

EKINOPS PM 1604

Quad 8G/10G/16G Fiber Channel & 10GbE Transponder

DATA SHEET 07 | 2017

KEY FEATURES & BENEFITS

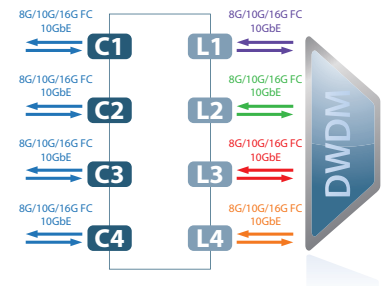
- Four independent transponders on one single-slot blade
- Supports any mix of 8G, 10G and 16G Fibre Channel and 10 Gigabit Ethernet
- Up to 80 x 16G channels in a single chassis — 1.2T of Fiber Channel capacity in 7RU
- Low latency
- Pluggable Module compatible with all Ekinops chassis already installed in the field
- Economical Ekinops-qualified SFP+ interfaces for both client and line side

APPLICATIONS

- Enterprise connectivity
- Server and storage replication/virtualization
- Business continuance and disaster recovery (BC/DR)
- Campus networking
- Managed business services

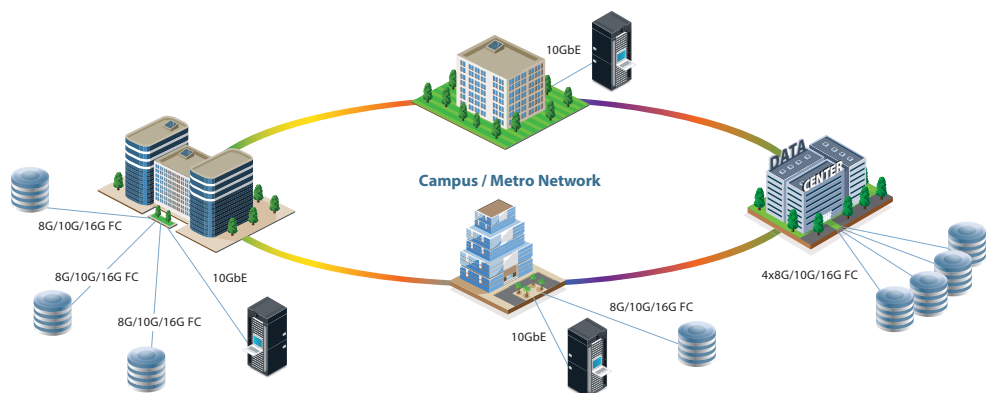
OVERVIEW

The EKINOPS PM 1604 is designed to provide high-speed connectivity to support business applications for enterprises. With requirements for server virtualization, business continuance, disaster recovery and real-time access to off-site data and applications, the requirements for high-speed connectivity across the WAN are greater than ever. Storage requirements continue to grow by orders of magnitude from Terabytes to Petabytes to Exabytes to Zettabytes and the need for increasingly high speeds to move data in native block format is driving the need for more than existing 8G Fibre Channel. The EKINOPS PM 1604 can provide up to four 8G, 10G or 16G Fibre Channel interfaces allowing network operators to gracefully migrate to higher speeds while supporting existing lower speed interfaces, as well as 10 Gigabit Ethernet to support other IT devices such as servers, switches and routers. The PM 1604 operates without Forward Error Correction (FEC) to provide the low latency required to move large data blocks within a campus or metro environment. By converting the incoming client signal to DWDM, the EKINOPS PM 1604 allows multiple services to ride over the same optical network for optimal fiber utilization.



APPLICATIONS

The EKINOPS PM 1604 is designed for high speed transport of enterprise traffic in native format in campus and metro networks. It provides connectivity between enterprise-class IT devices such as servers, switches, routers and Storage Area Network (SAN) devices. It can be used to connect virtualized servers or storage clusters in different locations so they can act as a single resource pool. Service providers can also use it to offer high margin managed services over their existing 50GHz or 100GHz spaced ITU-T grid networks and increase revenue streams without adding additional capital or operational expense.



