The Alcatel-Lucent G-240G-A Optical Network Terminal (ONT) with four Gigabit Ethernet, two POTS is part of the industry-leading Alcatel-Lucent 7368 ISAM ONT product family and is compatible with the Alcatel-Lucent 7342/7360 ISAM FTTx product line. It is designed to deliver triple play services in a Fiber-to-the-Home (FTTH) environment to single family units where multiple Ethernet and voice ports are required. The Alcatel-Lucent ONTs terminate the Gigabit Passive Optical Network (GPON) fiber interface compliant with a Full Service Access Network (FSAN).

**FEATURES**
- Compliant with ITU-T G.984, supports a line rate of 2.5 Gb/s downstream and 1.25 Gb/s upstream
- With GPON as the up-link interface, supports standard triple play services: voice, video, and high-speed Internet access to support home networking
- Data transfer at wire speed
- Auto-negotiation and MDI/MDIX auto sensing
- Built-in Layer 2 switch
- Advanced data features such as VLAN tag manipulation, classification and filtering

**BENEFITS**
- Delivers connectivity to Ethernet devices within the home
- Supports full triple play services including voice, video, and high-speed Internet access
- Supports IP video distribution
- Delivers voice services using voice over IP (VoIP)
- Delivers video services efficiently with multicasting or unicasting
- Network management via Alcatel-Lucent 5520 AMS
- Internet Group Management Protocol (IGMP) snooping

**Services**
**Data**
The G-240G-A ONT supports up to four 10/100/1000 Base-T Gigabit Ethernet data interfaces:
- Auto-negotiation and MDI/MDIX auto sensing
- Data transfer at wire speed
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**FEATURES**
- Can be managed from a remote site via access management system (AMS)
- Supports the full range of Fault, Configuration, Accounting, Performance, and Security (FCAPS) functions

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Voice
The G-240G-A ONT supports up to two POTS interface ports for carrier-grade voice services:
• 5 REN per line, balanced sinusoidal ring signal at 55 V RMS, DTMF dialing
• Multiple voice CODECs
• Echo canceling, voice activity detection (VAD), comfort noise generator (CNG)
• Various CLASS services – Caller ID, Call waiting, Call forwarding, Call transfer, etc.
• Session Initiation Protocol (SIP) (RFC 3261)

Video
The G-240G-A ONT supports video services over the Ethernet data ports (multicast or unicast).

Interfaces
The G-240G-A supports the following service interfaces:
• 4 x 10/100/1000Base-T
• 2 x POTS

TECHNICAL SPECIFICATIONS
Dimensions
• Height: 33 mm (1.3 in)
• Width: 208 mm (8.18 in)
• Depth: 142 mm (5.59 in)
• Weight: 0.26 kg (0.57 lb) (power adapter not included)

Installation
• Desktop mounting
• Wall mounting
• Outdoor mounting (in Alcatel-Lucent Universal SFU-ONT enclosure)

Power supply
• +12 V (feed via external AC/DC adapter)
• Dying Gasp support
• Power consumption: less than 8 W

Operating environment
• Temperature: -40°C to 60°C (-40°F to 140°F)
• Humidity: 5% to 90% relative humidity

GPON TC layer
• G.984.3-compliant GPON Encapsulation Method (GEM) framing
• Multiple transmission containers (T-CONTs) per device
• Multiple GEM ports per device
• Flexible mapping between GEM ports and T-CONT
• G.984.3-compliance:
  • activation with automatic discovered SN and password
  • Advanced Encryption System (AES-128)
  • Forward Error Correction (FEC)
  • DBA reporting IEEE 802.1p to GEM mapper service profile in upstream direction
• G984.5 compliance: GPON/XGPON co-existence

GPON network interface
• Compliant with G.984.x GPON standards
• SFF-type laser, SC/APC connector
• 1.244 G burst mode upstream transmitter
• 2.488 G downstream receiver
• Avalanche photodiode (APD) receiver and distributed feedback (DFB) transmitter
• 0.5 dBm ~ 5.0 dBm launch power, -28 dBm ~ -8dBm for receiving
• Wavelengths:
  • upstream: 1310 nm
  • downstream: 1490 nm
• Laser compliant with FCC 21 CFR

Ethernet
• 10/100/1000 Base-T interface with RJ-45 connectors
• Ethernet port auto-negotiation or manual configuration
• MDI/MDIX automatically sense
• Support of port based downstream priority queues and strict priority scheduling for traffic class of service (CoS) differentiation
• Virtual switch based on IEEE 802.1Q VLAN
• VLAN tagging/detagging per Ethernet port and marking/remarking (IEEE 802.1P)
• VLAN stacking (Q-in-Q) and VLAN translation
• CoS based on VLAN ID, 802.1p bit
• IP v4 Type of Service/Differentiated Service Code Point (ToS/DSCP) to 802.1p mapping for untagged frames
• Internet Group Management Protocol (IGMP) v2/v3 snooping
• Supports RFC 2236 (V2), RFC 3376 (V3), any-source multicast (ASM) and source-specific multicast (SSM)

POTS interface
• RJ-14 connector
• 5 REN
• Balanced ring, 55 V RMS
• DTMF dialing
• Echo cancellation
• VAD and comfort noise insertion
• SIP (RFC 3261)
• Real-time Transport Protocol (RTP) (RFC 3550/3551)
• Support various CLASS services – Caller ID, Call waiting, Direct Call, CLIP, Call forwarding, Call transfer, Three way calling, etc.
• ITU-T G.711, G.722, G.729
• ITU-T T.38 fax
• Country-specific ring tone generation

OA&M
• Standard compliant OMCI (the embedded operations channel) interface as defined by ITU-T G.984.4 and ITU-T G.988
• Support local web GUI for the ONU authentication password configuration from LAN side
• MIB manipulation over OMCI by create, delete, set, get, get next commands
• Provisioning of diverse services including Ethernet, VoIP, etc.
• Alarm reporting and performance monitoring
• Remote software image download over OMCI, as well as activation and rebooting
• Supports SLID (via POTS port or web GUI)

Buttons
• Power
• Reset

LEDs
• POWER
• BTRY
• FAIL
• DATA1-4
• NTWK
• MGMT
• POTS

REGULATORY
Safety and EMI
• UL 60950-1
• CSA C22.2 No. 60950-1
• FCC part 15b, Class B, IC-003
• ITU-T K.21

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