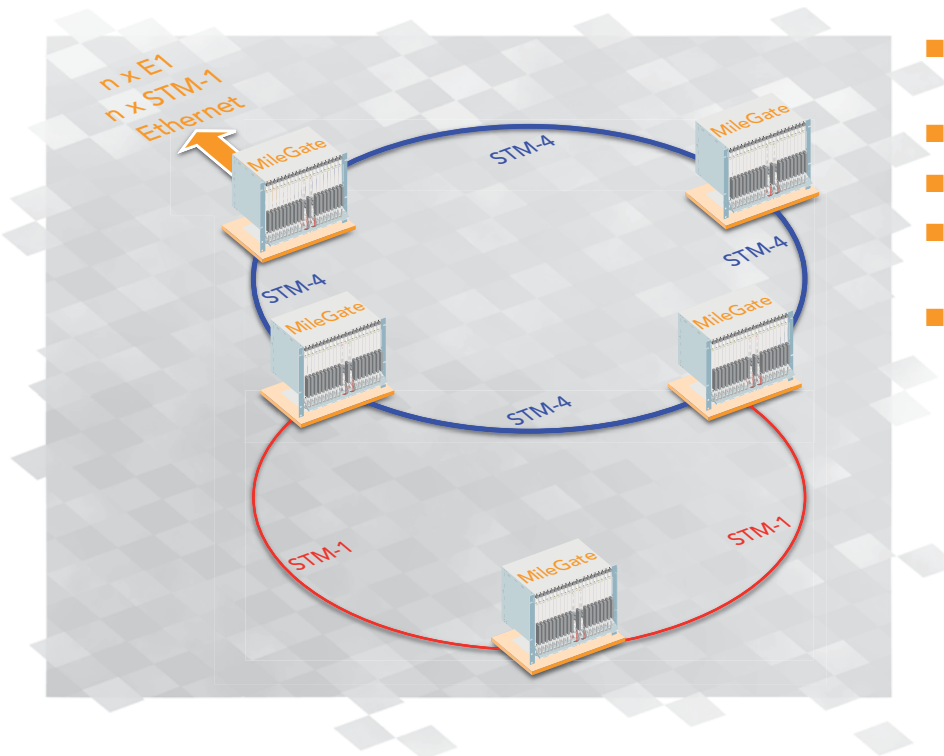# MileGate SDH STM-4/1 Unit SYN4M

SYN4M allows TDM and Ethernet services over a SDH uplink on the MileGate platform

- 2 x SDH STM-4/STM-1 interfaces
- 2 x SDH STM-1 interfaces
- 4 x 100/1000BaseT
- Mapping/demapping functionality PDH/SDH
- Ethernet over SDH

The new MileGate SDH STM-4 unit SYN4M offers the ability to have TDM and Ethernet services uplinked via SDH STM4 or STM-1 from the MileGate platform.

SYN4M allows a smooth migration from SDH transport to pure Ethernet transport on the same chassis; also allowing the coexistence of both types of transport technologies simultaneously.

■ Unit Description

The new MileGate SDH unit SYN4M is a one slot plug-in unit for the MileGate platform (MileGate 2500 and MileGate 2300).

The unit supports SDH interfaces and Ethernet interfaces on the front of the unit, and access to traffic from the TDM bus and Ethernet star in MileGate.

SYN4M's TDM connectivity allows the transport of TDM traffic from TDM DSL lines, E1 interfaces and other data services from units sitting on the MileGate chassis.

In addition, the ability to uplink Ethernet services is possible via the Ethernet over SDH functionality.

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■ **Supported Topologies**

The unit allows the creation of various SDH transport topologies:

☐ ring connections

☐ linear connections

☐ star networks

☐ meshed networks

■ **Protection Functions**

The SYN4M provides a set of functions which guarantees the highest equipment service availability through the support of recognised traffic and equipment protection standards:

☐ Multiplex Section Protection (MSP)

☐ Sub-Network Connection Protection (SNCP)

☐ 1+1 Equipment Protection (EQP)

☐ Synchronous Equipment Timing Source (SETS) protection

☐ Ethernet-over-SDH providing Link Capacity Adjustment Scheme (LCAS)

Technical Data

General	
VC services	Cross connect 18 x 18 VC-4
	Cross connect 36 x 36 VC-3
	Cross connect 693 x 693 VC-12
Multiplex Section Protection (MSP)	1+1 unidirectional and bi-directional
Traffic protection	Sub-Network Connection Protection (SNCP)
Equipment protection	1+1 EQP, with 2 units
Performance monitoring	According to G.826
Synchronisation	SETS
Access to TDM bus	n x 64 kbps (n = 120) plus 63 x G.703 transparent channels
SDH STM-1/STM-4 – Aggregate	
Bit rate	622 Mbps or 155 Mbps
Number of ports	2 (SDH STM-4 optical interface or SDH STM-1 optical/electrical)
Port types	SFP-based
SDH STM-1 – Tributary	
Bit rate	155 Mbps
Number of ports	2
Port types (optical and electrical)	SFP-based
Ethernet over SDH	
Framing procedure	GFP according to ITU-T G.7041
VC concatenation	Virtual concatenation according to ITU-T G.783
Link Capacity Adjustment (LCAS)	According to ITU-T G.7042
Bit rate	100 Mbps, 1 Gbps
Ethernet Interfaces	
Interfaces	4 x 100/1000BaseT
Front connector type	4 x RJ45
Management	
MCST	For local management
UNEM	For central management
Power Supply	
Input voltage nominal (min/max)	-48/-60 V DC (-40.5 V DC … -72 V DC)
Operation Environment	
Temperature range and humidity	According to MileGate environmental specifications

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