Today, carriers are dealing with increasing competition, operating costs and demand for bandwidth. As a result, many are turning to fibre 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 Fibre-to-the-Premises (FTTP) market.

ADTRAN provides an ultra-flexible, high-capacity, deep fibre solution allowing over 10,000 subscribers to be served from a single FTTP platform. The Total Access 5000 is a carrier class Multi-service Access and Aggregation Node (MSAN) that bridges the gap between existing and the next generation networks—like GPON. With a pure Ethernet core, the Total Access 5000 system supports services over copper and fibre, 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 utilising optical capabilities to reach up to 40 km on a single PON.

The ADTRAN GPON solution utilises 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 the exchange and Remote Terminal (RT) environments. This allows carriers to deploy GPON from whatever infrastructure is available or desired rather than limiting GPON to just exchange deployments.

**Product Features**
- 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 the exchange and RT deployments
- Scalable to 64 ONTs per GPON
- Supports native Ethernet transport over GPON

Total Access 5000 Octal OLT
8-port GPON Optical Line Terminal Access Module
Total Access 5000 Octal OLT
8-port GPON Optical Line Terminal Access Module

Product Specifications

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

Interfaces
- 8-SFP Single-fibre Interfaces on Faceplate

Capacities
- 8 GPON Interfaces per GPON OLT Access Module
- Capable of up to 64 ONTs per GPON Interface
- 17 GPON OLT Access Modules per 19-inch Total Access 5000 Chassis
- 8704 Subscribers per 19-inch Total Access 5000 Chassis utilising 1:64 Split

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°C to +70°C (-40°F to 158°F)
- Storage Temperature: -40°C to +70°C (-40°F to 158°F)
- Relative Humidity: Up to 95%, at 50°C (122°F), Non-condensing

Optics
- Class B+ Compliant as Specified in G.984.2 Amendment 1
- 20 km Reach with 64x Split
- 30 km Reach with 32x Split
- 40 km Reach with 16x Split

Ordering Information

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Access 5000</td>
<td>1187503F1</td>
</tr>
<tr>
<td>GPON Octal OLT</td>
<td></td>
</tr>
<tr>
<td>SFP GPON 2.5G, 1.25G 30km</td>
<td>1442530G1</td>
</tr>
</tbody>
</table>

ADTRAN believes the information in this publication to be accurate as of publication date, and is not responsible for error. Specifications subject to change without notice. ADTRAN and Total Access are registered trademarks of ADTRAN, Inc. and its affiliates in various countries. All other trademarks mentioned in this document are the property of their respective owners.

ADTRAN warranty duration and entitlements vary by product and geography. For specific warranty information, visit www.adtran.com/warranty

ADTRAN products may be subject to U.S. export controls and other trade restrictions. Any export, re-export, or transfer of the products contrary to law is prohibited. For more information regarding ADTRAN’s export license, please visit www.adtran.com/exportlicense

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

Copyright © 2013 ADTRAN, Inc. All rights reserved.