**ADTRAN®**

Data Sheet

ADTRAN

# 5000

## 8-port GPON Octal OLT

FTTH    Gigabit

## Benefits

- Supports Gigabit and Committed Information Rate (CIR) services
- Supports an extensive and growing family of ONTs
- Supports both IPTV and RF overlay video service
- Supports Dynamic Bandwidth Allocation (DBA) enabling committed rate business services
- Supports service-aware provisioning and troubleshooting
- Allows both CO and RT deployments
- Scalable to 128 ONTs per GPON
- Supports native Ethernet transport over GPON

## Overview

**Today, carriers are dealing with increasing competition, operating costs and demand for bandwidth.** As a result, many are turning to fiber deployment as a solution. For many carriers, GPON is the means to compete in an environment where high bandwidth is required. GPON provides the flexibility, reliability, and bandwidth to give carriers a competitive advantage in today's Fiber-to-the-Home (FTTH) market.

ADTRAN® provides an ultra-flexible, high-capacity, deep fiber solution allowing over 20,000 subscribers to be served from a single FTTH platform. The Total Access® 5000 is a carrier-class Multi-service Access and Aggregation platform (MSAP) that bridges the gap between existing and the nextgeneration networks—like XGS-PON. With a pure Ethernet core, the Total Access 5000 system supports services over copper and fiber, easily scaling to support even the most bandwidth-intensive applications. As a GPON Optical Line Terminal (OLT), the Total Access 5000 provides the bandwidth and Ethernet switching capabilities needed to deliver a highly profitable service offering and meet a variety of legacy and emerging service requirements.

The SFP-based GPON OLT allows operators to increase their serving area by utilizing optical capabilities to reach up to 37 km on a single PON.

The ADTRAN GPON solution utilizes GPON Encapsulation Mode (GEM) to exclusively carry Ethernet traffic. ADTRAN has made a complete commitment to Ethernet in the access network with the Total Access 5000, and the GPON OLT Access Module is furthering this commitment.

With the ADTRAN solution, data traffic is carried natively as Ethernet, which is a very efficient means of transporting high bandwidth data connections. Voice traffic is carried as Voice over IP (VoIP) packets to the GR303 gateway in the Total Access 5000 to provide a gateway to the legacy TDM network, or as a SIP/MGCP to an external soft-switch to support next-generation voice services. Finally, TDM transport through GPON is provided with Pseudowire Emulation (PWE3), which terminates on the PWE3 gateway in the Total Access 5000 and on an ONT.

Video options with the Total Access 5000 GPON OLT include both IPTV and RF video. IPTV functions in the Total Access 5000 and the GPON OLT Access Module provide Internet Group Management Protocol (IGMP) signaling and multicast replication functions. RF video overlay at 54–870 MHz is supported on GPON as a third wavelength at 1550 nm using outboard amplifiers and wavelength combiners.

The Total Access 5000 GPON OLT supports a wide variety of management options. Transaction Language 1 (TL1) is used to communicate alarms with Telcordia's NMA Operations Support System (OSS). An Ethernet 10/100Base-T or standard RS-232 DB-9 connector is used for Telnet access and connection to SNMP networks.

Environmentally hardened, the Total Access 5000 GPON OLT Access Module can be installed in both Central Office (CO) and Remote Terminal (RT) environments. This allows carriers to deploy GPON from whatever infrastructure is available or desired rather than limiting GPON to just CO deployments.

