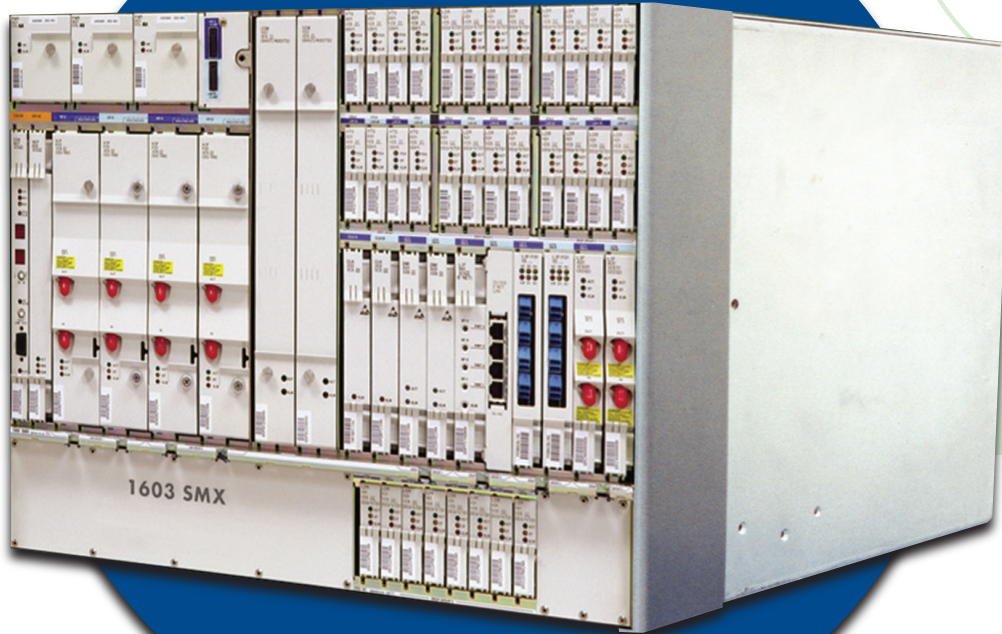


Telmar 1603 SMX

SONET Multi-Application Network Element

Telmar's 1603 SMX allows network service providers to reduce capital and operational expenses by increasing the efficiency, flexibility and reliability of their networks.



The 1603 SMX, originally engineered and manufactured by Alcatel, was acquired by Telmar Network Technology in 2005.

Telmar's 1603 SMX is a multiservice SONET network element that provides unparalleled reliability and interoperability. Designed for network service providers requiring drop rates from DS1 to OC-12 and line rates up to OC-48, the Telmar 1603 SMX brings low cost and high density to the metro access market. Transport flexibility is demonstrated by assorted interfaces for deployment agility, full SONET standards compliance and up to 16 OC-3 single shelf drop capability. Network efficiency increases with VT1.5 or STS-1 level grooming and STS-level bandwidth management across the entire OC-X payload. In addition, an M13 transmultiplexer provides DS3 to VT payload mapping.

The 1603 SMX helps reduce network operating costs with easy in-service, in-shelf upgrades. Its reduced footprint features low power consumption to minimize operating costs. Simplified "point-and-click" network management and FTP downloads save time and effort. Edge management

gateway functionality facilitates edge-device management by SNMP through the SONET DCC. Universal optical interface ensures ease of connectivity and reduces spares.

The Telmar 1603 SMX features an advanced architecture optimized for network security and reliability complemented by binary database backup capability that allows rapid backup and recovery. Its robust performance comes from full compliance with NEBS Level 3, GR-253 and GR-418 requirements and it is temperature hardened, allowing placement in unconditioned spaces.

Telmar Network Technology is dedicated to helping our customers manage the lifetime value of their networks. Network service providers worldwide rely on us for high-quality products and responsive service that save them time, money and productivity.

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TELMAR
NETWORK TECHNOLOGY
AN IQOR COMPANY

Telmar 1603 SMX

SONET Multi-Application Network Element

Power

- Three load-sharing power supplies (-48VDC):
 - > Input power range: -40 VDC to -57 VDC
 - > Power consumption: 250 W (typical application)
 - > Power and ground distribution: 48 VDC with return, signal and frame ground
- Built-in fusing: (-48 VDC) and fuse failure alarm

Mechanical dimensions

- Main shelf height: 14 in. (35.56 cm, or 8 rack spaces)
- Facility expansion shelf height (if required): 3.5 in. (8.89 cm or 2 rack spaces)
- Depth: 12 in. (30.48 cm)
- Width: 23 in. (58.42 cm) channel or unequal flange
- Weight: 70 lbs. (31.81 kg), fully populated

Interface specifications

- UPSR, 2F-BLSR, linear, terminal, linear taper, point-to-point

Optical

- Optical line rates:
 - > 155.52 Mb/s (OC-3)
 - > 622.08 Mb/s (OC-12)
 - > 2.49 Gb/s (OC-48)
- Wavelength: 1,310 nm or 1,550 nm
- Optical connectors: ST, SC, and FC (LC for Quad OC3 PWB)

Asynchronous

- Asynchronous line rates:
 - > 44.736 Mb/s (DS3)
 - > 1.544 Mb/s (DS1)
- Maximum distance to cross connect
 - > STS-1, DS3: up to 450 ft., depending up on cable type
 - > DS1: 655 ft. on 22 AWG ABAM; 450 ft. on 26 AWG ATAM
- Electrical connectors:
 - > STS-1: BNC
 - > DS3: BNC
 - > DS1: wire wrap

Environmental

- Fully temperature hardened optics:
 - > -40°C to 65°C (-40°F to 149°F)
- Operating temperatures:
 - > With required fans: -40°C to 65°C (-40°F to 149°F)
- Storage temperatures of -40°C to 85°C (-40°F to 185°F)

Maintenance and provisioning

- Provisioned and maintained through 1301 NMX network management system, a GUI application residing on an ordinary PC
- PC requirements: 50 MHz 486 processor, 32 MB RAM and 20 MB free disk space
- Communication and control interfaces: 12 external alarms and controls, 2 order-wire channels, office alarms, TBOS, RS-422, 802.3 LAN, 10Base-2 or 10Base-T, Direct X.25
- Local and express orderwire
- Customer definable alarms and controls and remote user telemetry byte-oriented serial interface

System specifications

- Timing: 1.544 Mb/s sync, OC-3, OC-12, OC-48 or EC-1
- Sync features: holdover, synchronization, messaging, internal, Stratum 3 stability, 4.6 ppm clock
- Transmission delay: VT groomed: 50 µs max, not VT groomed: 25 µs max
- Switching time: 50 ms maximum after detection of fault
- SMX surpasses Telcordia's GR-418 requirements and objectives specifications
- Certifications: ISO 9001, BellCore CSQP, UL listed, EMI and NEBS Level 3
- The SMX uses the standard OSI 7 layer stack to ensure interoperability has been tested with SIF and Telcordia
- Telcordia: full GR-253 compliance, GR-1377, DCC, TL1
- Remote control capability: SONET DCC, SML (DCC embedded in DS1), edge management gateway (SNMP), FTP, binary database backup

Interface capacities (per shelf)

Line side:

- OC-3 (STS-3c payload possible), OC-12 (OC-12c payload possible), OC-48, one active and one protect east, one active and one protect west

Drop side:

10/100 Base-T (Fast-E)	32
1000 Base-T (Gig-E)	4
DS1	112
DS3/STS-1	48
OC-3/OC-3c	16
OC-12/OC-12c	4

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