



Total Access 372 GPON SBU Series

GPON SBU Optical Network Terminal (ONT)

Carriers today are dealing with increasing competition, operational costs, and demand for bandwidth. To address these concerns, ADTRAN® offers a complete suite of fiber access solutions that are enabling carriers to compete more cost-effectively while expanding broadband services to unserved and underserved areas, like those targeted by the American Recovery and Reinvestment Act and Connect American Fund.

With fiber access solutions like Gigabit Passive Optical Networking (GPON) carriers have a new means to compete in an environment where bandwidth is king. GPON provides the flexibility, reliability, and bandwidth to give carriers a competitive advantage in today's market. As part of the ADTRAN FTTx strategy, ADTRAN offers a range of differentiated GPON ONT solutions to address residential, business, and cell site applications.

The Total Access® 300 Series Small Business Units (SBU) GPON ONTs are designed to address the small business market with industry-leading voice, data, and video capabilities. This series includes the Total Access 372 and 372R. With Total Access GPON SBU ONTs, carriers can benefit from high data rates of fiber optic transmission, multiple DS1 hand-offs, and the flexibility offered by ADTRAN's portfolio of Ethernet-based systems that can be easily configured for new, customized service offerings.

Total Access 300 Series SBU ONTs work seamlessly with ADTRAN's widely deployed Total Access 5000 Series Multiservice Access and Aggregation Platform. Functioning as a highly capable GPON OLT and flexible carrier-class access platform, the Total Access 5000 bridges the gap between existing and next-generation network architectures like GPON. It makes a carrier's access network capable of meeting a variety of legacy and emerging system requirements. Its Ethernet architecture allows carriers to increase bandwidth while offering differentiated capabilities. Coupled with Total Access 300 Series SBU ONTs, it provides an end-to-end GPON deployment strategy that is supported by a common management solution.

The Total Access 300 Series SBU ONTs leverage the industry-leading converged voice and data functionality widely deployed in ADTRAN integrated access, IP gateway, and Voice over IP

(VoIP) platforms, with millions of ports currently deployed. Based on the ADTRAN Operating System (AOS), each ONT provides unmatched SIP and MGCP interoperability with a host of major soft-switch vendors, as well as integrated statistics and tools that allow carriers to quickly and easily troubleshoot network configuration issues, as well as monitor performance.

Features of the Total Access 300 Series Outdoor ONTs include box-in-box, weatherproof and access controlled construction with entry ports for fiber, power, ground, Ethernet, telephone, RFoG (specific models), and DS1 (pseudowire) business circuits. Each device supports 2.5 Gbps GPON applications per the ITU-T G.984.2 specification. Data services are delivered over 10/100/1000Base-T Ethernet interfaces. Telephone service is supported by POTS interfaces and DS1 delivery is achieved by leveraging SAToP PWE3 services through the Total Access 5000 platform.

The POTS ports use in-band signaling tones and currents to determine call status. GPON Encapsulation Mode (GEM) is used to carry Ethernet traffic. SIP, MGCP, GR-303, TR-008, and TR-57 are all available to support a wide variety of network models. Voice traffic is carried as VoIP packets to either the Total Access 5000 integrated Voice Gateway Module for access to legacy TDM interfaces, or as SIP or MGCP to an external soft-switch to support voice services. A full suite of Quality of Service (QoS) features are available with support for 802.1Q VLANs and 802.1p for prioritization.

The Total Access 300 Series SBU ONTs are powered by an external UPS. The AC-powered UPS provides a nominal 12 VDC to the ONT. Management of the Total Access 300 Series SBU ONTs is performed over OMCI as specified in G.984.4. The Total Access 300 Series SBU ONTs are environmentally hardened for installation inside or outside a residence as such a particular installation demands. The ONTs are accepted by Rural Utilities Service (RUS) and provide a wealth of benefits for carriers of all types, deploying broadband solutions including voice, data, video, and HDTV. An industry-leading warranty and best-in-class technical support make ADTRAN Total Access GPON solutions the best value on the market today.

