



# Motorola ONT1400GT2JI

## Single Family Unit

### Intelligent Fiber-to-the-Premise (FTTP) Services Platform

#### Overview:

With the ONT1400GT2JI GPON optical network terminal (ONT), operators can build on 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™ or AXS1800™, the ONT1400GT2JI 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 ONT1400GT2JI 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 ONT1400GT2JI 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 ONT1400GT2JI, 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, DVR, and online gaming
- 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.
- Works with existing in-home wiring.
- Enables easy installation supported through pre-provisioned service profiles.
- Combines the ONT, mounting bracket, fiber slack storage, power supply and battery back-up all a unique ergonomic design, ensuring ease of installation and cost savings
- Provides integrated return path demodulation (RPD) signaling in support of interactive services.
- Provides a cost-effective, scalable solution for initial rollout or full deployment.
- Built-in non-interruptible power supply to assure continuous operations in emergency situations.
- Supports 1Ghz 1550nm RF overlay

## 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 ONT1400GT2JI is compliant with industry standard FSAN and ITU-T G.984 specifications to allow inter-working with third party vendors. The ONT1400GT2JI is also designed to interoperate with Motorola's line of RF and combination RF/IP set top terminals.

### Management:

The AXS2200/AXS1800 Optical Access Platform and ONT1400GT2JI 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: 17.0" (43.18 cm)
- Width: 10.75" (27.30 cm)
- Depth: 3.0" (7.62 cm)
- Weight: 8.1 lbs (3.67 kg)
- Mounting: Wall
- Slack storage for 40 ft. of outdoor aerial/burial cable

### 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.
- Optional 12V 7.2Ahr battery available
- Serial output power supply can be placed up to 100ft from the ONT1400GT2JI using Cat 5 cable

### Service Interfaces

#### Telephony Interface:

- 2x POTS, IDC terminals (Tip/Ring) and RJ-11 gel-coated 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-coated connector
- RPD over F-type connector

#### Video Interfaces:

- 75-ohm F-type connector +18dBmV
- 50mhz to 1Ghz

### Network Interfaces

#### Optical:

- GPON: 2.488 Gbps downstream, 1.244 Gbps upstream
- Operating Wavelengths:
  - 1490 +/- 10nm voice/data receive
  - 1310 +/-50nm voice/data transmit
  - 1550-1560nm video receive
- SC/APC connector
- Fiber splicing within the ONT enclosure

### Environmental

- Operating Temperature: -20°C to +50°C ambient
- Storage Temperature: -40°C to +65°C
- Operating Humidity: 0 to 95% RH

### Regulatory Compliance

- US/Canada: UL 60950-1
- Europe: EN 60950-1
- CB: IEC 60950-1:2001
- Emission/Immunity: ETSI EN 300 386 Class B, FCC CFR47 Part 15 Class B
- Lightning Surge: ETSI EN 61000 4-5
- Stationary use: ETSI EN 300 019-2-3 Specification T 3.2
- Transportation conditions (optional): EN 300 019-2-2, specification T 2.3
- Storage: ETSI EN 300 019-2-1, Specification T1.2
- Sustainable development: WEEE 2002/96/EC, RoHS 2002/95/EC
- International Standards Compliance:
  - EMEA: RoHS and WEEE, Unique markings/labeling EMEA (ETSI), CE Mark, C-tick Mark, CCC Mark
- Laser Safety: 21CFR1040, CE Mark EN60825-1/2

### 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 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
- IEEE 802.3i, IEEE802.3u, 802.3ab
- IEEE 802.1ad Provider Bridges
- IEEE 802.3ad link aggregation
- ANSI/SCTE 55-1 (RPD)



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