



## EKINOPS RM\_ETSc1

### Two-Slot Compact OTN Transport Switch

DATA SHEET 05 | 2024

#### KEY FEATURES & BENEFITS

- 400Gbps switching capacity in 1RU form factor
- 200Gbps card slot capacity
- Configurable as an OTN switch or OTN crossponder
- Through-backplane switching between line cards
- Point-and click service provisioning
- Automatic discovery
- Common software management and feature set shared across ETS platform
- Redundant management, timing and power
- ASON-based control plane
- Multiple protection and restoration schemes
- Service SNCP protection (1+1) with TCM level
- SDN Ready Platform—NETCONF (YANG model) and ConfD

#### APPLICATIONS

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

#### OVERVIEW

The Ekinops ETSc1 is an OTN access switch that drives OTN switching to the far edge of the network with up to 200Gbps of blade-based switching and transport in a small 1RU form factor along with 1+1 protection for both ring and linear configurations. Designed for small capacity applications, the ETSc1 increases network agility and bandwidth optimization by efficiently mapping up to Gigabit Ethernet interfaces into ODU0 payloads or 10GbE interfaces into ODU2e for further aggregation to OTU2 or OTU4 uplinks to the network core while providing service-level fan out to client devices. It supports one or two line cards with embedded management and timing functions for standalone or redundant control and also includes dual power feeds and through-backplane switching between the cards for carrier-class reliability. When populated with two (2) line cards, it also provides optional 1+1 service protection.

The ETSc1 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 ETSc1 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. The ETSc1 is capable of redundant management and timing by populating the chassis with two LC1-MP1-C line cards.

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 Switching: 400Gbps  
Switch Matrix: ODUk (k=0, 2, 2e, 4)

###### Line Cards Supported *(see separate data sheet)*

100Gbps: LC1-MP1-C

###### Client Interfaces

1GbE  
10GbE

###### Line Interfaces

10G, 100G DWDM; gray optics

###### System Configurations

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

###### System Management

In-band: GCC0 channel and Monitoring BIP-8, BEI, BDI, STAT

###### Environmental Characteristics

Power consumption (typical) 27W  
Power consumption (max.) 30W  
Operating temperature: -5°C to +50°C / +23°F to +122°F  
Storage temperature -20°C to +85°C / -4°F to +185°F

###### Physical Characteristics

Height: 1RU  
Width: 19" / 475mm  
Depth: 9.6" / 240mm

#### ORDERING INFORMATION

##### RACK MOUNTABLE UNIT (RM)

PRODUCT CODE	DESCRIPTION
RM_ETSc1	1RU empty chassis OTN Switching
PM_FAN_ETSc1	FAN modules, ETSc1 compact chassis ( <i>with redundancy</i> )

#### CONTACT



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