

Product: [CSM540-A](#)



Central Switching Module with MPLS-TP compliant switching fabric for Core nodes

Product Description

The CSM540-A Central Switching module (=CSM) is the heart of the XTran nodes. This module provides the main processing within the XTran nodes via an Integrated Ethernet Multilayer Switch and onboard Traffic Manager. The CSM540-A must be plugged into a CSM slot in the core nodes. The CSM provides the ability to use 40Gbps enable ports, a switching capacity of 720Gbps and makes use of a Stratum 3E clock (as of hardware edition 7).

Technical Specifications

Product Overview

Part Number:	S30924-Q501-X101
Port Type and Quantity:	1x RJ-45 management port
Switching Capacity:	720 Gbps

More Interfaces

SD-card slot:	1 slot: allows for easy replacement in the field
---------------	--

Power requirements

Operating Voltage:	+12V
Power consumption:	Measured at 25°C/77°F, with data transport: 57W

Software

Switching:	Sub 50ms protection switching in all network topologies (MPLS-TP), Non-blocking 720 Gbps, 1071 Mpps (Layer 2 throughput), 288k MAC addresses, 24k Layer 2 Multicast entries, 8k VFI, 32k MPLS entries, BFD hardware support
Management:	Auto provisioned and auto setup DCN for management, Full SNMP v3 management (no CLI needed), Management port on each CSM module, 2 input contacts allowing forwarding of local alarms to the TXCare platform, 2 output contacts for local triggering of alarms, Removable memory allowing easy replacement of CSM in the field, Hardware supported OAM, Automatic protection switching via BFD, LSP ping and LSP trace via BFD, Performance monitoring based on Y.1731 Loss and Delay
Diagnostics:	Advanced monitoring capabilities based on MPLS-TP OAM enhancements
Security:	Sticky MAC for easy locking of MAC address per service, MAC and IP based ACL, SNMPv3 encryption and authentication, Disable unused ports Locked Node ID's, Logical separation of services, Centralized user authentication and central event logging, Audit trail
Layer 2 Ethernet Aggregation:	MSTP (multiple spanning tree), Multicast handling through IGMP, Virtual forwarding instances, VLAN handling, Broadcast and multicast storm control
Quality of Service (QoS):	Service priority scheduling independent from user traffic to ensure transport functionality of all traffic, End to end traffic engineering through TXCare, 8 Priorities (6 user definable) Per flow statistics and port counters, 4k Flexible queues, Handling of priority queues Strict Priority Based
MPLS-TP Service:	Point to point service (VPWS), Multipoint (VPLS), Logical Ethernet Ring, Protection schemes (1:1, Hitless Switching, ERP logical Rings)
Management Software:	The XT-2215-A can be fully managed via the TXCare Network Management System. TXCare supports user friendly and fast deployment of the network. Supported by the automatic setup of the DCN and OAM features for continuous monitoring with SNMP v3

Ambient conditions

MTBF (Telcordia SR-332 Issue 4) @ 25°C:	65 Years
Operating Temperature Range:	-20° to +55°C (-4° to 131°F)
Storage Temperature Range:	-30° to +75°C (-22° to 167°F)
Relative humidity (non-condensing):	0-95 %

Mechanical construction

Overall Width:	372.5 mm
Overall Height:	43 mm

Depth:	202 mm
Weight:	1.53 kg
Node Compatibility:	XT-2215-A

Approvals

Basis Standard:	CE, EN 55032:2015 + A11:2020, EN IEC 61000-3-2:2019, EN 61000-3-3:2013 + A2 :2021, EN 55035:2017 + A11:2020, EN IEC 61000-6-1:2019, EN IEC 61000-6-2:2019, EN IEC 61000-6-3:2021, EN IEC 61000-6-4:2019
Safety of industrial control equipment:	EN 62368-1:2014
Power Utility:	EN 61000-6-5:2015, EN 61850-3:2014 (§6.7), IEEE 1613-2009 (§4), IEEE1613-2013 (clause 5,7,8,9,10)
Transportation:	EN 50121-4:2016 + A1:2019

Reliability

Guarantee:	Standard 1 year (extension possible)
------------	--------------------------------------

Scope of delivery and accessories

Accessories to Order Separately:	Micro SD Memory Card (16GB Class 10, UHS-I): V30812-A6073-C3
----------------------------------	--

Further Instructions

Product Documentation:	Available via Belden Solutions Portal site
Certificates:	Available via Belden Solutions Portal site
Software Download:	Available via Belden Solutions Portal site

History

Update and Revision:	Revision Number: 0.23 Revision Date: 11-14-2025
----------------------	---

© 2025 Belden, Inc
All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.