HIRSCHMANN IT

A **BELDEN** BRAND

HIRSCHMANN IT – MTS Switches

Product Brochure

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The Hirschmann IT MTS switches provide the capability to construct unified IT/OT networks by exclusively deploying equipment sourced from a single manufacturer. This approach confers a range of advantages, including:

- **Seamless Integration:** Equipment from a single manufacturer ensures smooth data flow and reduces compatibility issues during IT/OT integration.
- **Unified Management:** A single application simplifies network administration, enabling faster fault detection and response.
- **Robust Security:** Consistent security policies and rapid response to threats enhance network protection.
- **Scalability:** Effortless network expansion and futureproofing capabilities accommodate changing production needs.
- **Efficient Support:** Access to manufacturer-specific expertise ensures timely assistance, and resources for quicker issue resolution and maintenance.
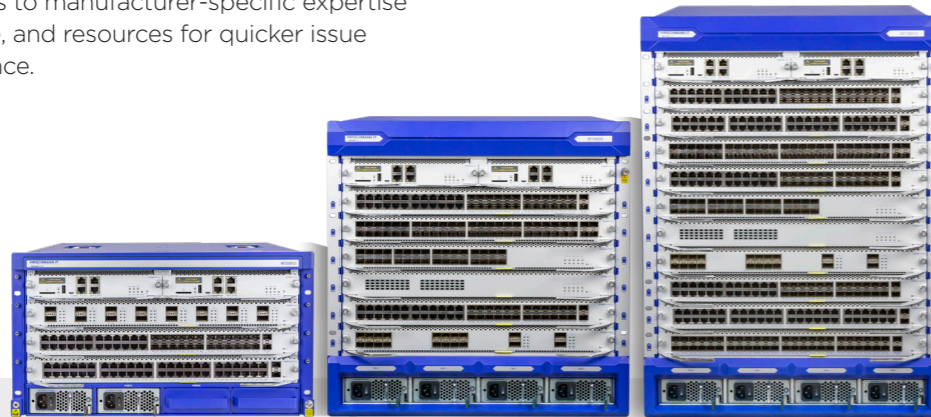
Benefits at a glance

Hardware
- Extensive product range from access to core switches
- Line speeds at 100Mb/s, 1Gb/s, 10Gb/s, 40Gb/s and 100Gb/s
- Redundant switching engines, power supplies and fans
- Switch Stacking up to 8 devices
- Persistent Power over Ethernet

Software
- Full IPv6 static, unicast, and multicast routing
- ERPS for rings, subrings, and ladder topologies
- Multi-Chassis Link Aggregation for resilience and load sharing
- Extensive security functions across the complete range
- ERSPAN for traffic mirroring across networks

Management
- SNMPv3 for secure management
- LLDP for topology discovery
- NETCONF scalable network management
- OAM (802.3ah, 802.1ag, ITU Y.1731) fault/performance monitoring
- OpenFlow communication for SDN

## IT/OT Convergence at Belden
Mark Cooksley, Product Manager

In the dynamic landscape of industrial automation, the concept of IT/OT convergence has been steadily gaining momentum. But what does it mean, and why is it crucial for modern industrial networks? Let's explore the benefits of blending Hirschmann IT and OT network equipment to harness the full potential of this convergence.

Traditionally, IT and OT networks operated in separate realms, primarily distinguished by physical attributes and the applications they supported. However, in recent years, these boundaries have blurred, resulting in a significant overlap between the two domains. Consider the evolution of CCTV, once a stand-alone IT application but now a vital component in various industrial scenarios. Today's industrial environments demand IT network characteristics, including high bandwidth and port density, to support such applications effectively.

Enter Hirschmann IT network equipment, purposefully designed to thrive in the convergence of IT and OT. It seamlessly integrates IT-like physical attributes while harmonizing flawlessly with Hirschmann's trusted OT equipment. This unique synergy allows you to construct a network that bridges the IT/OT gap without relying on equipment from traditional IT manufacturers.

By embracing Hirschmann's comprehensive range of network equipment, you can achieve IT/OT convergence while ensuring optimal performance, security, and scalability for your industrial operations. This integration not only simplifies network management but also enhances operational efficiency and paves the way for innovative industrial applications.

In a rapidly evolving digital landscape, where data and connectivity reign supreme, leveraging Hirschmann's IT and OT network equipment can be your strategic advantage. Stay ahead in the world of industrial automation by embracing the power of IT/OT convergence with Hirschmann.
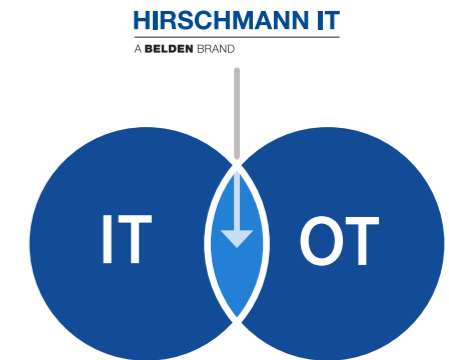
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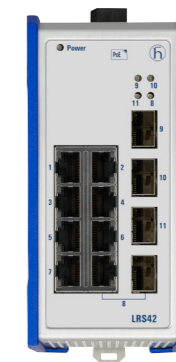
Hirschmann LEMUR

Hirschmann IT MTS2800

Hirschmann BXP

Summary of MTS Switches

2600 Series
- Access switch
- 4 to 6 x 10Gb/s ports
- 24 to 48 x 1Gb/s ports
- Basic software
- Static IPv4 and IPv6 routing

2700 Series
- Access/Aggregation PoE switch
- 4 to 6 x 10Gb/s ports
- 24 to 48 x 1Gb/s ports
- Standard and Enhanced software
- Dynamic IPv4 and IPv6 routing

2800 Series
- Aggregation switch
- 4 to 6 x 10Gb/s ports
- 24 to 48 x 1Gb/s ports
- Standard and Enhanced software
- Comprehensive IPv4 and IPv6 routing

2900 Series
- Core switch
- 6 x 40Gb/s ports
- 48 x 10Gb/s ports
- Advanced software
- Comprehensive IPv4 and IPv6

8000 Series
- Core switch
- Up to 100Gb/s ports
- Dual active switching engines
- Non-blocking forwarding matrix
- MTS8000 software
- Summary of MTS Switches

Product, Hardware and Performance Matrix of MTS switches

Product Category	Product Code	Ports	PSU	Heat Radiation	Stackable
MTS2600 Series	MTS2624-4X-B	24 × FE/GE TX 4 × 1/10G SFP+ slots	Fixed single power supply	Fixed Fan	Yes
	MTS2648-6X-B	48 × FE/GE TX 6 x 1/10G SFP+	Fixed single power supply	Fixed Fan	Yes
MTS2700 Series	MTS2724-4X-FP-S	24 × FE/GE POE/POE+ 4 × 1/10G SFP+ slots	2 × Fixed redundant PSUs	Fixed Fan	Yes
	MTS2724-6X-MP-E	24 × FE/GE POE/POE+ 4 × 1/10G SFP+ slots 1 × extended media module slot	2×Modular redundant PSUs	Fixed Fan	Yes
	MTS2748-6X-MP-E	48 × FE/GE POE/POE+ 4 × 1/10G SFP+ slots 1 × extended media module slot	2×Modular redundant PSUs	Fixed Fan	Yes
MTS2800 Series	MTS2848TF-4X-E	32 × FE/GE TX 16 x 100/1000M SFP slots 4 x 1/10G SFP+ slots 1 × extended media module slot	2×Modular redundant PSUs	Fixed fan	Yes
	MTS2832TF-4X-E	24 × 10/100/1000M SFP slots 8 × FE/GE TX 4 × 1/10G SFP+ slots 1 × extended media module slot	2 × Fixed redundant PSUs	Fixed fan	Yes
	MTS2824F-4X-S	24 × 10/100/1000M SFP slots 4 × 1/10G SFP+ slots	2 × Fixed redundant PSUs	Fixed fan	Yes
	MTS2824-4X-S	24 × FE/GE TX 4 × 1/10G SFP+ slots	2 × Fixed redundant PSUs	Fixed fan	Yes
	MTS2848-6X-S	48 × FE/GE TX 6 × 1/10G SFP+ slots	2 × Fixed redundant PSUs	Fixed fan	Yes
	MTS2824-6X-E	24 × FE/GE TX 6 × 1/10G SFP+ slots	2 × Fixed redundant PSUs	Fixed fan	Yes
	MTS2848-6X-E	48 × FE/GE TX 6 × 1/10G SFP+ slots	2 × Fixed redundant PSUs	Fixed fan	Yes
MTS2900 Series	MTS2948X-6Q-A	48 × 1/10G SFP+ slots 6 × 40G QSFP+ slots	2×Modular redundant PSUs	4 × Modular fan tray	Yes
MTS8000 Series	MTS8003-Chassis	Dual Engine 3 × media modules	4 × Modular redundant PSUs	2 × Modular fan tray	Yes
	MTS8006-Chassis	Dual Engine 4 × media modules 2 × switch fabric modules	4 × Modular redundant PSUs	2 × Modular fan tray	Yes
	MTS8010-Chassis	Dual Engine 8 × media modules 2 × switch fabric modules	4 × Modular redundant PSUs	2 × Modular fan tray	Yes

