

812Gv2 and 813Gv2 GigaHubs



DESCRIPTION

The Calix 812Gv2 and 813Gv2 GigaHubs are next generation premises service delivery platforms that support broadband connectivity to the home. These high-performance devices integrate a 2.5 GPON optical WAN interface with switching and routing functions that manage premises network traffic at speeds up to 1 Gbps. The GigaHub service interfaces include: four gigabit Ethernet (GE) ports for IPTV video and data services, and two integrated voice lines supporting carrier grade VoIP. Options include integrated 2.4 GHz 802.11n Wi-Fi, for connecting services.

GIGABIT SUBSCRIBER EXPERIENCE: The 812Gv2 and 813Gv2 GigaHubs are integrated access and gateway solutions that deliver advanced network management and software features to unleash the gigabit experience. The GigaHub premises service delivery platforms terminate a GPON fiber optic link at the subscriber's premises and provides gigabit Ethernet interfaces and wireless connectivity for customer multi-media devices. The 812Gv2 and 813Gv2 GigaHubs enable residential subscribers to receive gigabit broadband data, IP video, and VoIP on a single fiber. Using bridged or home gateway features and option for 802.11n 2.4 GHz Wi-Fi allows service providers to extend the access network inside the home and establish a strategic location for the delivery and control of broadband services. The GigaHub solution delivers HD video and data throughout a subscriber's home with control and management of an increasingly video-rich and mobile broadband environment.

EASY TO INSTALL, ACTIVATE, AND MAINTAIN: With the 812Gv2 and 813Gv2 GigaHubs, Calix has redefined how to install and activate residential services at a subscriber's premises. Using the Calix Smart Activate feature and a phone or laptop, a field technician can install and apply the subscriber's service profile without special equipment or assistance from the central office. Calix also provides the innovative Compass software portfolio, including management via CMS and Consumer Connect, which allows the service provider to configure, activate and upgrade the GigaHubs quickly from a remote location using in-band management or TR-069. Extensive troubleshooting capabilities, remote software downloads, and easy-to-use service activation ensure that broadband services are delivered and maintained without needless truck rolls and hardware upgrades. Employing GigaHubs allows service providers to reduce their operational expenses while effectively delivering the gigabit experience to their subscribers. With powerful cloud enhanced Flow and Wi-Fi Advisor software, service providers are able to gain meaningful insights into their usage trends to improve network efficiency, to diagnose wireless issues and provide resolutions to increase subscriber satisfaction.

TRUE CARRIER GRADE VOICE SOLUTION: The 812Gv2 and 813Gv2 GigaHubs deliver a truly agile and responsive service platform with lifeline voice.

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KEY ATTRIBUTES

- Standards-based Full Service Access Network (FSAN), ITU-T GPON compliant
- Home Gateway:
 - Layer 2 bridge and Layer 3 routing for High Speed Internet (HSI) data and IPTV video services
 - DHCP server options
 - DHCP (IPoE) and PPPoE network connections
 - Network Access Translation (NAT), public to private IP addressing
 - Configurable IP address schemes, subnets, static-IP addresses
 - DNS server
 - Bridge port assignment and data traffic mappings
 - Port forwarding
 - Firewall and security
 - Application and website filtering
 - Selectable forwarding and blocking policies
 - DMZ hosting
 - Parental controls, time of day usage
 - Denial of service
 - MAC filtering
 - Time/Zone support
 - Universal Plug-and-Play (UPnP)
- Wireless: (Only 813Gv2)
 - 2.4GHz single-band
 - 2.4GHz 802.11n certified, 802.11b/g compatible
 - WPA/WPA2
 - WPS push-button
 - WEP 64/128 bit encryption
 - Four SSIDs per band with factory default SSIDs
 - MAC filtering
- Two voice lines:
 - FXS ports, ANSI
 - Carrier grade SIP
- Four gigabit Ethernet (GE) interfaces:
 - Symmetrical 1 Gbps bandwidth for residential IPTV and data services
 - Multi-rate 10/100/1000 BaseT Ethernet, auto-negotiating
- Supports multiple data service profiles
- Traffic management and Quality of Service (QoS):
 - 802.1Q VLANs
 - 802.1p service prioritization
 - Q-in-Q tagging
 - Multiple VLANs
 - Rate limiting
 - DiffServ
 - Pre-defined QoS on service type
- IPTV, IGMPv2 and IGMPv3:
 - IGMP Snooping and Proxy
 - IGMP Fast Leaves
- Complete OAM&P support via Calix Management System (CMS)
- Gateway Management:
 - TR-069
 - Local Home Gateway GUI, access provisionable
 - Remote WAN side GUI access
 - Default username/password
 - Set-up persistence, factory reboot support
- Indoor mounting:
 - Wall mount
 - Desktop
- AC to 12 VDC power adapter available for non-lifeline services.

