P R O D U C T   D A T A S H E E T

844E GigaCenter | ANSI

D E S C R I P T I O N

The Calix 844E GigaCenter is a next generation residential premises service delivery platform that extends the access network into the home and acts as a strategic location for control of the gigabit experience. Supporting broadband connectivity within the home and distributing subscriber voice, data and video services, this intelligent, high-performance service platform integrates an Ethernet interface with switching and routing functions that support speeds up to 1 Gbps symmetrically. The GigaCenter service interfaces include: carrier class wireless networking with 802.11ac Wi-Fi and four Gigabit Ethernet (GE) ports for IPTV video and data services, two integrated voice lines supporting carrier grade VoIP and a USB port for home networking services.

GIGABIT SUBSCRIBER EXPERIENCE: The 844E GigaCenter is an unique gateway solution that delivers advanced software features to unleash the gigabit experience throughout a subscriber's home. The GigaCenter service delivery platform uses an Ethernet link at the subscriber's premises to provide carrier-class Wi-Fi and Gigabit Ethernet interfaces for customer multi-media devices. The 844E GigaCenter enables residential subscribers to receive gigabit broadband data, IP video, and VoIP voice. Using the latest 802.11ac 5GHz technology incorporating 4x4 multi-user multiple-input and multiple-output (MU-MIMO) and beamforming, the 844E GigaCenter allows service providers to extend the access network inside the home and establish a strategic location for the delivery and control of broadband services. A USB port is available for home networking with other Ethernet appliances.

Calix engineered the 844E GigaCenter for optimal whole-home coverage with simultaneous dual-band 2.4GHz and 5GHz operation and dynamic beamforming at 5GHz. For maximum performance, the GigaCenter supports high-power 2x2 MIMO spatial diversity at 2.4GHz and 4x4 MU-MIMO at 5GHz. The 844E GigaCenter supports the entire 5GHz band including DFS channels and can be provisioned to support 80MHz channel bandwidth at 5GHz. The GigaCenter solution easily delivers HD and UHD video and data throughout a subscriber's home in an increasingly video-rich and mobile broadband environment.

EASY TO INSTALL, ACTIVATE, AND MAINTAIN: With the 844E GigaCenter, 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 Consumer Connect, which allows the service provider to configure, activate and upgrade the GigaCenter quickly from a remote location using in-band management or TR-069. Extensive troubleshooting capabilities, remote software downloads, and easy-to-use service activation features ensure that services are delivered and maintained without needless truck rolls and hardware upgrades. Employing GigaCenters allows service providers to reduce their operational expenses while effectively delivering the gigabit experience to their subscribers.

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KEY ATTRIBUTES

- 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:
  - 2.4GHz and 5GHz, simultaneous dual-band
  - 5GHz 802.11ac certified, 802.11a/n compatible
  - 2.4GHz 802.11n certified, 802.11b/g compatible
  - WPA/WPA2
  - WPS push-button
  - WEP 64/128 bit encryption
  - Eight SSIDs per band with factory default SSIDs
  - MAC filtering
- Two voice lines:
  - FXS ports, ANSI

  Carrier grade SIP 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
- USB port:
  - USB 2.0 - Type A configured as a host interface
- 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
  - DiffServ
  - Pre-defined QOS on service type
- IPTV, IGMPv2, future support of IGMPv3:
  - IGMP Snooping and Proxy
  - IGMP Fast Leaves
- Calix Consumer Connect
- 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
- AC to 12 VDC power adapter available for non-lifeline services.

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DIMENSIONS

Width: 7.9 in (20.0 cm)
Height: 10.6 in (26.9 cm)
Depth: 1.8 in (4.6 cm)
Weight: 28 oz. (.8 kg)

WAN INTERFACE

Interface: One 10/100/1000 BASE-TX
    Ethernet Port, RJ-45 connector

INTERFACES

Wireless: 2.4GHz 2x2 and 5Hz 4x4
    internal antennas
Telephony: Two RJ-11 connectors
Data/IPTV: Four 10/100/1000 BaseT
    Ethernet ports, RJ-45 connectors
USB: USB 2.0 Type A
Power: 2-pin connector
Power Switch: Push-button actuator

TELEPHONY

General: SIP VOIP
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, 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;

WIRELESS

2.4GHz 802.11 b/g/n
    2x2 MIMO, high-power
5GHz 802.11 a/n/ac
    4x4 MU-MIMO, implicit/explicit
    dynamic beamforming
2.4GHz and 5GHz simultaneous
8 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

TR-069 remote management
TR-064 CPE management
TR-098 Internet Gateway Device Data
    Model

ENVIRONMENTAL

Operating temperature: Indoor ambient
    temperature, 0° to 40°C
    (32° to 104° F)
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

Emissions:
    FCC Part 15 Class B
    IC ICES-003 Class B
    CISPR-22
Safety:
    UL 60950 and UL 1697 approved
IEEE: 802.3, 802.3AB, 802.3U, 802.11p,
    802.11Q
Wi-Fi Alliance Certified
    802.11ac and 802.11n

USB-IF Compliance
    USB 2.0

POWERING AND ALARMS

2-pin connector
Input voltage: 12 VDC (nominal),
    10 VDC (min.), 15 VDC (max)
External Power Adapter: 12 VDC, 2.5 A
Power Switch

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Calix 844E GigaCenter

100-04015 .... 844E-1 GigaCenter, 2 POTS, 4 GE, Dual Wi-Fi, 1 USB - Power Adapter Interface

Calix 844E Power Adapter

100-04036 .... Power Adapter 844G/854G 12V 2.5Amp - AM Type A

Sales Package - Calix 844E GigaCenter with Power Adapter

000-00866 .... 844E-1 GigaCenter -AM Type A Power Adapter
000-00867 .... 844E-1 GigaCenter -EU Type C Power Adapter