MTS2600 Series Switches - Layer 2 Gigabit Ethernet Switch with 10G Uplink Ports
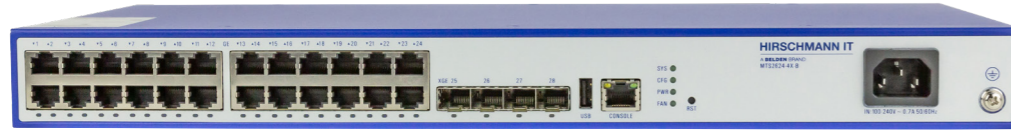
Are you in search of a reliable, cost-effective solution to enhance your network's performance at the edge? Look no further than the MTS2600 series switch, the entry level switch in the MTS series, purpose-built to meet the specific needs of your end devices.
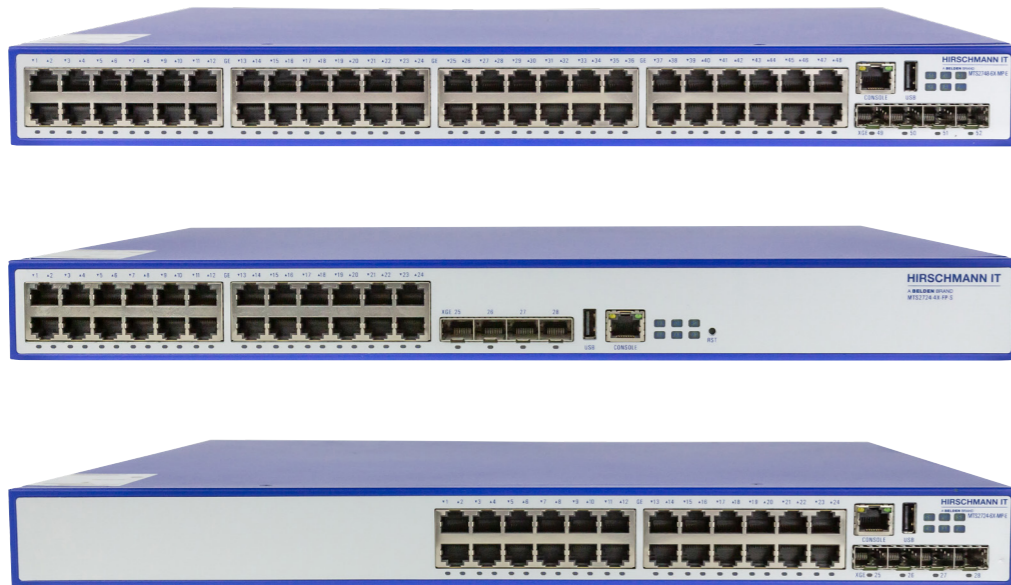
Key Benefits

- **Fast Connections:** The MTS2600 series boasts end device RJ45 ports that deliver speeds of up to 1Gb/s, ensuring that your network devices operate at peak efficiency.
- **Seamless Uplink Connectivity:** Say goodbye to bottlenecks. The MTS2600 uplink ports utilize SFP+ technology, offering a choice of 1Gb/s or 10Gb/s, guaranteeing abundant bandwidth towards the network core.
- **Scalability Made Easy:** Need to expand your network's capabilities? The MTS2600 switches support stacking, enabling you to achieve higher port density and performance at the access level, all while streamlining device management.
- **Robust Functionality & Security:** We understand the importance of comprehensive switching functionality and network security. The MTS2600 switches deliver on both fronts, offering a wide range of features to safeguard your network.
- **IPv6 Routing Simplified:** If your network relies on routing to segment access levels, the MTS2600 devices provide straightforward IPv6 static routing, ensuring efficient data flow.
- **Cost-Effective Excellence:** At the heart of the MTS2600 series is cost-effectiveness. These access switches provide industrystandard switching functionality locally, giving you the power to seamlessly switch or route data to higher network levels.

Technical Information: MTS2600

Product Description		
Type	MTS2624-4X-B	MTS2648-6X-B
Description	1U rack mount, 24 x FE/GE TX, 4 x 1/10G SFP+ slots, fixed single power supply, basic software	1U rack mount, 48 x FE/GE TX, 6 x 1/10G SFP+ slots, fixed single power supply, basic software
Port type and quantity	24 x FE/GE TX, 4 x 1/10G SFP+, 1 x RJ45 Console port, 1 x USB 2.0, 1 x Reset Button	48 x FE/GE TX, 6 x 1/10G SFP+, 1 x RJ45 Console port, 1 x USB 2.0
Power supply	Fixed single power supply	
Heat radiation	Fixed fan	
Order number	942999847	942999839
Mechanical construction		
Dimensions (W x D x H)	442mm x 220mm x 44.2mm	442mm x 320mm x 44.2mm
Weight	3.6kg	7kg
Mounting	Rack mount	
Power requirement		
Operating voltage	100-240VAC, 50-60HZ	
Power consumption	26W	75W
Ambient conditions		
Operating temperature	-10°C...55°C	
Storage/transport temperature	-40°C...70°C	
Relative humidity (non-condensing)	10%...90%	
Storage/transport humidity (noncondensing)	5%...95%	
Software		
Software level	Basic software	
Stacking	Stackable, up to 8 devices in one stack	
Approvals		
CE / FCC	Compliant	
China Network Access Certificate	Compliant	
CCC approval	Compliant	
RoHS compliance	RoHS((EU) 2015/863) and RoHS (GB/T26572-2011) compliant	
Scope of delivery and accessories		
Scope of delivery	Device, DB9 console cable, installation package. Power cord not included.	
Accessories to order separately	Industrial HiVision Network Management Software, SFPs, ACA22	

MTS2700 Series Switches - Layer 3 PoE/PoE+ Ethernet Switch with 10G Uplink Ports

The MTS2700 Series Ethernet switches offer a multitude of key benefits designed to empower IT network administrators. From adaptable functionality to unmatched reliability, these devices are the cornerstone of modern network infrastructure. Increase your network's performance and future-proof your operations with the MTS2700 series today.

Key Benefits

- **Flexible Functionality:** the MTS2700 series is a true powerhouse, capable of functioning seamlessly as either an access switch or aggregation switch, depending on your specific needs. This adaptability ensures that your network architecture can evolve alongside your organization's requirements.
- **Power Over Ethernet (PoE) Excellence:** one standout feature that sets the MTS2700 series apart is its robust Power over Ethernet capabilities. Every RJ45 port in these switches supports PoE/PoE+ functionality, delivering up to 30W of power per port to a wide range of end devices such as cameras and telephones. Say goodbye to the hassle of managing external power sources.
- **Fast Connectivity:** when it comes to speed, the MTS2700 series leaves no room for compromise. The end device RJ45 ports deliver speeds of up to 1Gb/s, ensuring lightning-fast data transfer for all connected devices. Moreover, the uplink ports utilize SFP+ technology, offering a choice between 1Gb/s or 10Gb/s speeds, providing an abundance of bandwidth to meet the demands of even the most data-intensive applications.
- **Reliability Beyond Compare:** All models in the MTS2700 series come equipped with redundant power supply units, ensuring uninterrupted operation even in the face of unexpected power issues. For added peace of mind, select models offer hotswappable modular power supply units, minimizing downtime during maintenance or upgrades.
- **Enhanced Scalability:** scaling your network has never been easier. The MTS2700 series supports stacking, allowing you to effortlessly increase port capacity as your network grows. This feature simplifies network management and ensures a smooth transition as your organization expands.
- **Numerous Layer 2 and Layer 3 Features:** for network administrators who demand robust functionality, the MTS2700 series delivers a standard Layer 2 and Layer 3 feature set, including dynamic unicast IPv6 routing. These features enable you to optimize and secure your network according to your unique specifications.

