GIGABIT SUBSCRIBER EXPERIENCE: The 812G GigaHub is an integrated access and gateway solution that delivers advanced network management and software features to unleash the gigabit experience. The GigaHub premises service delivery platform terminates a GPON fiber optic link at the subscriber's premises and provides gigabit Ethernet interface connectivity for customer multi-media devices. The 812G GigaHub enables residential subscribers to receive gigabit broadband data, IP video, and SIP, H.248 or MGCP based VoIP on a single fiber. Using bridged or home gateway features 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 812G GigaHub, 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 GigaHub 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 the 812G GigaHub allows service providers to reduce their operational expenses while effectively delivering the gigabit experience to their subscribers. With powerful cloud enhanced Flow software, service providers are able to gain meaningful insights into their usage trends to improve network efficiency and provide resolutions to increase subscriber satisfaction.
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)
- Two voice lines:
  - FXS ports, ETSI
  - Carrier grade SIP, H.248 or MGCP VoIP
- 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 and Structured Wiring Enclosure (SWE) mount with fiber management
  - Desktop mounting stand
- Power switch
- AC to 12 VDC power adapter available for non-lifeline services.
# Specifications

## 812G GigaHub | ETSI

### Dimensions
- Height: 7.9 in (20.0 cm)
- Width: 5.9 in (15.0 cm)
- Depth: 1.5 in (3.8 cm)
- Weight: 14 oz. (4 kg)

### PON Characteristics
- Max. split: 64 GPON
- Max. reach: 58 km (36 miles) with C+/FEC

### Maximum Optical Distribution Network (ODN) Attenuation:
- GPON Class B+, 28 dB
- GPON Class C+, 32 dB

### Interfaces
- 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
- Power: 2-pin connector
- Power Switch: Push-button actuator

### Telephony
- General: SIP, H.248, MGCP
- Number of lines: 2
- RENs per line: 5 maximum
- RENs per unit: 10 maximum
- Drop length: Maximum 500 feet (152.4 m)
- DS0 Output: 23.5 mA

### Data
- Drop length: 328 feet (100 m) maximum using CAT5 cable
- Auto MDI/MDIX crossover for 1000BASE-TX, 10BASE-T ports

### Environmental
- Operating temperature: Indoor ambient temperature, 0° to 40°C
- Operating/storage relative humidity: 8 to 95 % non-condensing
- Altitude: –200 to 10,000 feet (–61 to 3,048 m) above sea level

### Certification and Compliance
- Safety: UL 60950 and UL 1697 approved

### Powering and Alarms
- 2-pin connector
- Input voltage: 12 VDC (nominal), 10 VDC (min.), 15 VDC (max)
- External Power Adapter: 12 VDC, 1.5 A
- Typical Power: 7 W, Max Power: 10 W

## Ordering Information

**Calix 812G GigaHub**

100-04258.................. 812G-2 GigaHub, 2 POTS, 4 GE –Power Adapter Interface

**Calix 812G Power Adapters**

100-04035............... Power Adapter CPA3 12V 1.5Amp - EU Type C
100-04036............... Power Adapter CPA5 12V 2.5Amp - AM Type A
100-04037............... Power Adapter CPA5 12V 2.5Amp - UK Type G
100-04038............... Power Adapter CPA5 12V 2.5Amp - AU/NZ Type I
100-04039............... Power Adapter CPA5 12V 2.5Amp - AR Type I