DNWP

Connection Master

Mission critical multiservice access platform for utility, corporate and enterprise customers

Connection Master provides true multiservice capabilities to support a very wide range of legacy voice and data interfaces transported over Next Generation SDH. It has the performance capabilities to handle almost any type of applications including POTS (Plain Old Telephony Service) and SCADA (Supervisory Control and Data Acquisition). Very low latency means that time-critical applications, such as teleprotection, are supported.

Connection Master is designed to be backward compatible with your existing network – for example, with Nokia's Dynanet and FMX2 product families. In addition, Connection Master is offered along with Network Management Systems which also support legacy equipment. This allows for a flexible migration towards a modern platform.

The internal architecture has a modular structure that uses high-speed, point-to-point buses to meet both current and future needs offering a growth path to carrier Ethernet.

6-Slot Subrack

8+8-Slot CM/Dynanet Subrack

16-Slot Subrack

Trunk interfaces: SDH STM-1/4/16

Versatility:

- 64 kbit/s cross-connection functionality for legacy TDM services (voice and data) including advanced path protection
- Optimized for strictly time critical, low latency applications
- Power-over-Ethernet functionality
- High capacity TDM and Ethernet based tributary units
- High availability via redundant critical modules

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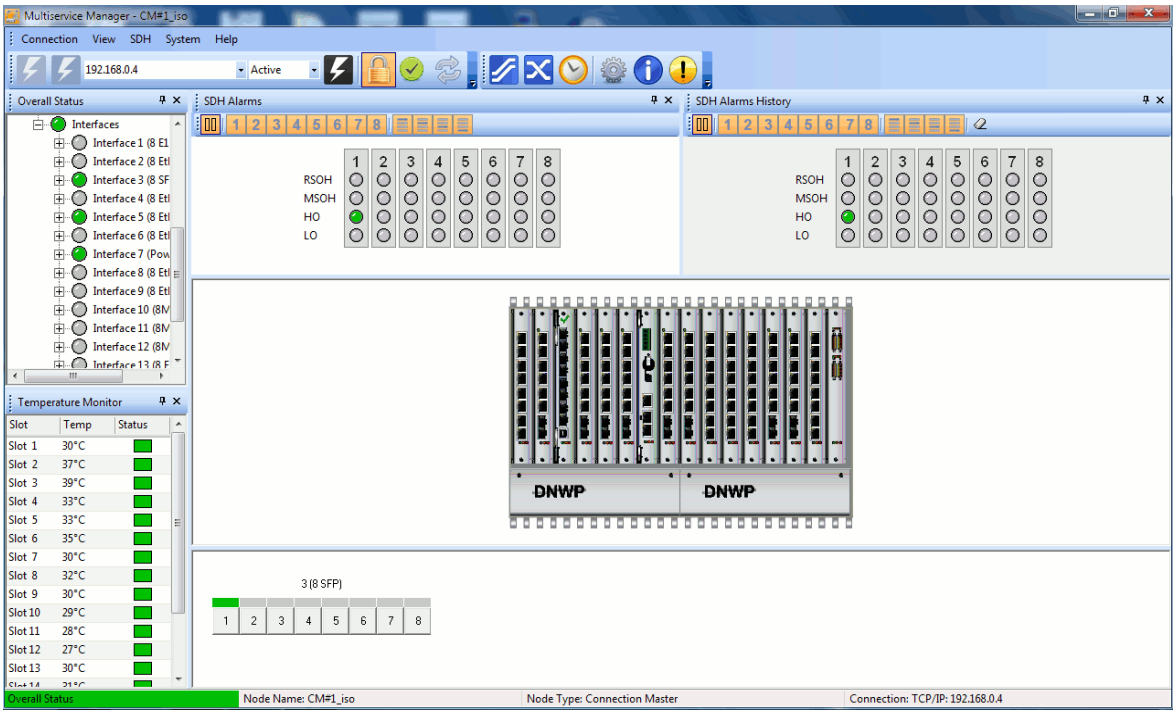
Management



Connection Master seamlessly interfaces with any Network Management System (NMS) via its powerful NorthBound Interface (NBI) over SNMP. The interface enables users to access the features and settings of the device itself and easily provision services. It also supports a wide range of management functions:

- Fault management
- Inventory management
- Performance management

Multiservice Manager

Connection Master can be managed locally or remotely either with Windows based Multiservice Manager (graphical UI) or Command Line Interface (CLI). Multiservice Manager allows the user to access all functions of Connection Master while CLI is the embedded management application accessible via SSH.