Technical Information: MTS2700

| Product Description			
Type	MTS2724-4X-FP-S	MTS2724-6X-MP-E	MTS2748-6X-MP-E
Description	1U rack mount, 24 x FE/GE PoE/PoE+, 4 x 1/10G SFP+ slots, fixed redundant power supply, PoE output 380W, standard software	1U rack mount, 24 x FE/GE PoE/PoE+, 4 x 1/10G SFP+ slots, redundant PSU, enhanced software	1U rack mount, 48 x FE/GE PoE/PoE+, 4 x 1/10G SFP+ slots, redundant PSU, enhanced software
Port type and quantity	24×FE/GE PoE/PoE+, 4×1/10G SFP+ slots, 1×RJ45 Console port, 1×USB 2.0, 1×Reset Button	24 x FE/GE PoE/PoE+, 4 x 1/10G SFP+ slots, 1 x RJ45 Console port, 1 x USB 2.0, no Reset Button	48 x FE/GE PoE/PoE+, 4 x 1/10G SFP+ slots, 1 x RJ45 Console port, 1 x USB 2.0, no Reset Button
Extended media module	None	1 x extended media module slot	1 x extended media module slot
Power supply	2 x fixed redundant PSUs	2 x modular redundant PSUs, hot swappable	2 x modular redundant PSUs, hot swappable
Heat radiation	Fixed fan		
Order number	942999835	942999832	942999831
Mechanical construction			
Dimensions (W x D x H)	442mm x 380mm x 44.2mm	442mm x 420mm x 44.2mm	442mm x 420mm x 44.2mm
Weight	6.4kg	7.4kg	7.8 kg
Mounting	Rack mount		
Power requirement			
Operating voltage	100-240VAC, 50-60HZ, redundant PSU supported		
Power consumption	29W	34W	46W
Ambient conditions			
Operating temperature	-10°C...55°C		
Storage/transport temperature	-40°C...70°C		
Relative humidity (non-condensing)	10%...90%		
Storage/transport humidity (noncondensing)	5%...95%		
Software			
Software level	Standard software	Enhanced software	
Stacking	Stackable, up to 8 devices in one stack		
Approvals			
CE / FCC	Compliant		
China Network Access Certificate	Compliant		
CCC approval	Compliant		
RoHS compliance	HS((EU) 2015/863) and RoHS (GB/T26572-2011) compliant		
Scope of delivery and accessories			
Scope of delivery	Device, DB9 console cable, installation package. Power cord not included		
Accessories to order separately	Industrial HiVision Network Management Software, SFPs, ACA22, extended media module		
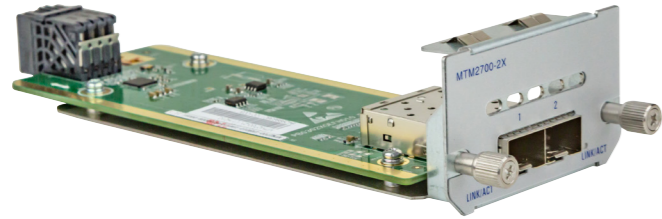
Technical Information: MTS2700

Extended media module

Order number	Type	Port type and quantity	Accessories to order separately
942999836	MTM2700-2X	2 × 1/10G SFP+ slot	SFPs

MTS2700 series power supplies

Type	MTM2700-PSU120	MTM2700-PSU500	MTM2700-PSU880
Description	AC/DC 120W PSU Input 100-240V/2.0A Output 12V/10A Without PoE support	AC/DC 500W PSU Input 100-240V/7.0A Output 12VDC/10A, 53.5VDC/7A PoE supported	AC/DC 880W PSU Input 100-240V/7.0A Output 12VDC/10A, 53.5VDC/7.1A (100VAC-165VAC), 53.5VDC/14.2A (165VAC- 240VAC) PoE supported
Order number	942999834	942999833	942999837

Service	
Diagnostics	LEDs (PWR) on base device LEDs (PWR) on base device

Current consumption	
Operating voltage	typ. < 40A at 220VAC at cold start

Technical data			
Operating voltage	100-240VAC		
Operating temperature	-10°C...55°C		
Input frequency	50-60HZ		
Nominal power of voltage supply	120W (220V/110V)	500W (220V/110V)	880W (220V) / 550W (110V)

Power requirement			
Current consumption	1A (220V), 2A (110V)	3.5A (220V), 7A (110V)	7A (220V), 7A (110V)

Scope of delivery and accessories	
Scope of delivery	PSU module. Power cord not included

MTS2800 Series Switches - Layer 3 Gigabit Ethernet Switch with 10G Uplink Ports
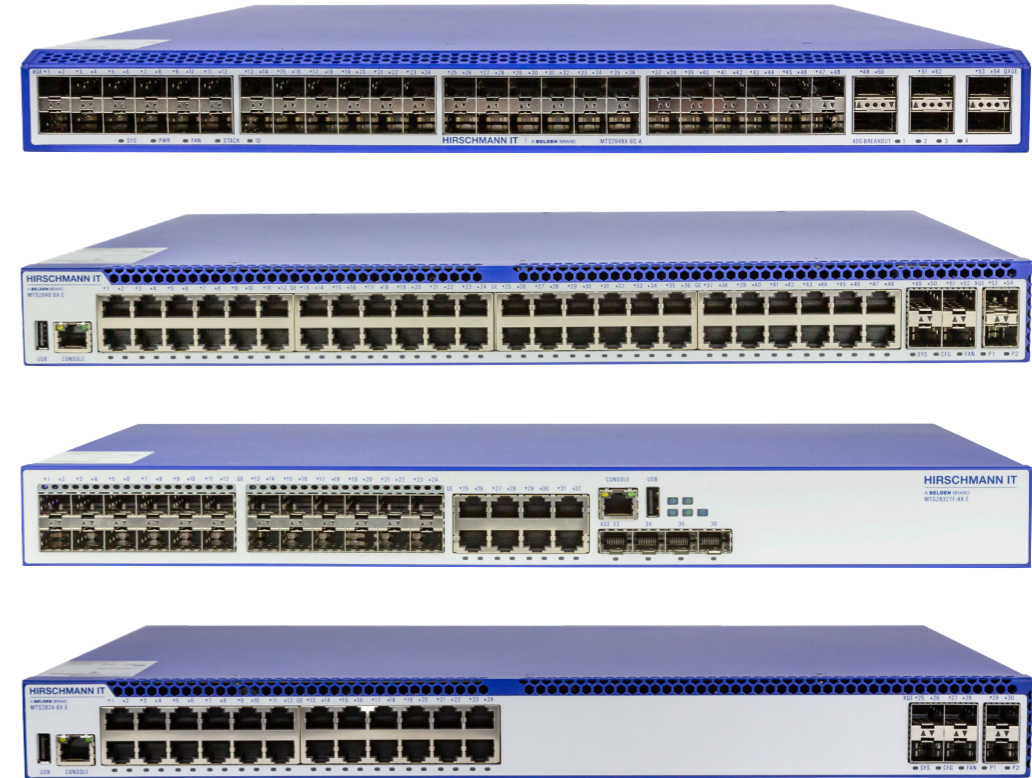
MTS2800 Ethernet switches seamlessly aggregate data, offer versatile port configurations, and ensure reliability and functionality with enhanced software, all designed to optimize network performance and flexibility.

