ALCATEL-LUCENT
7368 ISAM ONT G-8X1G

The Alcatel-Lucent G-8x1G Optical Network Terminal (ONT) family is part of the industry-leading Alcatel-Lucent 7368 Intelligent Services Access Manager (ISAM) ONT product family and is compatible with the Alcatel-Lucent 7342/7360 ISAM FTTx product line. The Alcatel-Lucent G-8x1G ONT family is designed to deliver triple play services in a fiber to the home (FTTH) environment to small office/home office (SOHO) units where multiple Ethernet and voice ports and RF video interfaces are required. The Alcatel-Lucent ONTs terminate a Full Service Access Network (FSAN)-compliant GPON fiber interface.

Alcatel-Lucent G-821G-B

Alcatel-Lucent G-881G-B

Alcatel-Lucent G-881G-A Outdoor

OVERVIEW

G-8x1G is designed to cater to small business and residential customer requirements. This ONT offers data, voice and video services to the subscriber through FTTH or fiber to the premises (FTTP) applications. The G-8x1G family comes in three different versions: G-821G-B and G-881G-B, which are temperature non-hardened ONTs, and G-881G-A, which is temperature hardened. The temperature non-hardened ONTs are suitable for indoor deployments and can be mounted on a desktop, rack or wall. The temperature hardened ONT is suitable for outdoor deployments.

The G-8x1G family can be used in single-family unit applications, as well as in multiple dwelling units (MDUs). It can deliver high-speed Internet access, voice and video over IPTV and CATV. The ONTs are compliant with ITU-T G.984 supporting 1.25 Gb/s upstream and 2.5 Gb/s downstream line rate. Compliant with the standard OpenManage Client Instrumentation (OMCI) definition, they can be managed from a remote site using an Access Management System (AMS) and can support the full range of fault, configuration, accounting performance security (FCAPS) functions.

FEATURES

- Auto-negotiation and medium dependent interface/medium dependent interface crossover Media dependent interface/media dependent interface crossover (MDI/MDIX) auto sensing
- Data transfer at wire speed
- Built-in Layer 2 switch
- Advanced data features such as VLAN tag manipulation, classification and filtering
- Multiple voice codecs
- Echo canceling, Voice Activity Detector (VAD), and Comfort Noise Generator (CNG)
- Various Class services – caller ID, call waiting, call forwarding, call transfer
- RF overlay

BENEFITS

- Supports full triple play services including voice, video and high-speed Internet access
- Delivers connectivity to up to eight Ethernet devices within the home or premises
- Supports Internet Group Management Protocol (IGMP) snooping for the filtering process of IPTV
- Concurrent support of IPTV service capabilities on all Ethernet ports
- Fast-leave function to enhance the efficiency of the bandwidth
- RF video overlay over fiber as input and F-connector to support 54 MHz to 870 MHz CATV channels

AMT advanced media technologies®

Alcatel·Lucent

Available versions

PRODUCT	10/100/1000BASE-T	POTS	RF OVERLAY	DIMENSIONS	WEIGHT
G-821G-B	2	8	1	43.6 mm x 482 mm x 188.5 mm (1.71 in. x 19 in. x 7.42 in.) (h x w x d)	2.5 kg (5.5 lb)
G-881G-B	8	8	1	43.6 mm x 482 mm x 188.5 mm (1.71 in. x 19 in. x 7.42 in.) (h x w x d)	2.6 kg (5.7 lb)
G-881G-A	8	8	1	413.7 mm x 365.5 mm x 151.1 mm (16.29 in. x 14.39 in. x 5.95 in.) (h x w x d)	5.1 kg (11.2 lb)

TECHNICAL SPECIFICATIONS

Power supply
- UPS connector
- +48 V DC as auxillary power terminal block
- Dying Gasp support
- Power consumption:
  - ¬ Less than 30 W (G-881G-x)
  - ¬ Less than 17 W (G-821G-B)

Operating environment
- Temperature non-hardened: -5°C to 50°C (23°F to 122°F)
- Temperature hardened: -40°C to 65°C (-40°F to 149°F)
- Humidity: 5% to 90% relative humidity