MANAGEMENT

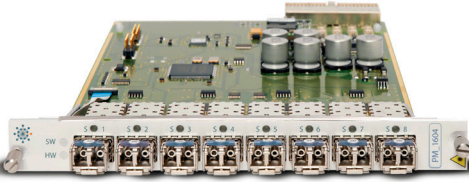
The EKINOPS PM 1604 module can be managed through SNMP or via the Ekinops standard element level management interfaces, which include a Command Line Interface (CLI) and an Ekinops java-based Graphical User Interface (GUI). The CLI is accessible via Secure Socket Shell (SSH) and Telnet remotely or via a local serial port locally on the management board.

Complete performance monitoring and management are provided, including laser shutoff and local and remote loopback, which is useful for maintenance and fault isolation.

Digital Diagnostics Management (DDM) is supported for SFP+ interfaces. This includes link status, transmit (TX) and receive (RX) signal power monitoring, and operational temperature, as well as manufacturer and transceiver model information essential for inventory management. The EKINOPS PM 1604 module is also supported by Celestis NMS, the Ekinops advanced Network Management System.

EKINOPS PM 1604

Quad 8G/10G/16G Fiber Channel
& 10GbE Transponder



SPECIFICATIONS

• CLIENT INTERFACES

Protocols	8G FC, 10G FC, 16G FC, 10GbE
Optical interface	SFP+
Number of ports	4

• LINE INTERFACES

Protocol	DWDM
Optical interfaces	SFP+
Number of ports	4

• MANAGEMENT

MIB	SNMP V2c Private MIB
Remote management	10 Mb Ethernet DCC

• PHYSICAL SPECIFICATIONS

Module size	One slot in Ekinops Chassis
Chassis compability	C200HC (6 modules per chassis) C600HC (20 modules per chassis)
Operating temperature	0°C to +50°C / +32°F to +122°F
Storage temperature	-20°C to +85°C / -4°F to +185°F

• INDICATORS

Status	HW ready, SW ready
Alarm	Port down (Client & Line)

• PERFORMANCE

Optical spacing	SFP+ dependent
Power (Max.)	15W

• REFERENCE STANDARDS

ITU-T G707 12/2003 edition; ITU-T G709 03/2003 edition; IEEE 802.3ae 2002 Revision; FC-PI Standard Rev 13; FC-PI-2 Standard Rev 8; FC-PI-3 Standard Rev 1; SFP MSA-Sept 14th 2002; SFF 8472 – Rev 9.5 – June 1st 2004; GR-253, issue 3rd, September 2000; ITU-T G.957 06/1999 revision; ITU-T G.691 – 12/2003 revision; ITU-T G959.1 – 12/2003 revision; ITU-T G694.1 – 06/2002 revision – DWDM grid; ITU-T G694.2 – 12/2003 revision – CWDM grid

ORDERING INFORMATION

PLUGGABLE MODULE (PM)

OPTICAL INTERFACES

(Ekinops-qualified SFP+ for Client and Line interfaces)

EKINOPS CHASSIS

PRODUCT CODE	DESCRIPTION
PM_1604	Quadruple transponder, 8G FC, 10G FC, 16G FC and 10GbE with 3R regeneration and SFP+ client and Line ports (SFP+s not included)
388_xx	SFP+, 16G FC, 40 km, DWDM
389	SFP+, 16G FC, 100 m, 850 nm
390	SFP+, 16G FC, 10 km, 1310 nm
382T	10G SFP+, Tunable 80 km (9,9 Gb/s to 11,3 Gb/s), DWDM
413	SFP+ 1310 nm, 10 km, Rate Select 10G/8G
C600HC	Ekinops 360 High Capacity Chassis, 7RU high, includes fans, 19" brackets and DC power cables, accepts single slot Chameleon in every slot (requires Management Card)
C200HC	Ekinops 360 High Capacity Chassis, 2RU high, includes fans, 19" brackets and DC power cables (requires Management Card)
PM_MNGT4	Management Card (for Ekinops C200, C600, C200HC, C200HC-AC & C600HC)
400EEM	Ekinops Java Craft Interface

CONTACT



www.ekinops.com

Ekinops EMEA
sales.eu@ekinops.com

Ekinops APAC
sales.asia@ekinops.com

Ekinops Americas
sales.us@ekinops.com