Key Benefits

- **Aggregation Excellence:** The MTS2800 switches are purpose-built for use as aggregation switches, seamlessly receiving data from the access layer and efficiently transmitting it to the core layer of your network. This means smoother data flow and optimized network performance.
- **Space Optimization:** We understand the value of space in your server room. That's why our devices boast a compact 19" cabinet-friendly design. Maximize your rack space without compromising on performance.
- **Versatile Port Configurations:** With a maximum of 48 x 1Gb/s ports and 6 x 10Gb/s ports, the MTS2800 devices offer a versatile range of connectivity options to meet the evolving needs of your network.
- **Flexibility in Port Types:** Whether you require RJ45, SFP, or full fiber ports, we've got you covered. The diverse range of models in the MTS2800 series allows you to choose the perfect combination of ports to suit your network design requirements. Transition seamlessly from full copper to full fiber as your network grows.
- **Enhanced Reliability:** Say goodbye to single points of failure with our stacking capability. Stack multiple devices to ensure uninterrupted network operation, providing peace of mind for your critical network infrastructure. Additionally, the MTS2800 devices come equipped with redundant power supplies, enhancing overall system resilience.

Technical Information: MTS2800

Product Description

Type	MTS2848-6X-E	MTS2824-6X-E	MTS2848-6X-S	MTS2824-4X-S
Description	1U rack mount, 48 x FE/GE TX, 6 x 1/10G SFP+ slots, fixed redundant power supply, enhanced software	1U rack mount, 24 x FE/GE TX, 6 x 1/10G SFP+ slots, fixed redundant power supply, enhanced software	1U rack mount, 48 x FE/GE TX, 6 x 1/10G SFP+ slots, fixed redundant power supply, standard software	1U rack mount, 24 x FE/GE TX, 4 x 1/10G SFP+ slots, fixed redundant power supply, standard software
Port type and quantity	48 x FE/GE TX, 6 x 1/10G SFP+ slots, 1 x RJ45 Console port, 1 x USB 2.0, no Reset Button	24 x FE/GE TX, 6 x 1/10G SFP+ slots, 1 x RJ45 Console port, 1 x USB 2.0, no Reset Button	48 x FE/GE TX, 6 x 1/10G SFP+ slots, 1 x RJ45 Console port, 1 x USB 2.0, no Reset Button	24 x FE/GE TX, 4 x 1/10G SFP+ slots, 1 x RJ45 Console port, 1 x USB 2.0, 1 x Reset Button
Power supply	2 x fixed redundant PSUs			
Heat radiation	Fixed fan			
Order number	942999841	942999842	942999843	942999844

Mechanical construction

Dimensions (W x D x H)	442mm x 320mm x 44.2mm	442mm x 320mm x 44.2mm	442mm x 320mm x 44.2mm	442mm x 220mm x 44.2mm
Weight	5.8kg	5.4kg	5.8kg	3.8kg
Mounting	Rack mount			

Power requirement

Operating voltage	100-240VAC, 50-60HZ, redundant PSU supported			
Power consumption	55W	37W	55W	26W

Ambient conditions

Operating temperature	-10°C...55°C
Storage/transport temperature	-40°C...70°C
Relative humidity (non-condensing)	10%...90%
Storage/transport humidity (noncondensing)	5%...95%

Software

Software level	Enhanced software	Standard software
Stacking	Stackable, up to 8 devices in one stack	

Approvals

CE / FCC	Compliant
China Network Access Certificate	Compliant
CCC approval	Compliant
RoHS compliance	RoHS（(EU) 2015/863）and RoHS（GB/T26572-2011）compliant

Scope of delivery and accessories

Scope of delivery	Device, DB9 console cable, installation package. Power cord not included
Accessories to order separately	Industrial HiVision Network Management Software, SFPs, ACA22

Technical Information: MTS2800

Product Description

Type	MTS2824F-4X-S	MTS2832TF-4X-E	MTS2848TF-4X-E
Description	1U rack mount, 24 x 100/1000M SFP slots, 4 x 1/10G SFP+ slots, fixed redundant power supply, standard software	1U rack mount, 24 x 100/1000M SFP slots, 8 x FE/GE TX, 4 x 1/10G SFP+ slots, fixed redundant power supply, enhanced software	1U rack mount, 32 x FE/GE TX, 16 x 100/1000M SFP slots, 4 x 1/10G SFP+ slots, modular redundant PSU, enhanced software
Port type and quantity	24 x 100/1000M SFP slots, 4 x 1/10G SFP+ slots, 1 x RJ45 Console port, 1 x USB 2.0, 1 x Reset Button	24 x 100M/1000M SFP slots, 8 x FE/GE TX, 4 x 1/10G SFP+ slots, 1 x Console port, 1 x USB 2.0, no Reset Button	32 x FE/GE TX, 16 x 100/1000M SFP slots, 4 x 1/10G SFP+ slots, 1 x RJ45 Console port, 1 x USB 2.0, no Reset Button
Extended media module	None	1 x extended media module slot	1 x extended media module slot
Power supply	2 x fixed redundant PSUs		2 x modular redundant PSUs, hot swappable
Heat radiation	Fixed fan		
Order number	942999845	942999846	942999849

Mechanical construction

Dimensions (W x D x H)	442mm x 320mm x 44.2mm	442mm x 320mm x 44.2mm	442mm x 420mm x 44.2mm
Weight	5.8kg	5.6kg	8.5 kg
Mounting	Rack mount		

Power requirement

Operating voltage	100-240VAC, 50-60HZ, redundant PSU supported		
Power consumption	38W	60W	55W

Ambient conditions

Operating temperature	-10°C...55°C
Storage/transport temperature	-40°C...70°C
Relative humidity (non-condensing)	10%...90%
Storage/transport humidity (noncondensing)	5%...95%

Software

Software level	Standard software	Enhanced software
Stacking	Stackable, up to 8 devices in one stack	

Approvals

CE / FCC	Compliant
China Network Access Certificate	Compliant
CCC approval	Compliant
RoHS compliance	RoHS（(EU) 2015/863）and RoHS（GB/T26572-2011）compliant

Scope of delivery and accessories

Scope of delivery	Device, DB9 console cable, installation package. Power cord not included
Accessories to order separately	Industrial HiVision Network Management Software, SFPs, ACA-31, extended media module
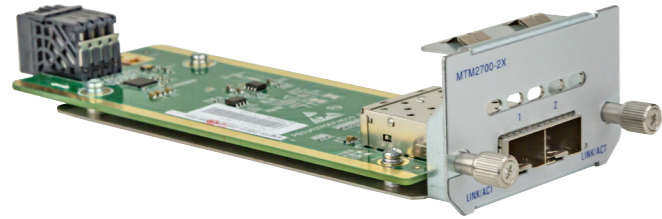
Technical Information: MTS2800

Extended media module

Order number	Type	Port type and quantity	Accessories to order separately
942999850	MTM2800-2X	2 × 1/10G SFP+ slot	SFPs

MTS2800 series power supply

Type	MTM2800-PSU120
Description	AC/DC 120W PSU Input 100-240V/2.0A Output 12V/10A
Order number	942999840
Service	
Diagnostics	LEDs (PWR) on base device
Current consumption	
Operating voltage	typ. < 40A at 220VAC at cold start
Technical data	
Operating voltage	100-240VAC
Operating temperature	-10°C...55°C
Input frequency	50-60HZ
Nominal power of voltage supply	120W (220V/110V)
Power requirement	
Current consumption	7A (220V), 7A (110V)
Scope of delivery and accessories	
Scope of delivery	PSU module. Power cord not included

MTS2900 Series Switch - Layer 3 Gigabit Ethernet Core Switch with 40G Uplink Ports

Elevate your network infrastructure to new heights with the MTS2900 Series Ethernet Switch. It's time to experience unparalleled performance, efficient space utilization, and unwavering reliability.

Key Benefits

- **Versatility for medium to large networks:** Whether you're managing a medium-sized network or a large-scale enterprise infrastructure, the MTS2900 serves as your ultimate core switch or high-capacity aggregation switch. Its adaptability ensures it fits seamlessly into your network ecosystem.

- **Unmatched Port Density and Lightning-Fast Switching Speed:** With industry-leading port density and blazing-fast switching speeds, the MTS2900 Series ensures your network operates at peak efficiency. Experience seamless data flow and reduced latency for all your critical operations.