Product Features

- 8 POTS and 4 DS1/E1 for PWE Transport through Total Access 5000
- 10/100/1000 Base-T Ethernet Port(s)
- G.984 compliant
- Environmentally hardened for indoor and outdoor deployments
- Full Class B+ Optics, capable of 30 km reach
- Optional Internal Opti-Fit mounting
- RF over Glass (RFoG) Support (ONT specific)
- Fiber cable management
- Native Ethernet transport over the GPON (GEMBased)
- VoIP using SIP or MGCP
- Traditional voice using GR-303, TR-008, or TR-57
- IPTV video support
- Traffic management through priority queuing, scheduling, policing and traffic shaping
- VLAN Stacking (Q-in-Q), VLAN tagging/untagging
- QoS with four traffic classes as per IEEE 802.1p
- Full IEEE 802.1Q VLAN ID processing per port
- Full OMCI integration

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GPON SBU ONT

Product Specifications

Voice Support

VoIP Protocol

- SIP
- MGCP

Traditional Voice

- GR-303
- TR-008
- TR-57

LEDs

- Power
- Network Status
- Voice
- ETH
- DS1

Mechanical

- 9.75" W x 12" H x 4" D
- 3 lbs., 0.5 oz. weight

Compliance

- FCC PART 15 Class B
- UL/CSA 60950

Interfaces

Voice

- 8 POTS Lines
- RJ-11

Data

- RJ-45 10/100/1000Base-T Ethernet ports
- Auto-sensing
- Auto MDI/MDIX

RF Video Interfaces (ONT specific)

- F-Type connector
- 1610nm RF return path

DS1/E1, PWE

- RJ-45
- SAToP structured in conjunction with PWE Modules in Total Access 5000

Video PON Optical Output (ONT specific)

- Output Wavelength: 1610+ 10nm
- Optical Output Power: 1 dBm min.

Video—RF Output (ONT specific)

- Impedance: 75-ohms
- Connector Type: F-Type
- Bandwidth: 54MHz to 1GHz
- RF Output Power: 15dBmV/ch to 24.5dBmV/ch
- RF Output Tilt: 2dB to 6dB from 54 to 870MHz
- Channel Loading: up to 82 (Analog), up to 200 (Digital)
- CNR: 46dB min
- CSO: -56dBc max
- CTB: -56dBc max

Power Connections Battery Backup

- 12 VDC (nominal) from external battery backup/power supply
- 5-wire battery backup/power supply status signals

Management

- Remote management through SNMP and TL1 to Total Access 5000 GPON OLT
- Ethernet interface on Total Access 5000 for IP management access
- Craft interface on Total Access 5000 for VT100 management access
- OMCI between ONT and OLT
- AOS statistics and debug capabilities

Environmental Outdoor

- Operating Temperature: -40°C to +65°C
- Storage Temperature: -40°C to +85°C
- Relative Humidity: Up to 95%, non-condensing

Optics

- Class B+ compliant as specified in G.984.2
- 30 km reach with 32x split
- SC/APC for GPON uplink

ONT Model	Application	POTS	GigE Ports	T1/E1	RF Video
Total Access 372	SBU	8	2	4	—
Total Access 372R	SBU	8	2	4	1



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ADTRAN is an ISO 9001, ISO 14001,
and a TL 9000 certified supplier.

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GPON SBU ONT

Ordering Information

ONT Model	Housing	Part number	Application	POTS	GigE Ports	T1/E1	RF Video
Total Access 372	Splice	4287722G2	SBU	8	2	4	—
Total Access 372R	Splice	4287722G4	SBU	8	2	4	1

Equipment Part

ONT Cartridge Only (No Housing)

Total Access 372 SBU, 2ND GEN	1287722G1
Total Access 372R SBU, 2ND GEN	1287722G2

Housings and Spare Kits

NID, SBU STND	1187774G1
NID, SBU OPTITAP	1187775G1
Total Access 300 SBU Spares Kit, Qty 5	1187700G2
GPON UPS CABLE, 50 FT	1187732G1
SBU UPS, GPON	1187735G1

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Enclosures for Outdoor Units

- Corning OptiTap™ mounting for pre-terminated fiber cable
- Slack storage tray
- Wind-driven rain protection

Packet-based Voice Resources

- CODECs
 - G.711-64k PCM
 - G.729a-8k CS-ACELP
- G.168 Echo Cancellation

Media Stream

- RTP/UDP/IP (RFC 3550)
- RTP payload for DTMF digits (RFC 2833)
- SDP (RFC 2327)

Tone Services

- Local DTMF Detection
- Local Tone Generation
 - Dialtone
 - Busy
 - Call Waiting
 - Alternate Call Waiting
 - Receiver Off Hook
 - Ringing
 - Distinctive Ring

Calling Feature Support (varies with feature server/gateway)

- Caller ID
 - Name and Number (MDMF, SDMF)
 - Call Waiting IAD
- Voice Mail
 - Stutter dialtone
 - Visual Message Waiting Indicator (VMWI)
- Call Hold
- Call Forward
 - Busy Line
 - No Answer
- Call Transfer
 - Blind, Attended
- Call Waiting
- Distinctive Ring
- Do Not Disturb
- Three-way Calling
- Call Return
- Speed Dial
- 3-way Conferencing (3WC)

