

Total Access 334

SFU GPON Indoor ONT with RF (3rd Gen)

Product Features

- Cost-effective delivery of triple-play services in high density housing environments
- G.984 compliant
- Allows use of CATV head end assets via RF support
- IPTV video support
- Environmentally hardened for indoor deployments
- 10/100/1000 Base-T Ethernet Port(s)
- Native Ethernet transport over the GPON (GEM Based)
- VoIP using SIP or MGCP
- 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

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 un-served 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 Optical Network Terminal (ONT) solutions to address residential, business, and cell site applications.

The Total Access® 300 Series is a line of GPON ONTs designed to address the residential market with industry-leading voice, data, and video capabilities. This series includes the Total Access 351, 352, 352H, 361, 362, 362H, 362R Outdoor ONTs and Total Access 324 and 334 Indoor ONTs. With Total Access GPON ONTs, carriers can benefit from high data rates of fiber optic transmission and the flexibility offered by ADTRAN's portfolio of Ethernet-based systems that can be easily configured for new, customized service offerings.

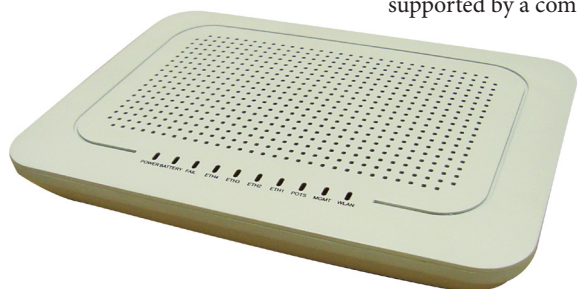
Total Access 300 Series ONTs work seamlessly with ADTRAN's widely deployed Total Access 5000 Series Multiservice Access and Aggregation Platform. Functioning as a highly capable GPON OLT and flexible carrier-class access platform, the Total Access 5000 bridges the gap between existing and next-generation 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 ONTs, this provides an end-to-end GPON deployment strategy that is supported by a common management solution.

The Total Access 300 series 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 softswitch 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 HPNA (specific models). 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.

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 Outdoor ONTs are powered by an external UPS. The AC-powered UPS provides a nominal 12 VDC to the ONT. Total Access 300 Series Indoor ONTs are optionally powered by an external UPS or directly connected to a 120 VAC power source. Management of the Total Access 300 Series ONTs is performed over OMCI as specified in G.984.4. The Total Access 300 Series Outdoor ONTs are environmentally hardened for installation inside or outside a residence as 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.



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Product Specifications

Voice Support

VoIP Protocol

- SIP (RFC 3261)
- MGCP (RFC 3435)
- G.711 (μ -law and A-law)
- DTMF encoding by RELAY or IN-BAND method
- CLASS service support
- DHCP Client or static IP configuration
- Echo Cancellation
- Voice Activity Detection and Comfort Noise Generation
- 5 REN per line
- Loop start/Ground Start
- Balanced and unbalanced ringing
- Country specific coefficients
- Metallic loop testing

Tone Services

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

Calling Feature Support

- Caller ID
 - Name and Number (MDMF, SDMF)
 - Call Waiting IAD
- Voice Mail
 - Stutter dial tone
 - 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)

Data Support

- 802.1D bridging
- VLAN tagging/detagging per Ethernet port
- VLAN stacking (Q-in-Q) and VLAN Translation
- QoS with support with 802.1p
- Up to 16 VLAN groups
- Automatic MAC address learning and aging
- Up to 256 MAC address entries
- MAC address limiting

OAM Support

- ITU-T G.984.4/G.988 based management of all services
- Remote firmware upgrades through Total Access 5000 OLT
- SIP configuration from Total Access 5000

