



CALIX GIGACENTER SPECIFICATIONS

DIMENSIONS

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

PON CHARACTERISTICS (844G/854G)

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

WAN CHARACTERISTICS (844E)

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
RF Video: F-connector, 75 Ohms (854G-1 and 854G-2)
PON: Single 9/125 μm (single mode) fiber, SC/APC connector, minimum 50 dB return loss
Power:
 8-pin connector (844G-1 and 854G-1)
 2-pin connector (844G-2 and 854G-2)
Power Switch: Push-button actuator (844G-2 and 854G-2)

TELEPHONY

General:
 ANSI: SIP, H.248, MGCP or TDM Gateway (GR-303, GR-57, TR-08 Mode I, TR-08 Mode II)
 ETSI: SIP
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
RFC 2976 (SIP INFO), RFC 2833/4733, G.711 A-law/u-law, G.729AB, T.30 Fax, T.38 Fax
SIP Conformance ETSI TS 102 027-2

DATA

Drop length: 328 feet (100 m) maximum using CAT5 cable

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Auto MDI/MDIX crossover for 1000BASE-TX, 100BASE-TX,
and 10BASE-T ports

Traffic Management and QOS: 802.11nQ VLAN; 802.11np voice, video, data and management priorities; Q-in-Q tagging; Rate limiting

WIRELESS

2.4GHz 802.11 b/g/n

- 2x2 MIMO, high-power (844E-1, 844G-1 and 854G-1)

- 2x2 MIMO, EU conformance (844E-2, 844G-2 and 854G-2)

5GHz 802.11 a/n/ac

- 4x4 MIMO, implicit/explicit dynamic beam forming

2.4GHz and 5GHz simultaneous

8 SSID per band (2 SSID subscriber default)

64 clients at 2.4GHz aggregate across Primary, Guest and Operator defined SSIDs

64 clients at 5Ghz aggregate across Primary and Guest SSID, 38 clients reserved for Operator defined SSIDs

Auto channel selecting and interference detection

Air Time Fairness

WPS, WPS push button

Wireless Security: Wi-Fi protected access (WPA/WPA2) WEP

- MAC address filtering

Wi-Fi multimedia (WMM)

VIDEO-ANALOG RF OUTPUT (854G)

Bandwidth: 54 to 550 MHz

Return loss: 10 dB minimum

Signal strength (with AGC range):

- 18 ± 2 dBmV

Flatness: ± 1.0 dB

Tilt: 1.0 dB ± 1.0 dB from 54 to

- 550 MHz

VIDEO-DIGITAL RF OUTPUT (854G)

Bandwidth:

- 550 to 1003 MHz

Return loss: 8 dB minimum

Signal strength (within AGC range): 12 ± 2 dBmV

Flatness: ± 1.5 dB

Tilt: 4.0 dB ± 1.0 dB from 550 to 1003 MHz

Modulation error ratio (MER): 33 dB

REMOTE MANAGEMENT

OAM&P via Calix Management System (CMS)

TR-069 remote management

TR-064 CPE 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

Operating/storage relative humidity:

- 8 to 95 % non-condensing

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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
CE Mark (844G-2 and 854G-2 only)
IEEE: 802.3, 802.3AB, 802.3U, 802.11np, 802.11nQ



USB-IF Compliance
USB 2.0



POWERING AND ALARMS

844E-1 and 844E-2

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

844G-1 and 854-1G

8-pin connector with 7-conductor power and alarm cable
Input voltage: 12 VDC (nominal),
10 VDC (min.), 15 VDC (max)
External Power Adapter: 12 VDC, 2.5 A
Residential battery backup source: UPS mounted at subscriber's residence
Battery backup time rated capacity:
8 hours based on Telcordia GR-909 calculation methods using recommended UPS.

844G-2 and 854G-2

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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