C H A P T E R 1

Product Overview

This chapter provides an overview of the features available for the Cisco 819 Integrated Services Routers (ISRs) and contains the following sections:

General Description

The Cisco 819 ISRs provide Internet, VPN, data, and backup capability to corporate teleworkers and remote and small offices of fewer than 20 users. These routers are capable of bridging and multiprotocol routing between LAN and WAN ports and provide advanced features such as antivirus protection.

The Cisco 819 ISRs are fixed-configuration data routers that provide four 10/100 Fast Ethernet (FE), 1 Gigabit Ethernet (GE), and WAN connections over Serial and Cellular (3G) interface.

The Cisco 819HGW and Cisco 819HWD ISRs support WiFi radios (AP802H-AGN). A Wireless Local Area Network (WLAN) implements a flexible data communication system frequently augmenting rather than replacing a wired LAN within a building or campus. WLANs use radio frequency to transmit and receive data over the air, minimizing the need for wired connections.

The Cisco 819HG-4G and Cisco 819G-4G support multimode 4G LTE and have embedded Sierra Wireless multimode modem.

Note Cisco 819 ISR is used to refer to Cisco 819G , Cisco 819HG, Cisco 819H, Cisco 819HWD, Cisco 819HGW, Cisco 819HG-4G, and Cisco 819G-4G ISRs unless specifically called out otherwise.

Figure 1-1 shows the Cisco 819HG ISR.

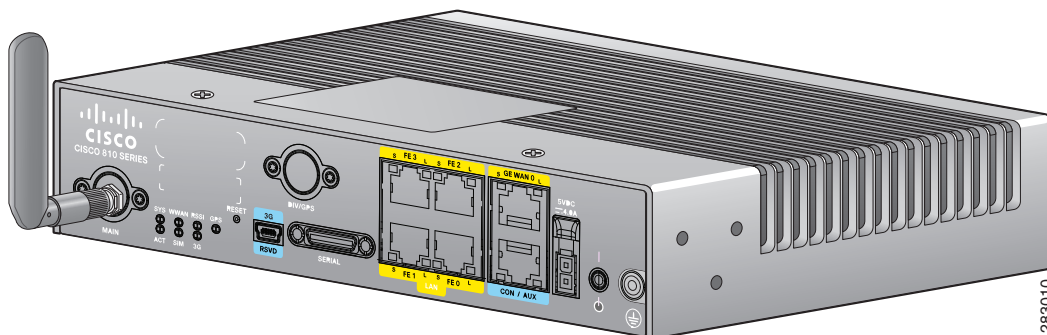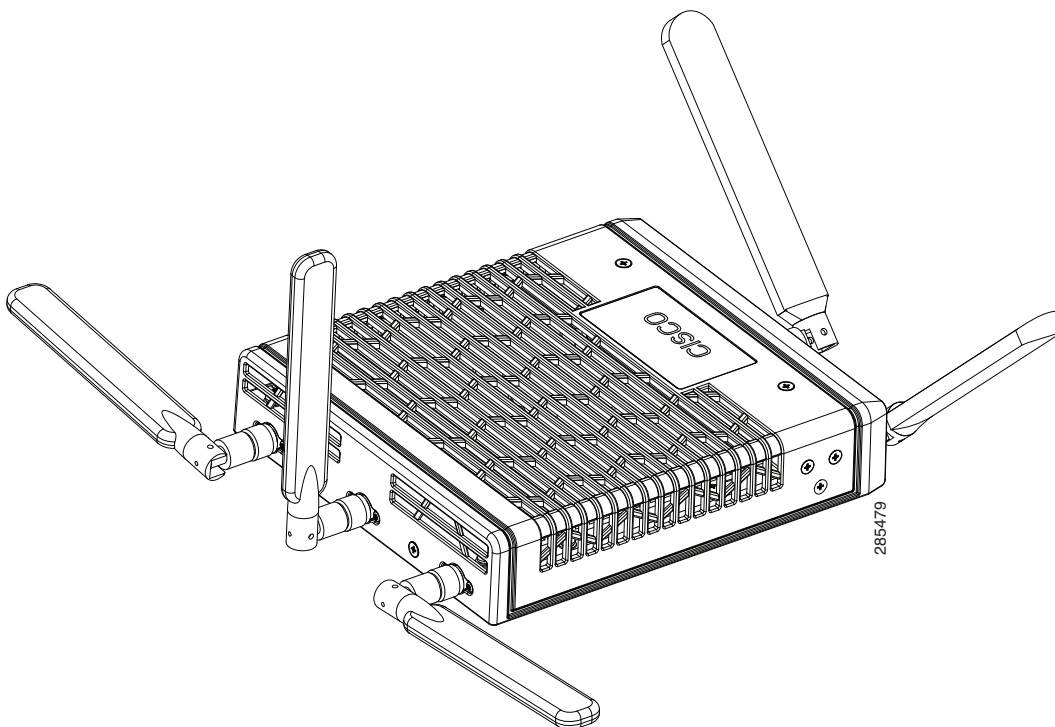*Figure 1-1*   ***Cisco 819HG Integrated Services Router***

Figure 1-2 shows the Cisco 819HGW ISR.

Figure 1-2   ***Cisco 819HGW Integrated Services Router***

SKU Information

For the complete list of SKUs available in Cisco 819 ISRs, see *SKU Information*.

New Features

This section lists the software, platform, and security features supported by the Cisco 819 ISRs.

- 3G Features, page 1-3
- WLAN Features, page 1-4
- 4G LTE Features, page 1-4
- Platform Features, page 1-4
- Security Features, page 1-4

Note The WAAS Express feature is not supported. This feature will be supported for 3G and 4G interfaces with later IOS releases.

3G Features

- Modem control and management
- Asynchronous transport (AT) command set
- Wireless Host Interface Protocol (WHIP)
- Control and Status (CNS) for out-of-band modem control and status
- Diagnostic Monitor (DM) logging
- Account provisioning
- Modem firmware upgrade
- SIM locking and unlocking
- MEP unlocking
- OMA-DM activation
- Dual SIM card slots
- Link persistence
- SMS Services
- Global Positioning System (GPS) Services
- 3G MIB

WLAN Features

- Dual Radio
- CleanAir Technology
- Dynamic Frequency Selection

4G LTE Features

- IPv4 bearer
- MIPv4, NEMOv4, RFC 3025
- IPv4 subnet behind LTE UE interface
- Evolved High-Rate Packet Data (EHRPD), which allows seamless handoff between 4G LTE and 3G services (C819(H)G-4G-V-K9 only)
- Seamless hand-off between LTE and EHRPD network (C819(H)G-4G-V-K9 only)
- Support for UMTS service as a fallback option from LTE service (C819(H)G-4G-A-K9 and C819(H)G-4G-G-K9 only)
- Seamless handoff between LTE and UMTS service (C819(H)G-4G-A-K9 and C819(H)G-4G-G-K9 only)
- Remote access to Qualcomm diagnostic monitor port
- OTA-DM including wireless configuration FOTA (C819(HG-4G-V-K9 only)
- Mini USB type 2 connector for modem provisioning

Platform Features

For the complete list of Cisco 819 ISR platform features, see *Platform Features for Cisco 819 ISRs*.

Security Features

The Cisco 819 ISRs provide the following security features:

- Intrusion Prevention System (IPS)
- Dynamic Multipoint VPN (DMVPN)
- IPsec
- Quality of service (QoS)
- Firewall
- URL filtering