- **Multi-Speed SFP+ Slots:** The MTS2900 Series offers 48 SFP+ slots, supporting both 1Gb/s and 10Gb/s SFP modules. Enjoy the flexibility to accommodate various connectivity requirements across your network. Plus, every model includes 6 x 40Gb/s QSFP+ ports for high-speed data transfer.

- **Space-Saving Design:** We understand the importance of maximizing your rack space. The MTS2900 Series is just one height unit (44.5mm / 1.75 inches), allowing you to save valuable real estate in your 19" cabinets. Say goodbye to clutter and hello to efficient space utilization.

- **Redundancy and Reliability:** We prioritize the reliability of your network. The MTS2900 Series is equipped with 2 x redundant hot-swappable power supplies and 4 x modular fan modules, ensuring uninterrupted operation even in the face of hardware challenges.

Technical Information: MTS2900

Product Description	
Type	MTS2948X-6Q-A
Description	1U rack mount 40G Core Switch, 48 x 1/10G SFP+ slots, 6 x 40G QSFP+ slots, redundant PSU, advanced software
Port type and quantity	48 x 1/10G SFP+ slots, 6 x 40G QSFP+ slots, 1 x USB, 2 x RJ45 console ports, 1 x FE/GE RJ45 out of band management port, 1 x Reset Button
Power supply	2 x modular redundant PSUs, hot swappable
Heat radiation	Modular fans
Order number	942999824
Mechanical construction	
Dimensions (W x D x H)	440mm x 560mm x 44.2mm
Weight	12.4kg
Mounting	Rack mount
Power requirement	
Operating voltage	100-240VAC 50-60Hz, redundant PSU supported
Power consumption	200W
Ambient conditions	
Operating temperature	-10°C...55°C
Storage/transport temperature	-40°C...70°C
Relative humidity (non-condensing)	10%...90%
Storage/transport humidity (noncondensing)	5%...95%
Software	
Software level	Advanced software
Stacking	Stackable, up to 8 devices in one stack
Approvals	
CE / FCC	Compliant
China Network Access Certificate	Compliant
CCC approval	Compliant
RoHS compliance	RoHS((EU) 2015/863) and RoHS (GB/T26572-2011) compliant
Scope of delivery and accessories	
Scope of delivery	Device, DB9 console cable, installation package. Power cord not included
Accessories to order separately	Industrial HiVision Network Management Software, SFPs, ACA22, PSU module, fan module*

* An MTS2948X-6Q-A switch must have four fan modules for correct operation.

Technical Information: MTS2900

MTS2900 series power supplies	
Type	MTM2900-PSU250
Description	AC/DC 250W PSU, AC Input 100-240V DC Input 192-288V, 3.5A Output 12V/20.8A, 5VSB/2A Hot-Swap supported
Order number	942999822
Service	
Diagnostics	LEDs (PWR) on base device
Current consumption	
Activation current	typ. < 40A at 220VAC at cold start
Technical data	
Operating voltage	100-240VAC
Operating temperature	-10°C...55°C
Input frequency	50-60HZ
Nominal power of voltage supply	250W (220V/110V)
Power requirement	
Current consumption	1.7A (220V), 3.4A (110V)
Scope of delivery and accessories	
Scope of delivery	PSU module. Power cord not included

MTS2900 series fan	
Type	MTM2900-FAN
Description	Modular fan, hot-swap supported, 4 fan modules are mandatory for MTS2948X-6Q-A
Order number	942999823
Service	
Diagnostics	LEDs (FAN) on base device
Technical data	
Operating temperature	-10°C...55°C
Scope of delivery and accessories	
Scope of delivery	Fan module

MTS8000 Series Switches - Layer 3 Modular Core Switch

When it comes to your network's backbone, compromise is not an option. Elevate your network infrastructure with the MTS8000 range, designed to meet the demands of today's IT landscape while future-proofing your OT network for tomorrow's challenges.

Key Benefits

- **Scalability Across Sizes:** The MTS8000 range offers the flexibility of three chassis sizes, ensuring it's perfectly tailored for networks of all sizes, from small setups to large-scale enterprises. No matter your network's scope, we have the right fit for you.
- **Seamless Network Expansion:** Planning for future growth has never been easier. The modular design allows you to effortlessly expand your network by adding port modules whenever needed. No need for costly overhauls; simply scale up as your network evolves.
- **Lightning-Fast Port Speeds:** Stay ahead of the data curve with port speeds of up to 100Gb/s. Experience rapid data transfer, low latency, and smooth network performance, even during peak usage.
- **Unwavering Reliability:** High availability is a top priority for any backbone switch. The MTS8000 range guarantees it with redundant management engines, ensuring continuous operation, even in the face of hardware failures.
- **Built-In Resilience:** The larger chassis models take redundancy to the next level with redundant switching fabrics, minimizing the risk of downtime. Additionally, hot-swappable fans and power supplies keep your network running soothly while simplifying maintenance.

Technical Information: MTS8000

Product Description			
Type	MTS8003-Chassis	MTS8006-Chassis	MTS8010-Chassis
Description	6U rack mount, dual engine, 3 × media modules, 4 × modular PSUs, 2 × fan trays, advanced software	11U rack mount, dual engine, 4 × media modules, 2 ×switch fabric modules, 4 ×modular PSUs, 2 × fan trays, advanced software	15U rack mount, dual engine, 8 × media modules, 2 × switch fabric modules, 4 × modular PSUs, 2 × fan trays, advanced software
Port type and quantity	Including 2 × engine slots, 3 × media module slots	Including 2 × engine slots, 4 × media module slots, 2 × switch fabric module slots	Including 2 × engine slots, 8 × media module slots, 2 × switch fabric module slots
Management ports on engine	1 × USB, 1 × SD port, 1 × RJ45 console port, 1 × RJ45 CMM port, 1 × micro USB console port, 1 × out-of-band port, 1 × RJ45 debug port and 1 × reset button		
Engine redundancy	Yes		
Power supply	4 × modular redundant PSUs, hot swappable		
Heat radiation	2 × modular redundant fan trays, hot swappable		
Mechanical construction			
Dimensions (W x D x H)	440mm×430mm×266mm	441mmx434.8mmx488mm	441mm×434.8mm×666mm
Mounting	Rack mount		
Power requirement			
Operating voltage	100-240VAC, 50-60HZ		
Ambient conditions			
Operating temperature	0°C...55°C		
Storage/transport temperature	-40°C...70°C		
Relative humidity (non-condensing)	10%...90%		
Storage/transport humidity (noncondensing)	5%...95%		
Software			
Software level	Advanced software		
Stacking	Stackable, up to 2 devices in one stack		
Approvals			
CE / FCC	Compliant		
China Network Access Certificate	Compliant		
RoHS compliance	RoHS ((EU) 2015/863) and RoHS (GB/T26572-2011) compliant		
Scope of delivery and accessories			
Scope of delivery	Device, DB9 console cable, installation package. Power cord not included		
Accessories to order separately	Engine, media modules, PSU, fan trays*, SFPs, Industrial HiVision Network Management software		

* Each MTS8000 chassis must have 2 × fan trays for correct operation.