GPON Support

- Compliant with ITU-T G.984 GPON standards
 - 1.244 Gbps Burst Mode Upstream Transmitter
 - 2.5 Gbps Downstream Receiver
- Compliant with ITU-T G.984.2 Amd1, Class B+
 - 0.5dBm ~+5dBm launch power, -27dBm sensitivity, and -8dBm overload
 - Wavelengths:
 - US 1310nm, DS 1490nm
 - Received optical power monitoring
- Serial number discovery and Registration ID provisioning
- Advanced Encryption Standard (AES)
- Forward Error Correction (FEC)
- Supports up to 8 T-CONTS
- Multiple GEM ports with flexible mapping between TCONTs
- Traffic management (shaping and priority queuing)

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RF Video Interfaces (ONT Specific)

- F-Type connector
- 1610nm RF return path

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 7dB from 54 to 870MHz
- Channel Loading: Up to 82 (Analog), up to 200 (Digital)
- CNR: 46dB min
- CSO: -56dBc max
- CTB: -56dBc max

IPTV Support

- Up to 256 multicast groups
- IGMP Snooping
- IGMP snooping with immediate leave
- IGMP snooping with proxy reporting

Physical Specifications

LEDs

- POWER
- LAN1~LAN4
- Battery
- LOS
- TEL1~TEL2
- Optical

Interfaces

- Four 10/100/1000 BaseT Ethernet interface via RJ-45
- Auto-negotiation and MDI/MDIX auto-sensing
- Two POTS lines via RJ-11

Power Supply, Power Consumption

- 12VDC
- Power Consumption: Less than 12W
- Input connection: 2.5 mm plug or UPS Molex connection

Physical Dimensions

- 10.2 in. x 6 in. x 1.8 in. (260 mm x 152 mm x 45 mm)
(W x D x H, without bracket)
- Weight: 2 lbs (0.9 kg)

Regulatory Agency Approvals

- FCC PART 15 Class B
- UL/CSA 60950
- CE Mark
- RoHS6 Compliant
- WEEE Compliant
- 1040.10 and 1040.11 Class 1
- EN 55022, EN 55024, EN 300 386, CLASS B
- FDA – FCC 47 CFR Part 15, Class B and FDR 21 CFR

Management

- TR-069 compliant
- 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

- Operating Temperature: - 40° F to 115° F
(-40° C to +46° C)
- Storage Temperature: -40° F to 185° F
(-40° C to 85° C)
- Relative Humidity: 5% to 90%
- Hardened outdoor enclosure



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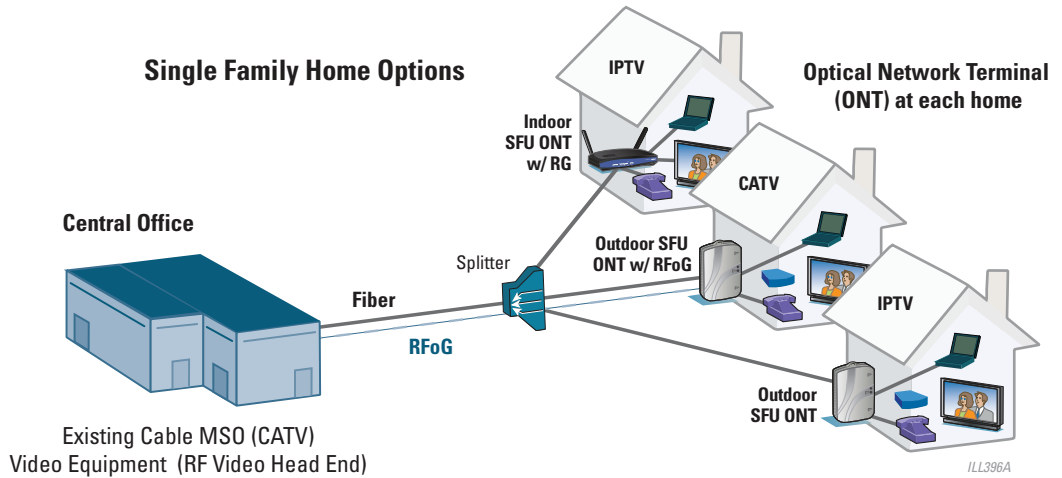
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Ordering Information



Equipment	Part No.
Total Access 334 SFU GPON Indoor ONT with RF (3rd Gen)	1287736G3



TL19.1270



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

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