

T073G, T076G, and T077G HGUs



DESCRIPTION

The Calix T073G, T076G, and T077G GPON Home Gateway Units (HGUs) are a line of single-family service delivery devices that combines ONT functionality with Home Gateway capabilities; this combination delivers the high-speed services and exceptional networking performance subscribers expect from a fiber-based system. These Home Gateway Units integrate a 2.5 GPON WAN interface with Layer 3 switching and routing to efficiently manage premises network traffic. The three HGU models: T073G – 4 GE, 2 POTS, USB, Wi-Fi; T076G – 4 GE, 2 POTS, RF; T077G – 4 GE, 2 POTS, RF, USB, Wi-Fi, offer an array of service interfaces to match a variety of indoor single-family deployment scenarios.

GIGABIT AND WIRELESS HOME NETWORKING: The T073G, T076G, and T077G HGU ONTs are designed for the industry-leading Calix E7 and BLM 1500 OLT platforms. The ONTs terminate a GPON fiber link at the subscriber's location and provides industry-standard interfaces for the customer premises equipment. The ONTs enable subscribers to receive broadband data, IP and RF video, and VOIP voice on a single fiber. At the ONT, the optical signal is converted to the appropriate electrical format for transmission over the residence's in-home network including Wi-Fi. The wireless versions are designed to the latest 802.11n standard, which supports 2.4MHz operation and MIMO spatial diversity antenna technology. The wireless antennas are optimized for residential coverage and single- or dual-polarity connections. A USB port is also available for networking with other Ethernet appliances.

EASY TO INSTALL, ACTIVATE, AND MAINTAIN: Featuring innovative software management tools, these HGU ONTs can be configured, activated and upgraded quickly from a remote location. Extensive troubleshooting capabilities, remote software downloads, and easy-to-use service profile menus ensure that services are delivered and the ONT is maintained without needless truck rolls and hardware upgrades. Employing this line of HGU ONTs allows service providers to install the ONTs once and support network upgrades with a simple, remote software download.

NEW STANDARD FOR PERFORMANCE AND RELIABILITY: The T073G, T076G, and T077G HGU ONTs are network-managed, intelligent service gateways that support both Layer 2 bridged operations and Layer 3 routed services. Sophisticated software allows the ONTs to support multiple high-bandwidth applications such as high-speed data, HDTV-based IPTV video, and routing with bridging features for Whole-Home DVR.

CONFIGURATION, PROVISIONING AND MANAGEMENT CHOICES: This line of HGU ONTs can be fully provisioned and managed using OMCI and TR-069. The Home Gateway functions are also configurable with a configuration file downloadable from the OLT via OMCI. They can be partially or fully configured as a Layer 2 bridged ONT. Additionally each LAN port can be individually configured and managed for bridged operation rather than for routed operation.

PRODUCT DATASHEET

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KEY ATTRIBUTES

- Standards-based Full Service Access Network (FSAN), ITU-T GPON
- Home Gateway:
 - Layer 2 and 3 switching and routing
 - 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
 - Denial of service
 - MAC filtering
 - Universal Plug-and-Play (UPnP)
- Layer 2 Features:
 - MAC address learning with 8 K MAC table
 - Transparent LAN service (TLS)
- Two voice lines:
 - FXS ports, ETSI
 - Carrier grade SIP VOIP
 - RFC 2833
 - T.38 fax
- Four Gigabit Ethernet (GE) interfaces:
 - Multi-rate 10/100/1000 BaseT Ethernet, auto-negotiating
- RF Video (T076G and T077G only)
- USB port (T073G and T077G only)
- Supports multiple data service profiles
- Wireless Features(T073G and T077G only):
 - 2.4 GHz single-band
 - 802.11n certified, 802.11b/g compatible
 - WPA/WPA2
 - WPS push-button
 - WEP 64/128 bit encryption
 - Four SSID support
 - MAC filtering
- 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:
 - Layer 2 or routed mode IPTV
 - IGMP Snooping and Proxy
 - IGMP Fast Leaves
 - Unicast Video-on-Demand (VOD)
- Complete OAM&P
- Gateway Management:
 - TR-069
 - Local subscriber GUI, access provisionable
 - Remote WAN side GUI access
- Management Features:
 - OMCI for GPON, Layer 2 bridge port functions, VoIP, and software download
 - TR-069 for Home Gateway (HGW) functions and HGW profile download
 - Web GUI for local and remote HGW management
 - Config file for Home Gateway functions and country specific VOIP configuration, downloadable via OMCI
- Powering:
 - Power Adapter: Wall mount EU plug
 - UPS: 8-pin jack with UPS management
 - Dying gasp



