Motorola ONT1500GT

Small Office/Home Office Unit
Intelligent Fiber-to-the-Premise (FTTP) Services Platform

Overview:

Using the ONT1500GT ITU compliant GPON optical network terminal (ONT), operators can build upon the power of a fiber infrastructure to bring advanced IPTV and packet-based video services directly to the home. In conjunction with the high-density Motorola AXS2200™, the ONT1500GT becomes the next generation service delivery point into the home, enabling operators to deliver multiple revenue generating services over a single fiber passive optical network (PON). The ONT1500GT can be deployed for new service or as an upgrade from an existing BPON system.

Based on open standards and leveraging a highly flexible design, the Motorola ONT1500GT addresses the demand for ultra broadband services. It can be configured to seamlessly deliver quality voice, voice-over-IP and high speed Internet access – via a single fiber optic connection to the home. The ONT1500GT also supports interactive services by integrating upstream signals from Motorola's widely deployed family of digital RF and combination RF/IP set top terminals.

With the ONT1500GT, service providers can:
• Provide tiered broadband data services from kbps to multi-Mbps
• Offer transparent TDM and VoIP telephony
• Provide video delivery via a single origination point, enabling IPTV services such as HDTV, VOD and digital video recording (DVR) as well as on-line gaming
• Deliver video using RF-overlay from legacy RF video systems and set top terminals working.

Highlights include:

• Enables the delivery of IPTV - voice, video and data services over a single fiber GPON.

• Provides eight lines of Class 5 or softswitchserved (VoIP) quality voice service.

• Provides Internet access at speeds up to 400Mbps over Ethernet .

• Supports interactive packet-based video and IPTV with Ethernet or MoCA.

• Works with existing in-home wiring.

• Enables easy installation supported through pre-provisioned service profiles.

• Provides integrated return path signaling in support of interactive services.

• Leverages an environmentally hardened enclosure for true outdoor capabilities, even in extreme conditions.

• Provides a cost-effective, scalable solution for initial rollout or full deployment.

• Includes an uninterruptible power supply to assure continuous operations in emergency situations

Features and Benefits

Flexibility

Motorola's Ultra-Broadband Fiber-to-the-Premises (FTTP) network solutions fuel the delivery of rich consumer experiences into the home – from hundreds of channels of high-definition TV to the viewing of thousands of on-demand titles. Motorola's FTTP solutions easily satisfy the growing consumer demand for advanced services by enabling lightning fast throughput capacity while lowering total cost of operations and maintenance. Motorola's FTTP platforms provide revenue generating services and allow service providers to take advantage of improved deployment economics and greater operational simplicity only all-fiber access networks can provide.

Interoperability:

The ONT1500GT is in compliance with industry standard FSAN and ITU-T G.984 specifications to allow interworking with third party vendors. The ONT1500GT is also designed to interoperate with Motorola's line of RF and combination RF/IP set top terminals. The ONT1500GT also hosts an integrated signaling return path in support of interactive on-demand services such as video-ondemand and pay-per-view.

Management:

The AXS2200 Optical Access Platform and ONT1500GT are managed by AXSvision, a comprehensive element management system that enables visibility into system performance, service continuity, service provisioning, maintenance and upgrades from a single operations center.

Specifications:

Physical Description*

- Height: 16.7" (42.4 cm)
- Width: 11.7" (29.7 cm)
- Depth: 8.00" (20.3 cm) *
- Weight: 15 lbs.
- Mounting: Wall
- * including fiber management

Power Supply

- ONT Power: 42 Watts (maximum)
- ONT Input Voltage: +12 VDC
- UPS Input Voltage: 100 to 240 VAC, 50/60 Hz.
- Battery Backup Time: 8 hours idle backup

Interface Configuration

Telephony Interface
- 8 POTS
- 2 lines 4 IDC terminals (Tip and Ring)
- 6 lines 1 IDC terminals (Tip and Ring)
- 8 RJ-11 gel-filled test point connections
- 5 REN (maximum) per line
- 20 REN (maximum) across all lines

Data Interface
- MoCA port with F-type connector
- 2x Ethernet 10/100/1000Base-T ports
- RJ-45 gel-filled connector
- Mounting position for 2x RJ-45 to IDC adapters
- Synchronous Ethernet

Power Interface
- 7 position 5mm remove-able IDC

Video Interface
- 75-ohm F-type connector
- +18dBmV

Optical Interface
- Field interchangeable SC or OptiFit® connector

Network Interface

Gigabit Passive Optical Network (GPON) interface
- 2.5 Gb/s downstream
- 1.2 Gb/s upstream

Operating Wavelengths:
- 1490 nm voice/data receive
- 1550 nm video receive
- 1310 nm voice/data transmit

Environmental

- Operating Temperature: -40°C to +60°C ambient (+46°C with 750 W/m2 solar loading)
- Storage Temperature: -40°C to +65°C
- Operating Humidity: 0 to 100% RH

Regulatory Compliance

Safety:
- EN60825-2, IEC 60825, EN60950, UL60950-1 Emission/Immunity:
- FCC Part 15 Subpart B,FCC Part 68
- Class B, ETSI CTR-21, EN55022, EN55024
- Applicable Sections of: GR-47-CORE, GR-57-CORE, GR-63-CORE, GR-418-CORE, GR-485-CORE, GR-487-CORE, GR-499-CORE, GR-909-CORE, GR-950-CORE, GR-1089-CORE, GR-1500-CORE, GR-2914-CORE

Protocols

- ITU-T G.984.1, G.984.2, G.984.3, G.984.4, as amended
- IGMP v2 (RFC 2236) and IGMP v3 (RFC 3376) multicast group management including snooping support
- IEEE 802.1D bridging
- IEEE 802.1Q Virtual LAN
- RFC 1886, RFC 2460, RFC 2463, RFC 2464, RFC 2474, RFC 3513, RFC 3587, RFC 3261, RFC 3262, RFC 3263, RFC 3264, RFC 3265, RFC 3311, RFC 3325, RFC 3515, RFC 3840, RFC 3842, RFC 3891, RFC 3911, RFC 3959, RFC 3966, RFC 4028, RFC 4235, RFC 4412
- H.248 and SIP-enabled VoIP
- GR-303, GR-08
- IEEE 802.3i, IEEE802.3u, 802.3ab
- IEEE 802.1ad Provider Bridges
- IEEE 802.3ad link aggregation
- MoCA

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