SPECIFICATIONS

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DIMENSIONS

Width: 5.5 in (14.40 cm)
Height: 8.67 in (22.0 cm)
Depth: 1.38 in (3.5 cm)
Weight: 14 oz. (.4 kg)

PON CHARACTERISTICS

Max. split: 64 GPON
Max. reach: B+/FEC
Maximum Optical Distribution Network (ODN) Attenuation:
GPON Class B+, 28 dB

1490 ± 10 nm optical receiver:
-27.0 to -8.0 dBm
1310 ± 20 nm optical transmitter:
0.5 to 5.0 dBm

INTERFACES

Wireless: 2.4GHz 2x2 internal antennas
Telephony: Two RJ-11 connectors
Data/IPTV: Four 10/100/1000 BaseT Ethernet ports, RJ-45 connectors
PON: Single 9/125 μm (single mode) fiber, SC/APC connector, minimum 50 dB return loss

TELEPHONY

General: SIP
Number of lines: 2
RENs per line: 5 maximum
RENs per unit: 10 maximum
Drop length: Maximum 500 feet (152.4 m)
DSO Output: 25 mA

DATA

Drop length: 328 feet (100 m) maximum using CAT5 cable
Auto MDI/MDIX crossover for 1000BASE-TX, 100BASE-TX, and 10BASE-T ports
Traffic Management and QOS: 802.11Q VLAN; 802.11p voice, video, data and management priorities; Q-in-Q tagging;
Rate limiting

WIRELESS

2.4GHz 802.11 b/g/n
2x2 MIMO, high-power
4 SSIDs per band (2 SSID subscriber default)
Auto channel selecting and interference detection
WPS, WPS push button
Wireless Security: Wi-Fi protected access (WPA/WPA2) WEP, MAC address filtering
Wi-Fi multimedia (WMM)

REMOTE MANAGEMENT

OAM&P via Calix Management System (CMS)
TR-069 remote management
TR-098 Internet Gateway Device Data Model
TR-104 Provisioning Parameters for VoIP CPE

ENVIRONMENTAL

Operating temperature: Indoor ambient temperature, 0° to 40°C (32° to 104°F)
Operating/storage relative humidity: 10% to 95 % non-condensing
Altitude: 0 to 10,000 feet (0 to 3,048 m) above sea level

CERTIFICATION AND COMPLIANCE

Radio :
FCC part 15C : 15.247
EN 300 328
MPE:
FCC 47 C.F.R.2.1091,
EN 62311
Emissions(EMC):
FCC Part 15 Class B
IC ICES-003 Class B
CISPR-32
Safety:
UL 60950 and UL 1697 approved
IEEE: 802.3, 802.3AB, 802.3U, 802.11p, 802.11Q
Wi-Fi Alliance Certified 802.11n –(Only 813Gv2)



POWERING AND ALARMS

Input voltage: 12 VDC (nominal), 10 VDC (min.), 15 VDC (max)
813Gv2 External Power Adapter: 12 VDC, 1.5A
812Gv2 External Power Adapter: 12 VDC, 1A

ORDERING INFORMATION

Calix 812Gv2 and 813Gv2 GigaHubs

100-04798..... 812Gv2-1 GigaHub, 2 POTS, 4 GE,
100-04800..... 813Gv2-1 GigaHub, 2 POTS, 4 GE, 2.4 GHz Wi-Fi (High Power)
100-04799..... 813Gv2-2 GigaHub, 2 POTS, 4 GE, 2.4 GHz Wi-Fi (Normal Power)



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