Switch Module 2.5 10-GE

**Total Access 5000**

IP/Ethernet is rapidly advancing as the primary protocol for delivering voice, video and data services in the network. The ADTRAN® Total Access® 5000 Switch Module 2.5 10-GE provides a robust, carrier-class switching capability for ADTRAN’s Total Access 5000 Multi-Service Access and Aggregation Platform. With the ability to be deployed in both central office and remote terminal locations, the Switch Module 2.5 10-GE provides flexible network deployment options, easily scaling to support applications such as Ethernet Ring Protection Switching (ERPS), IPTV, VoIP, Metro Ethernet and enhanced residential broadband.

The Total Access 5000 Switch Module 2.5 provides quality of service using IEEE 802.1p priority bits and 802.1Q VLAN tagging. Network and subscriber proxy ARP, MAC address to port binding, and DHCP Layer 2 relay functions enhance security to protect against “spoofing” attacks and service theft. The Total Access 5000 Switch Module 2.5 can be deployed either simplex or redundant, with sub 100 ms failover times to support even the most critical traffic.

The Total Access 5000 Switch Module 2.5 supports ITU G.8032 Ethernet Ring Protection Switching (ERPS) which provides network operators the ability to create resilient Ethernet rings through the common control Switch Modules of the Total Access 5000 platform. ERPS gives operators the ability to increase their network footprint and size while maintaining a single access point to their IP/Ethernet core.

The Total Access 5000 Switch Module 2.5 supports a high capacity 92 Gbps switch fabric across the Total Access 5000 platform which is two times greater capacities than the 2-GE Switch Modules. The extended capacity of the switch fabric for the Total Access 5000 Switch Module 2.5 allows operators to increase their network and subscriber bandwidth without having to replace the network elements. The Switch Module 2.5 is supported in all existing Total Access 5000 and 5006 systems that have been deployed worldwide.

In addition to providing the switch matrix for the Total Access 5000, the Switch Module 2.5 also provides network four pluggable connectors on the faceplate. Two connectors are XFP which support 10G-LR (10 km reach) and 10G-ER (40 km reach) optics. These ports are also capable of being used as a network interface and as an Ethernet ring (ERPS) interface. Two additional Small Form Factor Pluggable (SFP) ports exist that support 1 G and 2.5 G rates with options for optical and electrical SFPs. The Gigabit Ethernet ports can be configured independently to support either network uplinks or downlinks, or they can be “bonded” together via IEEE 802.3ad Link Aggregation to deliver an aggregate two Gigabit Ethernet connection to the network. The SFP ports can also be used at 2.5G rates for network downlinks to additional Total Access 5000 systems providing a greater bandwidth between star and chained systems.

Local CLI and menu management is through VT100 terminal emulation on the craft interface of the System Controller Module. Remote management is available through Telnet or SNMP using management VLANs. ADTRAN’s Total Access EMS, a comprehensive management platform for the Total Access product line, also can be used to manage the Total Access 5000 and the Switch Module.
**Switch Module 2.5 10-GE**

**Total Access 5000**

### Product Specifications

**Ethernet**
- Central Office
- POTS
- Remote Terminal
- IEEE 802.3ad
- ITU G.9832
- Link Aggregation
- POTS/ADSL2
- DS1
- IEEE 802.3z
- Optical Ethernet
- IEEE 802.3
- 1000Bt Electrical
- DS1 GR303

**Ordering Information**

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<th>Equipment</th>
<th>Part #</th>
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**Interfaces**

**Network Interfaces**
- Two 10-GE interfaces via XFP connector sockets
- Two 10GE interfaces via SFP connector sockets

**Physical**
- Requires SM103 Switch Module Input/Output

**Internet Support**
- IEEE 802.3z Optical Ethernet via SFP
- IEEE 802.3 Electrical 1000Bt via SFP
- IEEE 802.3ae Optical 10G-Base LR/ER via XFP
- IEEE 802.1p for CoS
- IEEE 802.1Q VLAN Tagging
- IEEE 802.3ad Link Aggregation
- IGMP v2

**Regulatory Standards**
- NEBS Level 3
- GR-1089 CORE
- GR-63 CORE
- NRTL Listed
- FCC Part 15

**Management**
- System CLI through System Controller Module
- Remote management through SNMP and TL1
- Ethernet interface for SNMP

**Mechanical**
- Dimensions: 9.25” H x 0.97” W x 9.25” D

**Environmental**
- Operating Temperature: -40°C to +65°C
- Storage Temperature: -40°C to +70°C
- Relative Humidity: Up to 95%, noncondensing

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