Technical Information: MTS8000

MTS8000 series power supply

Type	MTM8000-PSU800
Description	MTS8000 800W Power Supply Quantity according to power consumption of installed components
Order number	942999803
Service	
Diagnostics	LEDs (PWR) on base device
Current consumption	
Activation current	typ. < 40A at 220VAC at cold start
Technical data	
Operating voltage	100-240VAC or 200-240VDC
Operating temperature	0°C...55°C
Input frequency	50-60HZ
Nominal power of voltage supply	800W (220V/110V)
Power requirement	
Current consumption	5A (220 V), 10A (110V)
Scope of delivery and accessories	
Scope of delivery	Power supply unit. Power cord not included

MTS8003 series fan tray

Type	MTM8003-FAN
Description	Fan tray, hot-swap supported, 2 units of the fan tray are mandatory for MTS8003
Order number	942999804
Service	
Diagnostics	LEDs (FAN) on base device
Technical data	
Operating temperature	0°C...55°C
Scope of delivery and accessories	
Scope of delivery	Fan tray

MTS8006 series fan tray

Type	MTM8006-FAN
Description	Fan tray, hot-swap supported, 2 units of the fan tray are mandatory for MTS8006
Order number	942999798
Service	
Diagnostics	LEDs (FAN) on base device
Current consumption	
Activation current	typ. < 40A at 220VAC at cold start
Power requirement	
Current consumption	5A (220 V), 10A (110V)
Technical data	
Operating temperature	0°C...55°C
Scope of delivery and accessories	
Scope of delivery	Fan tray

MTS8010 series fan tray

Type	MTM8010-FAN
Description	Fan tray, hot-swap supported, 2 units of the fan tray are mandatory for MTS8010
Order number	942999797
Service	
Diagnostics	LEDs (FAN) on base device
Current consumption	
Activation current	typ. < 40A at 220VAC at cold start
Technical data	
Operating temperature	0°C...55°C
Scope of delivery and accessories	
Scope of delivery	Fan tray

Power Consumption

| Order Number	Type	Description	Power Consumption
942999804	MTM8003-FAN	MTS8003 Fan Tray	63 W
942999798	MTM8006-FAN	MTS8006 Fan Tray	47 W
942999797	MTM8010-FAN	MTS8010 Fan Tray	75 W
942999802	MTM8000-Engine	MTS8000 Engine Module	30 W
942999793	MTM8000-SF-A	High performance switch fabric module for MTS8000	155 W
942999794	MTM8000-SF-S	Standard performance switch fabric module for MTS8000	52 W
942999795	MTM8000-SF-24F8X-S	Hybrid card, standard switch fabric module with 24 × 100M/1000M SFP slots, 8 × 1/10G SFP + slots	112 W
942999796	MTM8000-SF-16F16X-S	Hybrid card, standard switch fabric module with 16 × 100M/1000M SFP slots, 16 × 1/10G SFP + slots	112 W
942999800	MTM8000-4QSFP28-A	Media module; 4 x 100Gbit QSFP28 slots	133 W
942999810	MTM8000-16X-S	Media module; 16 × 10Gbit SFP+ slots	82 W
942999811	MTM8000-16X4Q-S	Media module; 16 × 10Gbit SFP+ slots, 4 × 40G QSFP + slots	115 W
942999812	MTM8000-16Q-A	Media module; 16 × 40Gbit QSFP slots, high performance	151 W
942999809	MTM8000-24T24F2X-S	Media module; 24 × Gbit RJ45 ports, 24 × Gbit SFP slots, 2 × 10Gbit SFP+ slots	92 W
942999806	MTM8000-48F2X-S	Media module; 48 × Gbit SFP slots, 2 × 10Gbit SFP+ slots	77 W
942999807	MTM8000-48T2X-S	Media module; 48 × Gbit RJ45 ports, 2 × 10Gbit SFP+ slots	77 W
942999808	MTM8000-48TP2X-S	Media module; 48 × Gbit RJ45 PoE ports, 2 × 10Gbit SFP+ slots	77 W
942999814	MTM8000-52X-A	Media module; 52 × 10Gbit SFP slots, high performance	166 W

Media Module Port Count and Type

MTS8003 series fan tray	Port Speed and Type				
	1Gb/s RJ45	1Gb/s SFP	10Gb/s SFP+	40Gb/s QSFP	100Gb/s QSFP28
MTM8000-24T24F2X-S	24	24	2		
MTM8000-48T2X-S	48		2		
MTM8000-48TP2X-S	48 PoE		2		
MTM8000-48F2X-S		48	2		
MTM8000-16X-S			16		
MTM8000-52X-A			52		
MTM8000-16X4Q-S			16	4	
MTM8000-16Q-A				16	
MTM8000-4QSFP28-A					4

Slot Covers

Order Number	Type	Description
942999815	MTM8000-Module Cover	Media module slot cover
942999816	MTM8000-Engine Cover	Switch engine slot cover
942999817	MTM8000-PSU Cover	Switch PSU slot cover

Technical Drawings: MTS8003 and MTS8006
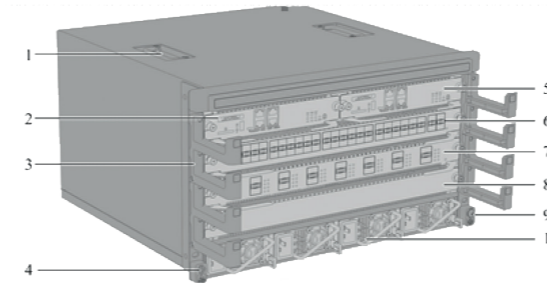
1. Chassis handle
2. Slot 0 of engine module
3. Cable tray
4. Anti-static bracelet socket
5. Slot 1 of engine module
6. Slot 0 of medium module
7. Slot 1 of medium module
8. Slot 2 of medium module
9. Earthing screw
10. Slot (0-3) of power modules
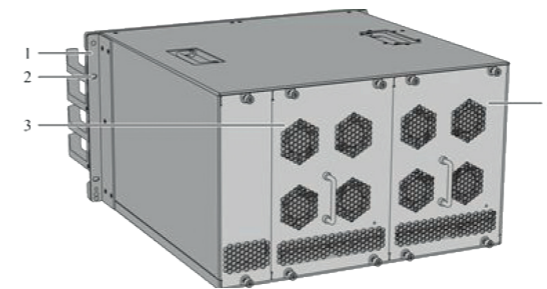
1. Mounting bracket
2. Cabinet screw hole
3. Slot 0 of fan tray
4. Slot 1 of fan tray

1. Slot 0 and 1 of engine module
2. Slot 0 of medium module
3. Slot 1 of medium module
4. Slot 0 of switching fabric
5. Slot 1 of switching fabric
6. Slot 2 of medium module
7. Slot 3 of medium module
8. Cable tray
9. Slot 0 of power module
10. Slot 1 of power module
11. Slot 2 of power module
12. Slot 3 of power module
13. Chassis handle
14. Anti-static bracelet socket
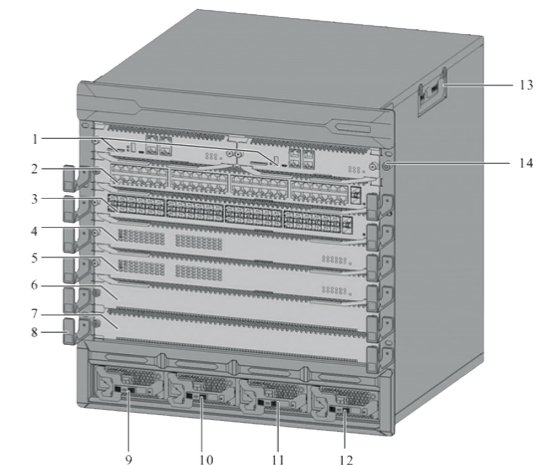
15. Slot 0 of fan tray
16. Slot 1 of fan tray
17. Air outlet
18. Chassis handle
19. Cabinet screw hole
20. Grounding stud
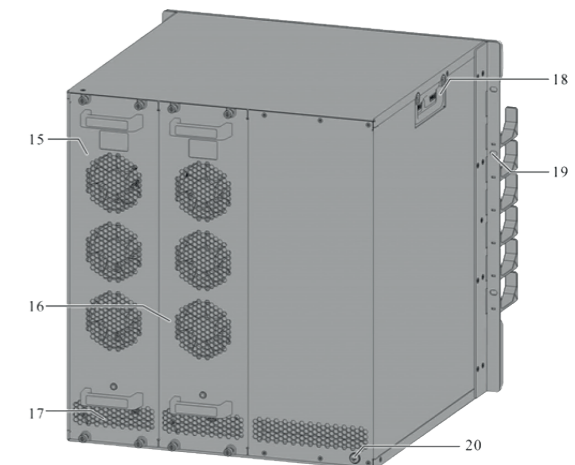
Technical Drawings: MTS8010

