800 Series routers support CiscoView, CiscoWorks, CiscoWorks and Cisco Security Manager (CSM)?

A. Yes, Cisco 1800 Series routers support CiscoWorks Resource Manager Essentials (RME) and CiscoView, both of which are part of the CiscoWorks Family, as well as CSM.

Q. Does the Cisco Router and Security Device Manager (SDM) support the Cisco 1800 Fixed-Configuration routers?

A. Yes, starting with Cisco SDM 2.1, SDM is supported on the Cisco 1800 Fixed-Configuration routers.

Q. Will SDM come standard with the Cisco 1800 Series routers?

A. Yes, Cisco SDM is included by default on all Cisco 1800 Series Fixed-Configuration routers shipping with a K9 image.

Q. Does the Cisco Configuration Professional (CCP) support the Cisco 1800 Fixed-Configuration routers?

A. Yes, CCP supports Cisco 1800 Fixed-Configuration routers running IOS release 12.4(9)T or later. For more information, please refer to the Cisco Configuration Professional datasheet.

Ordering Information

Q. What are the product numbers for the Cisco 1800 Fixed Configuration routers?

A. Please refer to the Cisco 1800 Series Integrated Services Routers Fixed Configuration Models datasheet for ordering information.

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Printed in USA

C67-374466-02   04/09