



EKINOPS RM_ETSc6

Six-Slot Compact OTN Transport Switch

DATA SHEET 05 | 2024

KEY FEATURES & BENEFITS

- 2Tbps switching capacity in 6RU form factor
- Up to 500Gbps card slot capacity (LCS)
- Configurable as an OTN switch
- Combined centralized and direct through-backplane switching using agnostic, non-blocking, packet-ready switch fabric
- Point-and click service provisioning
- Automatic discovery
- Common software management and feature set shared across ETS platform
- Redundant management, timing and power modules
- ASON-based control plane
- Multiple protection schemes
- Service SNCP protection (1+1) with TCM level
- SDN Ready Platform—NETCONF (YANG model) and ConfD

APPLICATIONS

- Metro service aggregation over OTN networks
- Multiprotocol service delivery
- Medium-density OTN switching and WDM transport
- Network demarcation and interconnection

OVERVIEW

The Ekinops ETSc6 is a mid-sized OTN switch that provides up to 2Tbps of switching and transport in a compact 6RU form factor. With six (6) card slots, the ETSc6 is designed for medium to large capacity aggregation sites with 10G, 100G or 200G interfaces making it deployable in any location with high capacity requirements. The ETSc6 provides an optional centralized switch fabric that can be deployed in unprotected or 1+1 protected configurations with simultaneous support for blade-based switching using direct backplane connectivity between two line cards. It supports one (1) or two (2) centralized SC2000 switch fabric cards with up to four (4) line cards to maximize switching flexibility. It also supports redundant management, timing and power modules in 1+1 configuration for carrier-class reliability.

The ETSc6 is part of the Ekinops Transport Switch (ETS) product family, a G.709 standards-based OTN switch platform that can be seamlessly integrated into any transport network. The ETS platform improves the efficiency, flexibility and reliability of your transport network by “virtualizing” valuable optical resources allowing you to right-size capacity to meet demand.

The ETSc6 uses a distributed ASON-based software control plane that enables service configuration and performance monitoring. It also provides link verification, discovery of network elements and trails, as well as multilayer resource availability functions providing all nodes full knowledge of the network state in real time. The software also abstracts and simplifies the underlying switch complexity using an interface adaptation layer that allows the operator to configure the OTN switch using simple commands from the management system or via a SDN environment. The control plane, in combination with the Celestis NMS network management system, supports multiple line protection schemes including 1+1 to maximize the availability of high priority traffic.

MANAGEMENT

Ekinops Celestis NMS provides standards-based Telecommunications Management Network (TMN) functions for the OTN Switch Equipment, Networks and Services. Celestis NMS has a distributed architecture in order to ensure flexibility for managing a variety of network technologies, high availability, high performance and scalability. Celestis NMS applications can be installed in a single standalone server for managing small networks or in multi-server clusters to ensure high availability and scalability when managing large networks. It can also create management clusters in which it can manage multiple chassis as a single network element using a single IP address.

SDN-ready, Celestis NMS connects to the network elements via NETCONF while the Northbound interface (NBI) is based on REST/JSON and SNMP.



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SPECIFICATIONS

PHYSICAL SPECIFICATIONS

Switch & Transport Capacity

OTN Switch Mode:	2Tbps
Wavelength support:	88 wavelengths in C-band
Switch Matrix:	ODUk (k=0, 2, 2e, 4)

Line Cards Supported *(see separate data sheet)*

200Gbps	LC4-MP2-A
500Gbps	LC5-MP4-D

Client Interfaces

Ethernet:	10GbE/ 100GbE
OTN:	ODU0/OTU2/OTU2e/OTU4

Line Interfaces

200G/100G DWDM; coherent or gray optics

System Configurations

1+0 (*unprotected*)
1+1
SNC/S 1+1 protection with TCM

System Management

In-band: GCC0; BIP-8, BEI, BDI, STAT;

Environmental Characteristics

Power consumption (typical)	429W
Power consumption (max)	450W
Operating temperature:	0°C to +50°C / +32°F to +122°F
Storage temperature	-20°C to +85°C / -4°F to +185°F

Physical Characteristics

Height:	6RU
Width:	19"/475mm
Depth:	9.6" / 240mm

ORDERING INFORMATION

RACK MOUNTABLE UNIT (RM)

PRODUCT CODE	DESCRIPTION
RM_ETSc6	6RU empty chassis OTN Switching
PM_SC2000	OTN Switching Fabric Card providing a max of 2.0 Tbps switching capacity in ETSc6 chassis; 1+1 switching matrix redundancy
PM_HWSC	Hardwired Switching Card (<i>Cross connection point, non-redundant, providing Line Cards interconnectivity with bandwidth between slots depending on the Line Cards used</i>)
PM_MNGT_ETSc	Management Card for ETSc6 OTN Switch compact chassis
PM_FAN_ETSc6	FAN modules, ETSc6 compact chassis (<i>with redundancy</i>)
PM_PU_ETSc6	Power Unit blade for RM_ETSc6 and RM_ETSc2 chassis, compact OTN Switch platform, -48 VDC, 0VDC and Frame Ground (<i>DGND</i>)

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