

# MOTOROLA ONT1400GT

## Single Family Unit

Intelligent Fiber-to-the-Premises (FTTP) Services Platform



The Motorola ONT1400GT Single Family Unit – SFU is an ITU G.984-compliant GPON intelligent optical network terminal (ONT). It is designed to deliver a full range of advanced voice, data and video services over an all-optical ultra-broadband access network.

Using the ONT1400GT 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 ONT1400GT 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).

Based on open standards and leveraging a highly flexible design, the Motorola ONT1400GT 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 ONT1400GT 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 ONT1400GT, 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 games on-line
- Deliver video using RF-overlay from legacy RF video systems and set top terminals

### Highlights include:

- Enables the delivery of IPTV - voice, video and data - services over a single fiber GPON.
- Provides two lines of Class 5 or softswitch-served (VoIP) quality voice service.
- Provides Internet access at speeds up to 200Mbps sustained and 400Mbps burst 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 Demodulation (RPD) 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.
- Optional uninterruptible power supply to assure continuous operations in emergency situations.

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### Features and Benefits

#### Flexibility:

Revenue growth and building a powerful defense against competitors are key reasons service providers need to consider the deployment of next generation fiber access technologies. Multi-service delivery over a single converged FTTP and FTTN platform provides the flexibility to offer "triple play" and additional advanced IPTV services. The converged platform provides revenue generating services and allows service providers to take advantage of improved deployment economics and greater operational simplicity.

#### Interoperability:

The ONT1400GT is in compliance with industry standard FSAN and ITU-T G.984 specifications to allow interworking with third party vendors. The ONT1400GT is also designed to interoperate with Motorola's line of RF and combination RF/IP set top terminals.

#### Management:

The AXS2200 FTTP and FTTN access networks and ONT1400GT are managed by 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: 11.5" (29.2 cm), Width: 10'.5' (26.7 cm), •
- Depth: 3" (7.6 cm)
- Weight: 5 lbs.
- Mounting: Wall
- \* not including fiber management

#### Power Supply

- ONT Input Voltage: +12Vdc, 30 Watts (maximum)
- UPS Input Voltage: 100 to 240 Vac, 50/60 Hz.
- Battery Backup Time: 8 hours idle using 12Vdc 7.2Ahr battery

#### Service Interfaces

##### Telephony Interface:

- 2x POTS, IDC terminals (Tip/Ring) and RJ-11 gel-filled test point connections
- 5 REN (max) per line, 10 REN (max) across all lines

##### Data Interfaces:

- 2x Ethernet 10/100/1000Base-T ports, RJ-45 gel-filled connector
- MoCA WAN/LAN and RPD over F-type connector

##### Video Interface (optional):

- 75-ohm F-type connector, • +18dBmV

#### Network Interfaces

##### Optical:

- GPON: 2.488 Gbps downstream, 1.244 Gbps upstream
- Operating Wavelengths:
  - 1490 +/- 10nm voice/data receive
  - 1310 +/-50nm voice/data transmit
  - 1550-1560 nm video receive
- Field interchangeable SC or OptiFit® connector, Class B+ optics

##### Power Interface:

- 7 position 5mm header with remove-able IDC connector

#### 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
- ITU-T G.983.2 and G.983.8 statistics (Ethernet interface)
- GPON Encapsulation Method (GEM)
- IGMP v2 services (RFC 2236) and v3 services (RFC 3376)
- IGMP v2 (RFC 2236) and IGMP v3 (RFC 3376) multicast group management including snooping support
- IEEE Std 802.1D bridging and learning, traffic class expediting & dynamic multicast filtering (Annex H)
- IEEE 802.1Q Virtual LAN with 8 levels of priority
- RFC 1886, RFC 2460, RFC 2463, RFC 2464, RFC 2474, RFC 3513, RFC 3587
- H.248 and SIP-enabled VoIP
- GR-303, TR-08
- SNMPv3
- IEEE 802.3i, IEEE802.3u, 802.3ab
- IEEE 802.1ad Provider Bridges
- IEEE 802.3ad link aggregation
- MoCA
- ANSI/SCTE 55-1 (RPD)



Motorola, Inc.  
1303 East Algonquin Road  
Schaumburg, IL (USA) 60196  
+1 847.576.5000 (TEL)  
www.motorola.com  
info@motorola.com (EMAIL)

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