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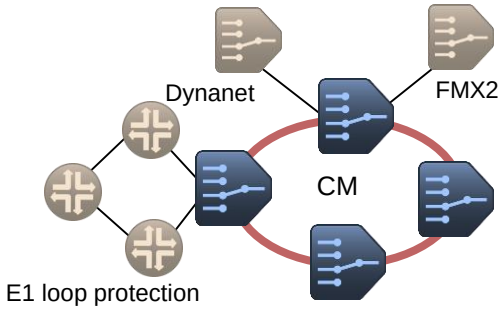
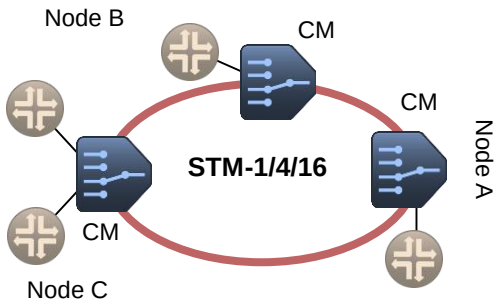
Application examples

Connection to legacy layer

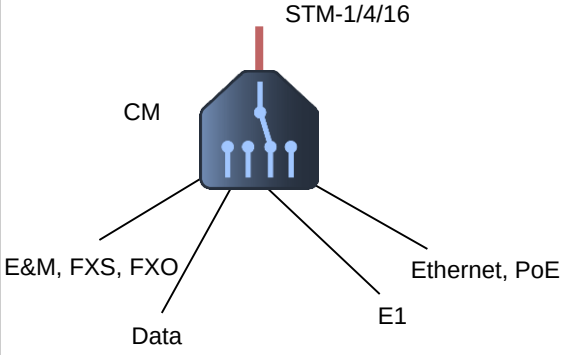


Metro rings

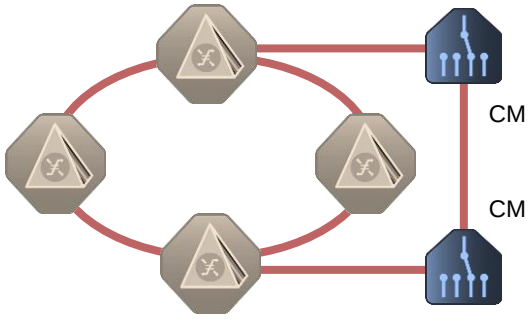
providing Ethernet transport
or SDH connectivity



