

FSP 3000 QuadFlex™

400Gbit/s software-defined transponder

Benefits

- **Optical coherent technology**
Enabling higher capacity, greater spectral efficiency and longer reach
- **Client plug flexibility**
Multiple QSFP28 client interface options including active optical (AOC) and copper (DAC) cable support
- **Open**
Single-slot module that can interoperate with any third-party open optical line system
- **Software-defined optical transmission**
Multiple configurable operation modes and modulation schemes
- **Dual- and single-fiber working variants**
QuadFlex-S variant with two single-fiber working coherent network ports
- **Smooth migration from 10G to 200G**
10Gbit/s client support via our innovative Adtran MicroMux™ pluggable QSFP28

Overview

Traffic demands are continuously growing.

Network operators need to increase the capacity and efficiency of their network infrastructure, while keeping costs and footprint at a minimum. Our FSP 3000 QuadFlex™ card with software-defined optics enables them to smoothly grow capacity and maximize profit from their network infrastructure.

Our FSP 3000 QuadFlex™ is a 400Gbit/s module capable of multiplexing up to four 100GbE/OTU-4 client signals into two ITU-T compliant coherent wavelengths. What's more, in combination with our innovative MicroMux™ pluggable QSFP28, the FSP 3000 QuadFlex™ module can seamlessly mix 10Gbit/s and 100Gbit/s client services without a footprint increase. Supporting tunable interfaces with flexgrid capability, QuadFlex™ wavelengths interoperate not only with the FSP 3000 optical layer but with any open optical line system. Our FSP 3000 QuadFlex™ can work in multiple operation modes. In addition, a configurable modulation scheme provides the optimum settings for efficient data transmission over any network from simple interconnects to the most complex meshed infrastructure. With its compact design and outstandingly low power consumption, the FSP 3000 QuadFlex™ offers unprecedented capacity and flexibility.



FSP 3000 QUADFLEX™

High-level technical specifications

General information

- Enables up to 8Tbit/s capacity per shelf; up to 25.6Tbit/s bidirectional fiber capacity
- Low footprint (1-slot card)
- Fits in multiple FSP 3000 chassis sizes from 1RU to 12RU
- Best-in-class power consumption

Interfaces

- 2 x tunable DWDM interfaces
- Coherent transmission at:
 - 100Gbit/s QPSK
 - 150Gbit/s 8QAM
 - 200Gbit/s 16QAM
- 128 channels C-Band
- Flexgrid tunable to any channel grid

Client interfaces

- 4 x QSFP28 client ports
- Each client port supports:
 - 100GbE / OTU-4
 - 10x10Gbit/s (MicroMux™)
- Multi-mode and single-mode transceivers including DAC, AOC, SR-4, LR-4, PSM-4 and CWDM-4

Optical performance

- Up to 4000km at 100G QPSK
- Up to 1500km at 150G 8QAM
- Up to 800km at 200G 16QAM
- High-performance SD-FEC
- Exceeding 30ps PMD tolerance
- Up to 280ns/nm CD tolerance

Module capabilities

- Multiple protection options
- Single-fiber working variant for 100Gbit/s and 200Gbit/s
- Latency optimization configurable by user
- Full management support

Chassis options

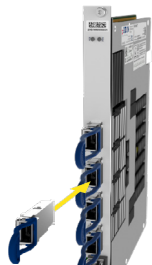
- 1RU, 3RU, 4RU and 12RU chassis variants
- 19", ETSI and 23" ANSI/NEBS rack-mountable chassis
- ETSI 300mm and 600mm depth options
- Extended temperature range
- Fiber and cable management

Applications in your network

Terascale capacity optical connectivity

- High-capacity metro and core optical network infrastructure and data center interconnect
- Smooth capacity upgrade of brownfield networks
- Low-latency applications
- Dual and single fiber working solutions

Smooth migration from 10GbE to 100GbE



With ADVA
MicroMux™ QSFP28

800Gbit/s capacity per 1RU chassis

Up to 25Tbit/s network capacity
Network upgrade at 50GHz



Multiple client options

4 x 100GbE / OTU-4
40 x 10GbE (with ADVA MicroMux™)

Flexible network ports

100Gbit/s – 200Gbit/s
QPSK, 8QAM, 16QAM



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