# TOTAL ACCESS 5000

## Product Specifications

### Mechanical

- **Dimensions:** 9.25 in. x 0.8 in. x 9.25 in.
  (235 mm x 20 mm x 235 mm) (H x W x D)

### Interfaces

- 8-SFP Single-mode Fiber Interfaces on Faceplate

### Capacities

- Capable of Up to 64 ONTs (F1 model), or Up to 128 ONTs (F2 Model) Per GPON Interface
- 21 GPON OLT Access Modules Per 23-inch Total Access 5000 Chassis
- 10752 Subscribers Per 23-inch Total Access 5000 Chassis Utilizing 1:64 Split (F1 model)
- 21,504 Subscribers per 23-inch Total Access 5000 ChassisUtilizing 1:128 Split (F2 model)

### Regulatory Standards

- NEBS
- GR-1089 CORE
- GR-63 CORE
- NRTL Listed
- FCC Part 15

### Management

- AOE
- Remote Management Through SNMP and TL1
- Ethernet Interface on SCM for Web, SNMP and Telnet Access
- Craft Interface on SCM
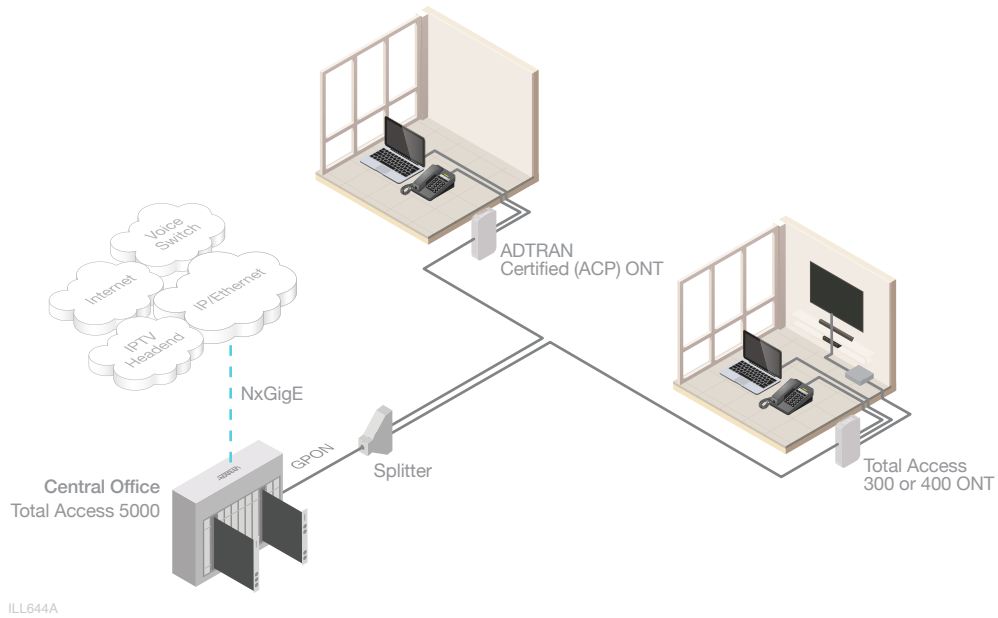- OMCI to ONTs

### Environmental

- **Operating Temperature:** -40° F to 158° F (-40° C to +65° C)
- **Storage Temperature:** -40° F to 185° F (-40° C to +85° C)
- **Relative Humidity:** Up to 95%, at 122° F (50° C), Non-condensing

### Optics

- Exceeds Class B+ Compliant as Specified in G.984.2 Amendment 1
  - 20 km Reach with 64x Split
  - 30 km Reach with 32x Split
  - 37 km Reach with 16x Split
- Class C+ Compliant as Specified in G.984.6
  - 22 km Reach with 64x Split
  - 35 km Reach with 32x Split
  - 45 km Reach with 16x Split

Voice Switch

Internet

IP/Ethernet

IPTV Headend

NxGigE

ADTRAN
Certified (ACP) ONT

Total Access
300 or 400 ONT

**Central Office**
Total Access 5000

GPON

Splitter

ILL644A

## Ordering Information

| Equipment | Part No. |
|---|---|
| Total Access 5000 GPON Octal OLT (1:64 Split) | 1187503F1 |
| SFP GPON 2.5G, 1.25G Class B++ | 1442530G1 |
| Total Access 5000 GPON Octal OLT (1:128 Split) | 1187503F2 |
| SFP GPON 2.5G, 1.25G Class C+ | 1442540F1 |

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