

ADTRAN

# FSU7101

## Multi-Gigabit Optical Services Platform



### Benefits

- **Simultaneously Supports 1G/10G Line Cards**
- **1G/10G ONU Coexistence on 10G PON**
- **160G Uplink Capacity**
- **DPoE 1.0 Qualified**
- **MEF 9 & 14 Certified**
- **Investment Protection**
  - Two 80Gbps Per PON Slot (for Redundancy)
  - 2.56Tbps Backplane Capacity
  - Redundant 100 Mbps Control Channels
  - Upgradeable Switching Modules
  - Dual Function Slot Design Supports Use of Multipurpose Line Cards
- **High Density**
  - 160 1G-EPON Interfaces
  - 128 10G-EPON Interfaces
- **High Throughput and Reliability**
  - 720 Gbps Switching Capacity Per Switch Card
  - 1.44 Tbps Switching Capacity Per System (Active/Active)
  - 160 Gbps Uplink (10 Gbps x 8 Ports x 2 Switch Cards)
  - L2/L3 Capable
  - Upgrade Path to Higher Switching and Uplink Capacities

### Overview

The FSU7101 Optical Services Platform (OSP) supports the delivery of symmetrical multi-gigabit (1G/10G) Ethernet services. It can be utilised as an integrated, modular or hybrid optical access platform.

It supports IEEE802.3ah/av standards compliant EPON/10G-EPON and Point-to-Point Ethernet (CWDM/DWDM) modules while supporting both DOCSIS (DPoE) and manual (CLI) provisioning methods.

When paired with the FCM7151 Ethernet Access Line Card (EALC) and FSR7142/43 Remote Optical Services Device (ROSD), it creates a modular access architecture that conserves fibre, increases PON reach beyond typical 20km, and increases density of the platform by four to eight times.



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## Product Specifications

### Chassis (FSU7101)

- Chassis: (FSU7101)
- Dimensions: 444mm x 434mm x 334mm (17.5" x 17.1" x 13.2") (H X W X D)
- Weight: 45kg (~100lb)
- Height: 19-inch, 10RU (excluding air baffles)
- Mount: Flush or Middle
- Input Voltage: -42V DC to -57V DC
- Power Consumption: 3kW Max
- Operating Temperature: 0°C-40°C (32°F-104°F)
- Operating Humidity: 10 ~ 90% RH (non-condensing)
- Number of Line Card Slots: 16

### Switch Card (FSW7112)

- Remote Access: I/F RJ-45 10/100/1000BASE-T x 1 (auto negotiation)
- Serial Interface: RJ-45 (RS232C) x 1
- Uplink Interface: SFP/SFP+ (1000B/10GBASE-SR/LR) x 8
- Uplink Capacity: 160G (Active/Active)
- SD Card Slot: SDHC
- Number of Supported Line Cards: Maximum 16

### 1G Line Card (FCM7121)

- PON I/F: SFP x 10, 1000BASE-PX20E-D
- Wavelength: Upstream 1260 ~ 1360nm/Downstream 1480 ~ 1500nm
- Transmission Rate: 1.25Gbps
- Bandwidth Control: Dynamic Bandwidth Allocation
- Maximum Number of ONUs: 64 Per Port

### 10G Line Card (FCM7133)

- PON I/F: XFP x 8; 10GBASE-PR-D3, 10/1GBASE-PRX-D3, 1000BASE-PX30-D
- Wavelength: Upstream 1260 ~ 1280nm/Downstream 1575 ~ 1580nm
- Transmission Rate: 10.3 Gbps
- Bandwidth Control: Dynamic Bandwidth Allocation
- Maximum Number of ONUs: 128 Per Port

### Certificates

- EMI FCC Part15 Class A, ICES-003 Class A
- Safety UL/CSA 60950-1, IEC 60950-1 & 60825-1
- MEF 9 and 14
- DPoE 1.0 Qualified

# Multi-Gigabit Optical Services Platform

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## Management

- SNMPv1/v2c/v3
- CLI (SSH/Telnet)
- TFTP/SFTP client
- Syslog
- SNMP client
- RADIUS/TACACS+ AAA client
- L2/L3/L4 based ACL
- Remote Firmware upgrade (OLT & ONU)
- Remote ONU Control

## Routing

- ECMP
- Static IPv4/6 Routing
- IPv4
  - ◆ IPv4/31 Bit Mask Interface Addressing
  - ◆ RIPv2, OSPFv2
- IPv6
  - ◆ M-ISIS
- DHCP Relay Agent (Option82)

## L2 Switching

- Link Aggregation (LAG) with LACP (802.3ad)
- DPoE 1.0 Compliant EPL Service with Provider Bridging (Q in Q)
- ELINE/ELAN

## QoS

- DBA of EPON (Hierarchical Weighted Round Robin)
- Eight Priority Queues for Each Line Card and Uplink Port
- Policing with Two Rate Triple Colour Markers (trTCM)

## DPoE/EPON

- Maximum 64 ONUs Per PON with FCM7121 Line Card
  - ◆ Maximum 8 LLIDs Per ONU
- Maximum 128 ONUs Per PON with FCM7133 Line Card
  - ◆ Maximum 16 LLIDs Per ONU

## Security

- PON Encryption (AES128 CFB mode)
- ONU Authentication
- Secure Software Download (SSD) via DOCSIS

## Diagnostic

- Statistics counters
- Ping and Traceroute
- ONU Loopback
- Optical Monitoring
- Optical Shutdown

# ADTRAN FSU7101

## Ordering Information

Equipment	Part No.
ADTRAN FSU7101 Optical Services Platform	4757101FSUDCF1
Switch Card FSW7112	1757112FSWF2
1G Line Card FCM7121	1757121FCMF1
10G Line Card FCM7133	1757133FCMF1



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