Adtran

Data sheet

# FSP 3000 TeraFlex™

Ultra-compact terminal for hyperscale connectivity over any infrastructure

## Benefits

- **Ultra-flexible modulation**
  Boost capacity and reach over any network infrastructure with fractional QAM and continuous tunable baud rate
- **Open and modular design**
  All system modules are externally accessible and field replaceable (non-service affecting)
- **Ultimate 100G and 400G client density**
  36x 100GbE client ports, 9x 400GbE client ports or a mix of both served by a 1RU chassis
- **From 10G to 400G services**
  10Gbit/s support via our MicroMux™ QSFP28
- **Multiple operating modes**
  Modular, scalable design with hot-swappable traffic modules (sleds) supporting multiple trans-/muxponder and coherent gateway use cases
- **Terascale line interfaces**
  Single-port 800Gbit/s line interfaces and channel data rates up to 1.2Tbit/s based on dual core DSP technology
- **Programmability through open APIs**
  Direct integration into data center and SDN environments with open, YANG-based interfaces

## Overview

**The phenomenal growth in data traffic combined with increasing cost pressures is creating an urgent need for more capacity and speed in data center interconnect (DCI) and carrier networks without significant increases in spend or hardware sprawl.** ICPs, CNPs and CSPs need to rapidly scale their networks while retaining simplicity and meeting evolving density and power requirements. Our FSP 3000 TeraFlex™ meets these exacting demands and takes scalability to a new level.

Our TeraFlex™ is a 1RU DWDM optical terminal that enables channels of up to 1.2Tbit/s and a total capacity of 7.2Tbit/s. Its ultra-compact footprint and open API design offer best-in-class density and interoperability. With its advanced capabilities, it takes flexibility to a whole new level. The FSP 3000 TeraFlex™ optimizes all optical paths over any distance, no matter which filter technology is used. It achieves this through fractional QAM modulation, which switches between lower and higher schemes for maximum spectral efficiency, significantly boosting capacity or extending the reach of installed legacy infrastructure without an OLS overhaul. TeraFlex™ is a scalable and flexible solution, supporting multiple operating modes and 100Gbit/s and 400Gbit/s services. What's more, 10GbE services are also supported via our pluggable MicroMux™ QSFP28. This unique flexibility enables the smoothest service upgrade from 10GbE to 400GbE and gives service providers and data center operators the configuration flexibility to address a wide range of applications with minimum inventory sprawl and market-leading power efficiency. In addition, our FSP 3000 TeraFlex™ delivers real-time streaming telemetry, a prerequisite for big-data-based network management.

# FSP 3000 TeraFlex™

## High-level technical specifications

### General information

- 1RU chassis; 600mm rack and closed cabinet installation
- Up to 1.2Tbit/s per channel; 7.2Tbit/s total capacity
- Hot-swappable and field replaceable modules
- 3 slots for traffic modules (sleds)

### Client interface options

- 400GbE: DR4, FR4, LR4, SR8, AOC and coherent 400ZR(+)
- 100GbE: LR4, CWDM4, ER4, SR4, AOC, DAC and coherent 100ZR(+)
- 10GbE via MicroMux™ pluggable, which converts a 100GbE QSFP28 port into 10x 10GbE ports
- FlexE support

### Sleds variants

- 1200G dual channel with up to 12x or 8x 100GbE/OTU4 client ports
- 1200G dual channel with 3x 400GbE client ports
- 800G CoreChannel™ with up to 2x 400GbE, up to 8x 100GbE/OTU4 client ports, or a mix
- Submarine mode

### Management

- Open interfaces
- YANG-model based
- Support for CLI, REST, NETCONF, SNMP and WebGUI
- Streaming telemetry (gRPC)
- Secure software and configuration management

### Automation and simplicity

- Zero-touch provisioning
- Script-based commissioning
- Integration into SDN environments
- Simplified local provisioning options

### Best-in-class ecodesign

- Highly-efficient design with market leading power efficiency
- <0.16W per Gbit/s
- 80+ platinum PSUs
- 1+1 hot-swappable PSUs (105-230VAC, HVDC, +/-48VDC)

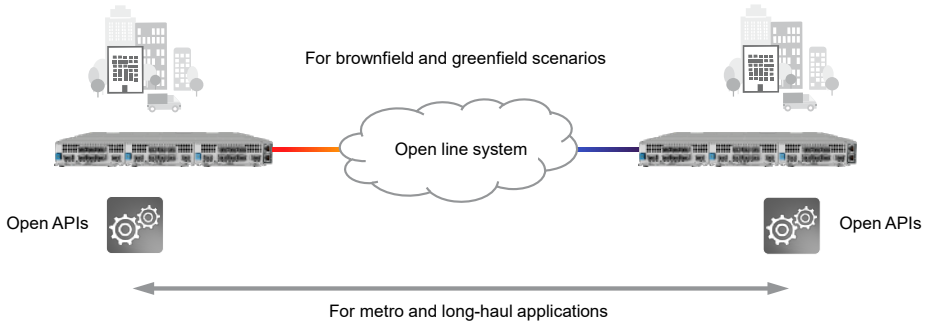
FSP 3000 TeraFlex™ equipped with three hot-swappable CoreChannel™ sleds

# FSP 3000 TeraFlex™

## Applications in your network

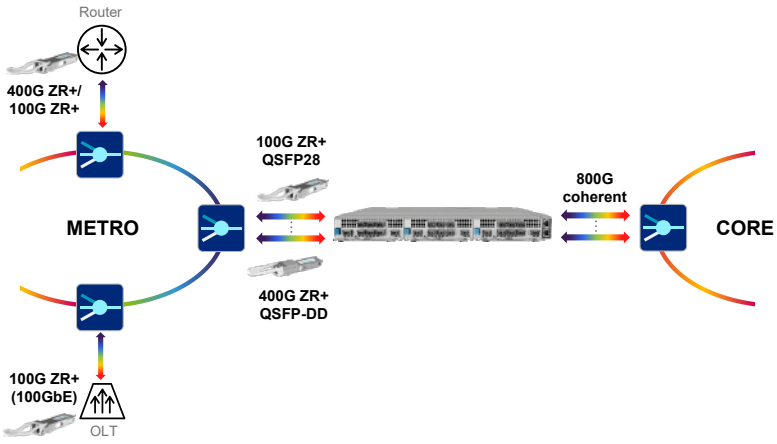
### Boost network capacity over any infrastructure

- Maximize capacity or extend the reach of installed legacy infrastructure (fixed grid or flexgrid) without optical line system upgrade
- Data center interconnect with up to 1.2Tbit/s per channel
- Submarine network applications with maximum bandwidth per channel




### Cost-efficient metro-core interconnects

- Coherent gateway applications using 100ZR+ and 400ZR+ coherent client pluggable transceivers
- Without back-to-back line cards and avoiding grey optics

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