Multiservice access

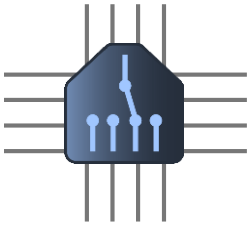


Ring MUX/Partial ring extensions/overlays

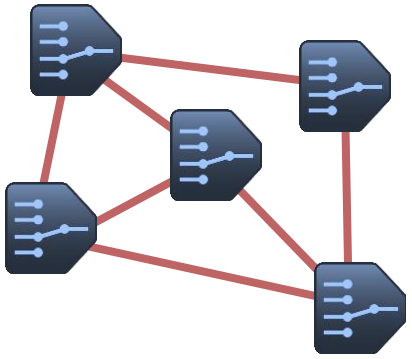


Local cross-connect

VC-4, VC-3, VC-12, DS0



Meshed critical networks



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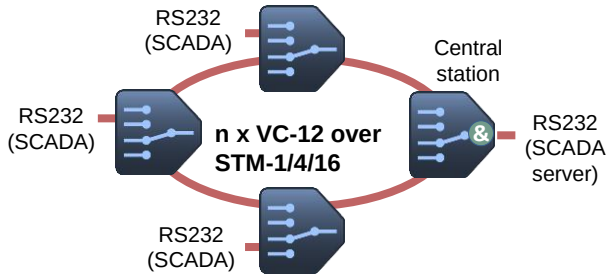
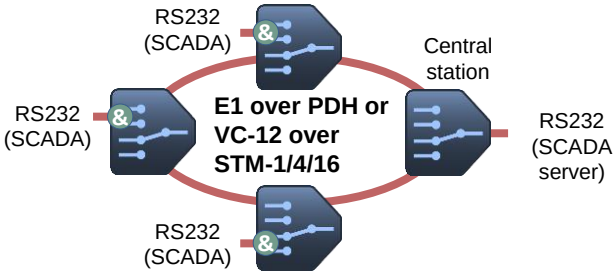
Application examples

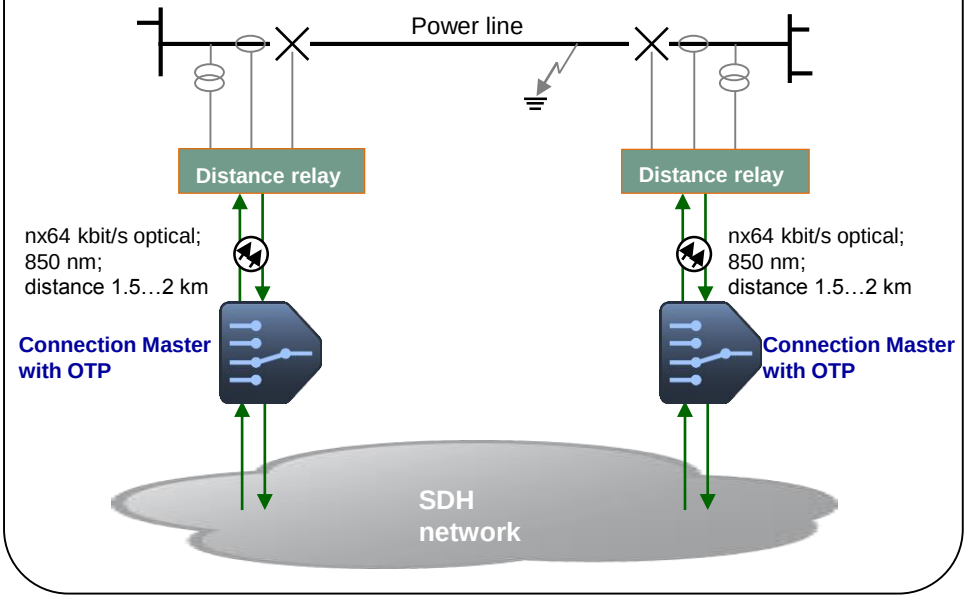
Multipoint-to-point SCADA - centralized summing



Multipoint-to-point SCADA - distributed summing



Optical teleprotection



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Technical data - interfaces

CU SDH / CU SDH Extended Temperature	T32001.01 / T32001.11
SFP interfaces	4 x STM-4/16, 4 x STM-1/4 or 4 x STM-4/16, 2 x STM-1/4, 2 x GbE (T32001.01) 4 x STM-1/4 or 2 x STM-1/4, 2 x GbE (T32001.11)
Ethernet Unit 1000BT, 8 Ports	**T32002.01**
RJ-45 interface	6 x 10/100/1000BASE-T Full duplex or half duplex Auto negotiation 4 x PoE
SFP interface	1 x 10/100/1000BASE 1 x 1000BASE
E1/T1 Unit, 8 ports, 75 ohm / 120 ohm	**T32003.01 / T32003.11**
E1 G.703/G.704 interface	8 x SMB (T32003.01) 8 x RJ-45 (T32003.11)
Data Unit V and X, 4 ports	**T32004.01**
4-port SSC interface	V.28, V.11, V.35, X.21, RS-530, RS-530A
Data Unit G.703/64k, 8 ports	**T32004.02**
RJ-45 interface	8 x G.703 / 64 kbit/s
Optical Teleprotection Unit, 4 ports	**T32004.11**
Optical interfaces	8 x ST connector, 4 ports nx64 kbit/s payload (n = 1…12); multimode fiber; transmission capacity per port: 64…768 kbit/s
Protocol	IEEE C37.94
VF/E&M Unit, 8 ports	**T32005.01**
8-port SSC interface	8 x 2-wire / 4-wire
Signaling	3 x E and 3 x M per port
FXS Unit, 16 ports	**T32005.11**
RJ-45 interface	8 connectors, 2 ports/connector
Integrated ring generator	25 Hz / 50 Hz
Signaling	R2 / Hot Line
FXO Unit, 16 ports	**T32005.21**
RJ-45 interface	8 connectors, 2 ports/connector
Advanced DXC Unit	**T32010.01**
Cross-connect capacity	Based on license Maximum cross-connect capacity: 196 x E1 / VC-12 links (equivalent to 63 E1 Y loops) Granularity: 8 kbit/s...nx64 kbit/s, non-blocking
Connection types	B (point-to-point connection supporting condition bit), Y (loop protection), C (digital summing), S (VF summing), M (bit masking)

