



Total Access 5000 Series

SM40

Nx10GE Switch Module



FTTH



10 Gbps



SDN Enabled

Benefits

- Supports 1GE/2.5GE/10GE ERPS Rings
- Supports High-Density Triple-Play Service Deployments
- Increases Access Slot Capacity to Support High-Capacity, Unblocked, Next-Gen 10G PON (XGS-PON) Services
- Enhanced Security to Protect Against “Spoofing” Attacks and Service Theft
- CoS Support For Multi-Service Deployments, Protecting Video Quality
- Allows FTTP Convergence of Both Business Ethernet and Residential Gigabit Services on the Same Shelf
- Offers Four SFP+ (1GE/10GE) Interfaces Supporting Simplex or Redundant Architectures
- Resilient Ring Protection Via ERPS (G.8032) Support

Overview

The Adtran Total Access® 5000 SM40 is a high-capacity switching and aggregation module that enhances the already robust, carrier-class switching capability of the Adtran Total Access 5000 Fiber Access, Aggregation, and Transport platform.

Offering 4x10 Gigabit Ethernet (10GE) network and ring interfaces, the SM40 switch module simplifies upgrading FTTP networks to 10G Next-Gen PON. Additionally, it enables operators to extend the life of their ODN while providing an architecture that supports cost-effective business and backhaul services delivery at multigigabit speeds.

With the ability to be deployed in both Central Office and Remote Terminal locations, the SM40 10G Switch Module provides flexible network deployment options, easily scaling to support symmetric multi-gigabit services for residential, business, and mobile applications; triple-play services, Metro Ethernet, and service aggregation using 10G Network Interfaces and Ethernet Ring Protection Switching (ERPS) support for network transport.

The Total Access 5000 SM40 Switch Module provides four flexible 10GE interfaces on the faceplate, which can be used in various ways depending on application needs. It has four Small Form-Factor Pluggable+ optical interfaces supporting 1G/10G rates. In addition, ports of the same speed may be configured to support IEEE 802.1ax link aggregation to increase the bandwidth between nodes or toward the core network.

The Total Access 5000 SM40 Switch Module supports ITU G.8032 ERPS, which provides network operators with the ability to create resilient 1G, 2.5G, or 10G Ethernet rings with multiple Total Access 5000 nodes. ERPS gives operators the ability to increase their network footprint while maintaining a single access point to the IP/Ethernet core.

To support Next-Gen 10G PON (XGS-PON and Combo PON) service delivery, the SM40 Switch Module supports high-capacity Nx10GE switch fabric. In addition, it provides non-blocking connectivity to every access module slot. The increased capacity of the switch fabric for the SM40 Switch Module allows operators to scale both network and subscriber bandwidth for years to come – without a forklift replacement. In addition, the SM40 Switch Module is supported in all currently deployed Total Access 5000 systems and is backward compatible with all existing Total Access 5000 access and line modules.

Like all Total Access 5000 Switch Modules, the SM40 provides traffic management features to support differentiated quality of service and enhanced security features to protect user data from external attacks. Additionally, this switch module can be deployed either simplex or redundant to support even the most critical traffic.

SM40

Product Specifications

Interfaces

- Four 10GE SFP/SFP+ Uplinks
 - 1GE, 2.5GE, or 10GE Configurable

Features

- Redundant or Non-redundant Operation
- 802.3ah Ethernet OAM Connectivity Fault Management
- 802.1p Class of Service (CoS)
- 802.1Q VLAN Tagging
- 802.1ad Q-in-Q VLAN Topologies
- 802.3ad Link Aggregation (LACP)
- ITU G.8032 Ethernet Ring Protection (ERPS)
- 1:1, N:1, and Hybrid N+1:1 VLAN Topologies
- Multicast Packet Replication for IPTV Applications
- Network and Subscriber Proxy ARP
- IGMP Version 2 Proxy and Snooping
- IGMP Version 3 LITE
- VoIP Protocols, SIP/MGCP, or Traditional Voice Gateway Functionality (GR-303)

Management

- Mosaic Software Suite
- Advanced Operational Environment (AOE)
- Remote Management Through SNMP, CLI, and Web-Service APIs (HTTPS)
- Ethernet Interface on SCM for Web and Telnet/SSH Access (in-band or out-of-band)
- Craft and Ethernet Interfaces on SCM

Physical

- Requires SMIO4 (Switch Module Input/Output)
- Dimensions: 9.5 in. x 0.75 in. x 9.0 in. (241 mm x 19 mm x 228 mm) (H x W x D)

Environmental

- Operating Temperature: -40°F to +149°F (-40°C to +65°C)
- Storage Temperature: -40°F to +185°F (-40°C to +85°C)
- Relative Humidity: Up to 95%, Non-condensing

Regulatory Standards

- NEBS Level 3
 - GR-1089-CORE
 - GR-63-CORE
- CE Marking (EMC and Low Voltage Directive)
 - ETSI EN 300 386
 - IEC 62368-1
- FCC Part 15 Class A
- UL/CUL 62368-1
- AS/NZS 62368.1

Ordering Information

Equipment

Total Access 5000 SM40 4x10GE (SFP+), SMIO4

Part No.

1187041F1

Adtran

Adtran Corporate Headquarters
901 Explorer Boulevard
Huntsville, AL 35806
USA
adtran.com
sales@adtran.com

Adtran Europe Limited
Building 2200 Basing View
Basingstoke RG-21 4EQ, UK
contact@adtran.com

Adtran GmbH
Jean-Monnet-Straße 4,
10557 Berlin, Germany
kontakt@adtran.com

Adtran Networks Pty. Limited
L5 330 Collins Street
Melbourne, Victoria, 3000
Australia
australia@adtran.com

61187041F1-8B

June Copyright © 2022 Adtran, Inc. All rights reserved. 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 the other trademarks listed at www.adtran.com/trademarks are registered trademarks of Adtran, Inc. or 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 exportation of Adtran items (e.g. commodities, technology, software), please visit www.adtran.com/exportlicense.