SPECIFICATIONS

T073G, T076G, and T077G HGUs

DIMENSIONS

Height: 41 mm
Width: 229 mm
Depth: 174 mm
Weight: T073G 640 g,
T076G 680 g, T077G 700 g

GPON CHARACTERISTICS

Maximum Attenuation:
GPON Class B+, 28 dB
1490 ± 10 nm optical receiver:
-28.0 to -8.0 dBm
1310 ± 20 nm optical transmitter:
0.5 to 5.0 dBm
1550 ± 10 nm RF video overlay
(T076G and T077G only)

INTERFACES

GPON: SC/APC connector
Telephony: RJ-11
Data/IPTV: 10/100/1000 BaseT
Ethernet ports, RJ-45 connectors
Wireless: 802.11b/g/n Wi-Fi (T073G
and T077G only)
RF Video: F-connector (T076G and
T077G only)
USB: Type A (T073G and T077G
only)
Power: DC barrel connector
UPS: 8-pin jack with UPS telemetry

TELEPHONY

General: ETSI POTS via SIP
Number of lines: 2
5 REN, balanced ring at 55V RMS
Gain adjustment: -14dB to -6dB
±1dB
CODEC: G.711 (A-law)
RFC 2833
Fax: T.38

DATA

Drop length: 328 feet (100 m)
maximum using CAT5 cable
Number of ports: 4
10/100/1000 BaseT auto-negotiation
or manual configuration
Traffic Management and QOS:
802.11Q VLAN; 802.11p voice,
video, data and management
priorities; Q-in-Q tagging; Rate
limiting

RF VIDEO

RF output power: +18.5 dBmV
RF passband: 54MHz to 870MHz

WIRELESS

2.4 GHz single-band 802.11b/g/n
2x2 MIMO with external antennas
Multiple SSIDs
WPS, WPS push button
Wireless Security: WIFI protected
access (WPA/WPA2), WEP,
MAC address filtering

USB

USB 2.0 mass-storage device class
(MSC)
FAT, FAT32 and NTFS file system

MANAGEMENT

OAM&P
TR-069 remote management
TR-064 local management
TR-98 Internet gateway device data
model
Web GUI: Local and remote RG
management
Config file: HGW profile and country
specific voice FXS configuration

ENVIRONMENTAL

Operating temperature: Indoor
ambient temperature, 0° to 40°C
Storage temperature: -20° to 70°C
Operating/storage relative humidity:
5 to 95 % non-condensing
Altitude: -61 to 3,048 m above
sea level

REGULATORY

Safety: EN 60950-1:2006, EN
60825-2:2004, CE Mark
EMC: DIRECTIVE 2004/108/CE,
DIRECTIVE 1999/5/EC,
EN 300 386 V1.5.1:2011 Class B,
EN 55022, Class B
EN 55024:1998+A1/A2
Waste Directives: 2002/95/EC,
2002/96/EC

STANDARDS

ITU-T: G.984.1, .2, .3, .4, .5
Broadband Forum: TR-069 Issue 1
Amt 1/2/3
IEEE: 802.3, 802.3AB, 802.3U

POWER AND ALARMS

Power Adapter: Wall mount EU plug,
Power Adapter
UPS: 8-pin connector with UPS
telemetry
AC input: 100~240 V±10%, 0.6 A,
50~60 Hz±5%
Residential battery backup source:
UPS mounted at subscriber's
residence
Contact Calix for recommended UPS

ORDERING INFORMATION

T073G, T076G, and T077G HGUs

Calix T073G, T076G, and T077G Home Gateway Units

T073G HGU (100-03576) HGU, 2 POTS, 4 Gigabit Ethernet, 1 USB, WIFI

T076G HGU (100-03564) HGU, 2 POTS, 4 Gigabit Ethernet, RF Video

T077G HGU (100-03577) HGU, 2 POTS, 4 Gigabit Ethernet, 1 USB, WIFI, RF Video



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