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Technical data – alarm unit, mechanics and power supply

Alarm Unit	T32011.01
Digital inputs	15 pcs; E&M or TTL; alarm filtering time 10 ms…10 min
Analog inputs	4 pcs; -150 VDC…+150 VDC or 0.0 VDC…4.0 VDC; alarm filtering time 10 ms…10 min
Alarm outputs	3 pcs; dry loop or ground connection
MultiLine Terminal	T32012.01
Line interface	1 x RJ-45; 1…4 pairs; SHDSL/SHDSL.bis Line rate: Up to 5.7 Mbit/s over a single copper pair. With bonded SHDSL.bis, it is possible to deliver 22.8 Mbit/s.
Digital interfaces	2 x E1; 2 x Fast Ethernet; 2 x V.11/V.24/V.35
Operating modes	Ethernet over TDM; TDM over copper, legacy mode; TDM and Ethernet over copper; Ethernet over copper
Subrack 6-Slot	T32009.01
Installation capacity	2…4 tributary units
Subrack 8+8-Slot CM/Dynanet	T32009.02
Installation capacity	4…6 tributary units Positioned for flexible expansion from PDH to SDH. Easy adaptation from E1 to SDH with existing Nokia's / DNWP's Dynanet units (use of 8 slots). 8 Dynanet slots can be converted to 8 Connection Master slots.
Subrack 16-Slot	T32009.04
Installation capacity	12…14 tributary units
NOTE!	All the above subrack models support CU SDH trunk unit redundancy and also tributary units to be introduced in the later releases of Connection Master. Also, all subrack models can house 1 or 2 power adapter units.
Fan Unit for 6-Slot Subrack	T32007.01
Fan Unit for 8+8-Slot /16-Slot Subrack	T32007.02 / T32007.12 (with alarm output)
Power Supply AC/DC 2x1kW	T32006.02 (Emerson NS211/R48-1000)
Power Adapter DC 48V	T32008.01
Power Adapter DC 24-60/48V	T32008.02
Power Adapter DC 48V Bus Extension	T32008.11

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Technical data – environmental

Environmental specifications	
Climatic: 6-slot subrack with fan	Operation: EN 300 019-1-3, Class 3.1 (-5 to +50 °C) Storage: EN 300 019-1-1 Class 1.2 (-25 to +55 °C) Transport: EN 300 019-1-2 Class 2.3 (-40 to +70 °C)
Climatic: 8+8 and 16-slot subrack with fan	Operation: EN 300 019-1-3, Class 3.2 (-5 to +55 °C) Storage: EN 300 019-1-1 Class 1.2 (-25 to +55 °C) Transport: EN 300 019-1-2 Class 2.3 (-40 to +70 °C)
Climatic: 8+8 and 16-slot subrack without fan and with SDH trunk for Extended Temperature	Operation: EN 300 019-1-3, Class 3.1 (-5 to +45 °C) Storage: EN 300 019-1-1 Class 1.2 (-25 to +55 °C) Transport: EN 300 019-1-2 Class 2.3 (-40 to +70 °C)
EMC	EN 300 386 V1.4.1…1.6.1, class B EN 55022, class B
Safety	EN 60950-1

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