1. Slot 0 and 1 of engine module
2. Slot 0 of medium module
3. Slot 1 of medium module
4. Slot 2 of medium module
5. Slot 3 of medium module
6. Slot 0 of switching fabric
7. Slot 1 of switching fabric
8. Slot 4 of medium module
9. Slot 5 of medium module
10. Slot 6 of medium module
11. Slot 7 of medium module
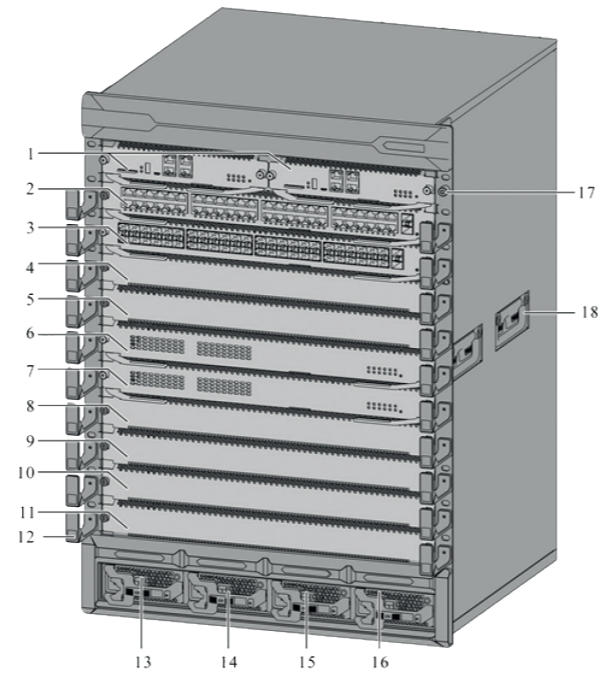12. Cable tray
13. Slot 0 of power module
14. Slot 1 of power module
15. Slot 2 of power module
16. Slot 3 of power module
17. An -sta c bracelet socket
18. Chassis handle

19. Slot 0 of fan tray
20. Slot 1 of fan tray
21. Air outlet
22. Grounding stud
23. Upper cabinet screw hole
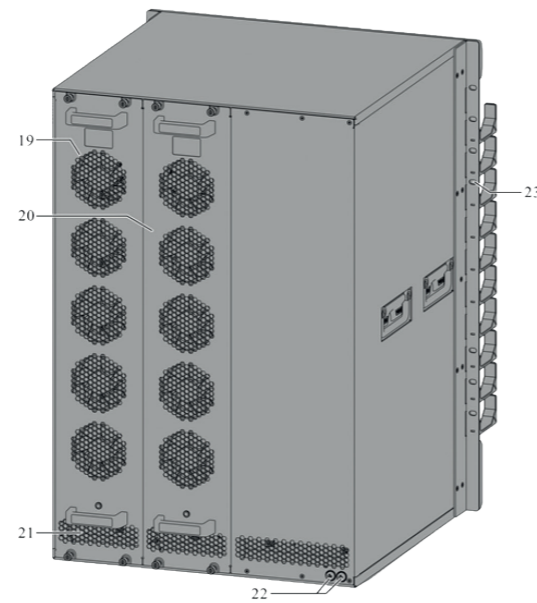
SFP Transceiver Modules

100M SFPs

Product Number	Product Code	Description
942999873	MTS-SFP-100M-MM/LC	100Mbps, Multimode, 2km
942999874	MTS-SFP-100M-SM/LC	100Mbps, Single mode, 20km
942999879	MTS-SFP-100M-LX/LC	100Mbps, Single mode, 1310nm, LC, 40Km, DDMI

1G SFPs

Product Number	Product Code	Description
942999854	MTS-SFP-1G-TX/RJ45	1Gbps, SFP TX/RJ45
942999855	MTS-SFP-1G-SX/LC	1Gbps, Multimode, 850nm, LC, 550m, DDMI
942999856	MTS-SFP-1G-LX/LC	1Gbps, Single mode, 1310nm, LC, 20Km, DDMI
942999857	MTS-SFP-1G-LX+/LC	1Gbps, Single mode, 1310nm, LC, 40Km, DDMI
942999858	MTS-SFP-1G-LH/LC	1Gbps, Single mode, 1310nm, LC, 80Km, DDMI
942999859	MTS-SFP-1G-LH+/LC	1Gbps, Single mode, 1550nm, LC, 100Km, DDMI
942999860	MTS-SFP-1G-BIDI-TypeA-LX/LC	1Gbps, Single mode, TX1310nm, RX1550nm, LC, 10Km-TYPE A
942999861	MTS-SFP-1G-BIDI-TypeB-LX/LC	1Gbps, Single mode, TX1550nm, RX1310nm, LC, 10Km-TYPE B
942999862	MTS-SFP-1G-LX+/LC-1550	1Gbps, Single mode, 1550nm, LC, 40Km, DDMI

SFP Transceiver Modules

10G SFPs

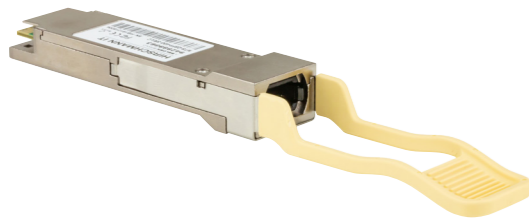| Product Number	Product Code	Description
942999851	MTS-SFP-10G-SR/LC	10Gbps, Multimode, 850nm, LC, 300m, DDMI
942999852	MTS-SFP-10G-LR/LC	10Gbps, Single mode, 1310nm, LC, 10Km, DDMI
942999853	MTS-SFP-10G-ER/LC	10Gbps, Single mode, 1550nm, LC, 40Km, DDMI
942999867	MTS-SFP-10G-TX/RJ45	SFP TX/RJ45, 10Gbps full duplex auto neg.
942999870	MTS-SFP-10G-BIDI-TypeA-LR-LC	MTS2600/2700/2800, MTS2900, MTS8000
942999871	MTS-SFP-10G-BIDI-TypeB-LR-LC	MTS2600/2700/2800, MTS2900, MTS8000
942999875	MTS-SFP-10G-ZR/LC	MTS2600/2700/2800, MTS2900, MTS8000
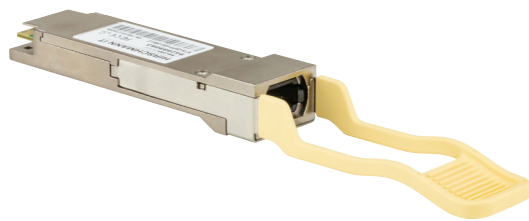
40G SFPs

Product Number	Product Code	Description
942999863	MTS-SFP-40G-SR/LC	40Gbps, Multimode, 850nm, MPO, 100m (OM3), 150m(OM4), DDMI
942999864	MTS-SFP-40G-LR/LC	40Gbps, Single mode, 1310nm, LC, 10Km, DDMI
942999872	MTS-QSFP-40G-ER/LC	MTS2900, MTS8000

100M SFPs

Product Number	Product Code	Description
942999876	MTS-SFP-100G-SR	Multimode, 850nm, MPO, 70m (OM3), 100m (OM4), DDMI, 100GBASE-SR4
942999877	MTS-SFP-100G-LR/LC	Single mode, WDM:1295.53-1309. 14nm, LC, 10Km, DDMI, 100GBASE-LR4