Safety and electromagnetic interference (EMI)
Non-Hardened (G-881G-B, G-821G-B):
- UL 60950-1
- FCC Part 15b, Class B, IC-003
  - ¬ EN 300386
  - ¬ IEC 60950-1
  - ¬ ITU-T K.21
- CSA C22.2 No. 60950-1

Hardened (G-881G-A):
- UL 60950-1
- FCC Part 15b, Class B, IC-003
  - ¬ UL 60950-22
  - ¬ UL 50E
  - ¬ CSA C22.2 No. 60950-1

GPON TC layer
- G.984.3-compliant GPON Encapsulation Method (GEM) framing
- Multiple T-CONTs per device
- Multiple GEM ports per device
- Flexible mapping between GEM ports and T-CONT
- G.984.3-compliant activation with automatically discovered SN and password
- G.984.3-compliant Advanced Encryption System (AES-128)
- G984.3-compliant FEC (Forward Error Correction)
- G.984.3-compliant database administrator (DBA) reporting 802.1p to GEM mapper service profile in upstream direction
- G984.5-compliant: GPON/XGPON coexistence
- Avalanche photodiode (APD) receiver and distributed feedback (DFB) transmitter
- 0.5 dBm to 5.0 dBm launch power
- -28 dBm to -8 dBm for receiving
- Wavelengths:
  - ¬ US 1310nm, DS 1490nm
  - ¬ Laser compliant to FCC 21
- CFR part 15, class B

RF video overlay
- Uplink: Optical fiber with 1550 nm wavelength
- Downlink: F-connector
- Video frequency range: 47 MHz to 870 MHz
- RF optical receive sensitivity: +1 to -9 dBm
- 18 dBmV RF video receiver

Ethernet
- 10/100/1000Base-T interface with RJ-45 connectors
- Ethernet port auto negotiation or manual configuration
- MDI/MDIX automatic sense
- Synchronous Ethernet (SyncE) support on Ethernet ports (G-881G-A, G-881G-B)
- Support of port-based downstream priority queues and Strict Priority scheduling for traffic Class of Service (CoS) differentiation
- Virtual switch based on 802.1Q VLAN
- VLAN tagging/detagging per Ethernet port and marking/remarking of 802.1p
- VLAN stacking (Q-in-Q) and VLAN translation
- CoS based on VLAN ID, 802.1p bit
- IPv4 Type of Service/Differentiated Service Code Point (ToS/DSCP) to 802.1p mapping for untagged frames
- IGMP v2/v3 snooping
- Supports RFC 2236 (v2), RFC 3376 (v3), any source multicast/source-specific multicast (ASM/SSM)

POTS interface
- RJ-11 connector
- 5 REN
- Balanced ring, 55 V RMS
- Dual tone multi-frequency (DTMF) dialing
- Echo cancellation
- VAD and Comfort Noise Insertion (CNI)
- Session Initiation Protocol (SIP)
- RTP (RFC 3550/3551)
- Supports various Class services – caller ID, call waiting, direct call, CLIP, call forwarding, call transfer, three-way calling
- G.711, G.722, G.729
- T.38 FAX
- Country-specific ring tone generation

Installation
- Indoor deployment
  - ¬ Desktop
  - ¬ Rack mounted
  - ¬ Wall mounted
- Outdoor deployment
  - ¬ Wall mounted

GPON network interface
- Compliant to G.984.x GPON standards
- Modular laser, subscription connector/ angled physical contact SC/APC connector
- 1.244 G burst mode upstream transmitter
- 2.488 G downstream receiver compliant

Operations, administration and maintenance (OAM)
- Standard-compliant OMCI (the embedded operations channel) interface as defined by G.984.4 and G.988
- Supports local WebGUI for the optical network unit (ONU) authentication password configuration from the LAN side
- MIB manipulation over OMCI using the create, delete, set, get, and get next commands
- Provisioning of diverse services including Ethernet and VoIP
- Alarm reporting and performance monitoring
- Remote software image download over OMCI, as well as activation and rebooting
- Supports SLID (by POTS port or WebGUI)
- Connectivity fault management (CFM)/Y.1731
- Ethernet OAM (802.3ah)

LEDs
- POWER
- BTRY
- FAIL
- VIDEO
- DATA
- NTWK
- MGMT INTF
- POTS

Alcatel·Lucent