SFP Matrix

			MTS2600 Series Switch	MTS2700 Series Switch	MTS2800 Series Switch		MTS2900 Series Switch		MTS8000 Series Switch			
	Product Number	Product Code	10G SFP+ port	10G SFP+ port	1G SFP port	10G SFP+ port	10G SFP+ port	40G QSFP port	1G SFP port	10G SFP+ port	40G QSFP port	100G QSFP28 port
100M SFPs	942999873	MTS-SFP-100M-MM/LC			•				•			
	942999874	MTS-SFP-100M-SM/LC			•				•			
	942999879	MTS-SFP-100M-LX/LC			•				•			
1G SFPs	942999854	MTS-SFP-1G-TX/RJ45			•		•		•	•		
	942999855	MTS-SFP-1G-SX/LC	•	•	•	•	•		•	•		
	942999856	MTS-SFP-1G-LX/LC	•	•	•	•	•		•	•		
	942999857	MTS-SFP-1G-LX+/LC	•	•	•		•		•	•		
	942999858	MTS-SFP-1G-LH/LC	•	•	•		•		•	•		
	942999859	MTS-SFP-1G-LH+/LC	•	•	•		•		•	•		
	942999860	MTS-SFP-1G-BIDI-TypeA-LX/LC	•	•	•		•		•	•		
	942999861	MTS-SFP-1G-BIDI-TypeB-LX/LC	•	•	•		•		•	•		
	942999862	MTS-SFP-1G-LX+/LC-1550	•	•	•		•		•	•		
10G SFP	942999851	MTS-SFP-10G-SR/LC	•	•		•	•			•		
	942999852	MTS-SFP-10G-LR/LC	•	•		•	•			•		
	942999853	MTS-SFP-10G-ER/LC	•	•		•	•			•		
	942999867	MTS-SFP-10G-TX/RJ45	•	•		•	•			•		
	942999870	MTS-SFP-10G-BIDI-TypeA-LR-LC		•		•	•			•		
	942999871	MTS-SFP-10G-BIDI-TypeB-LR-LC		•		•	•			•		
	942999875	MTS-SFP-10G-ZR/LC		•		•	•			•		
40G SFP	942999863	MTS-SFP-40G-SR/LC						•			•	
	942999864	MTS-SFP-40G-LR/LC						•			•	
	942999872	MTS-QSFP-40G-ER/LC						•			•	
100G QSFP28	942999876	MTS-SFP-100G-SR										•
	942999877	MTS-SFP-100G-LR/LC										•
	942999878	MTS-Cable-100G-3M										•

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Stacking Cables

10G Stacking Cables

Product Number	Product Code	Description
942999868	MTS-Cable-10G-1M	10G Stacking Cable, 1m, including 2 x SFP+ connectors
942999869	MTS-Cable-10G-3M	10G Stacking Cable, 3m, including 2 x SFP+ connectors

40G Stacking Cables

Product Number	Product Code	Description
942999865	MTS-Cable-40G-1M	40G Stacking Cable, 1m, including 2 x QSFP connectors
942999866	MTS-Cable-40G-3M	40G Stacking Cable, 3m, including 2 x QSFP connectors

100G Stacking Cable

Product Number	Product Code	Description
942999878	MTS-Cable-100G-3M	100G Stacking Cable, 3m, including 2 x QSFP28 connectors

Terminal Cable, RJ45 to USB

The terminal cable enables a serial connection from the USB port of an external management station (PC with corresponding terminal emulation software) to the RJ45 console port of the MTS switches.

Part number: 942096001

Auto-configuration Adapter (ACA22-USB)

The Auto-configuration Adapter 512 MB with USB 2.0 connection can be used to store device configuration files. The design of the ACA allows it to be securely attached to a rack.

Part number: 942124001

MTS Switches Software Functionality: Switching

Switching	Basic	Standard	Enhanced	Advanced	MTS8000
MAC limitation	•	•	•	•	•
Static MAC address entry	•	•	•	•	•
MAC blackhole	•	•	•	•	•
Static/Dynamic ARP	•	•	•	•	•
GARP	•	•	•	•	•
ARP proxy	•	•	•	•	•
VLAN (802.1Q)	•	•	•	•	•
Flow control (802.3x, 802.3p)	•	•	•	•	•
LAG	•	•	•	•	•
QinQ	•	•	•	•	•
Flexible QinQ	•	•	•	•	•
VLAN mapping	•	•	•	•	•
STP/RSTP/MSTP	•	•	•	•	•
GARP VLAN Registration Protocol (GVRP)	•	•	•	•	•
Super VLAN	•	•	•	•	•
Private VLAN	•	•	•	•	•
Voice VLAN	•	•	•	•	•
BPDU Tunnel	•	•	•	•	•
N:1/N:N port monitoring	•	•	•	•	•
SPAN	•	•	•	•	•
ERSPAN				•	•
Flow mirroring	•	•	•	•	•
ERPS	•	•	•		
UDLD	•	•	•	•	•
OAM	•	•	•	•	•
sFlow	•	•	•	•	•
MPLS				•	•
MPLS QoS				•	•
MPLS L3VPN				•	•
VXLAN			•	•	•
EVPN			•	•	•
TRILL				•	•
Multicast VLAN Registration	•	•	•	•	•
Multicast VLAN Plus	•	•	•	•	•
ERPS	•	•	•	•	•

MTS Switches Software Functionality: Routing

Routing	Basic	Standard	Enhanced	Advanced	MTS8000
Static route	•	•	•	•	•
RIP v1/v2		•	•	•	•
OSPF		•	•	•	•
BGP			•	•	•
ISIS			•	•	•
RIPng			•	•	•
BGP4+			•	•	•
OSPF v3			•	•	•
ISIS v6			•	•	•
IGMP v1/v2			•	•	•
IGMP v3			•	•	•
IGMP filter			•	•	•
MLD v1/v2	•	•	•	•	•
IGMP snooping	•	•	•	•	•
MLD v1/v2 snooping	•	•	•	•	•
PIM DM			•	•	•
PIM SM			•	•	•
PIM SM v6				•	•
PIM SDM			•	•	•
PIM SSM			•	•	•
DHCP Client	•	•	•	•	•
DHCP Server		•	•	•	•
DHCP relay		•	•	•	•
DHCP v6 Server/Client		•	•	•	•
DHCP v6 relay		•	•	•	•
DNS	•	•	•	•	•
FTP Server/Client	•	•	•	•	•
NTP	•	•	•	•	•
IPv6	•	•	•	•	•
IPv6 tunnel			•	•	•
GRE			•	•	•
6to4 tunnel			•	•	•
ISATAP tunnel			•	•	•
BFD			•	•	•
VRRP		•	•	•	•
VRRP v6			•	•	•
IRMP				•	•

IPv6	Basic	Standard	Enhanced	Advanced	MTS8000
Static Routing v6	•	•	•	•	•
IPv6	•	•	•	•	•
IPv6 tunnel			•	•	•
PIM v6-SM			•	•	•
IP v6 Multicast			•	•	•
GRE v6			•	•	•
TCP v6	•	•	•	•	•
UDP v6	•	•	•	•	•
RIPng		•	•	•	•
BGP4+			•	•	•
OSPF v3		•	•	•	•
ISIS v6			•	•	•
DHCP v6 Server/Client		•	•	•	•
DHCP v6 relay		•	•	•	•
Prefix List v6		•	•	•	•
BFD v6				•	•
VRRPv3			•	•	•

Management	Basic	Standard	Enhanced	Advanced	MTS8000
Console	•	•	•	•	•
Telnet	•	•	•		•
SSH v1/v2	•	•	•		•
SNMP v1/v2	•	•	•	•	•
SNMP v3	•	•	•		•
RMON	•	•	•		
TR069	•	•		•	•
IPFIX				•	•
OAM (802.3ah, 802.1ag, ITU Y.1731)	•	•	•	•	•
EEP	•	•	•		•
Syslog	•	•	•		•
Web UI	•	•	•	•	•
DHCP Client	•	•	•		•
DHCP Server			•	•	•
DHCP relay			•	•	•
DNS	•	•	•	•	•
FTP Server/Client	•	•	•		•
NTP	•	•	•	•	•
TFTP	•	•	•	•	•
E-LMI	•	•	•	•	•
LLDP	•	•	•	•	•
SLA		•	•	•	•

MTS Switches Software Functionality: Security

Security	Basic	Standard	Enhanced	Advanced	MTS8000
Login security	•	•	•	•	•
AAA	•	•	•	•	•
802.1x	•	•	•	•	•
RADIUS	•	•	•	•	•
TACACS+	•	•	•	•	•
SSH Client	•	•	•	•	•
Port security	•	•	•	•	•
Port isolation	•	•	•	•	•
UNI/NNI isolation	•	•	•	•	•
DHCP snooping	•	•	•	•	•
Dynamic ARP Inspection (DAI)	•	•	•	•	•
IP Source Guard	•	•	•	•	•
CPU protection	•	•	•	•	•
uRPF	•	•	•	•	•
LAND attack protection	•	•	•	•	•
SYN flooding protection	•	•	•	•	•
Ping flooding protection	•	•	•	•	•
TearDrop protection	•	•	•	•	•
Ping of Death protection	•	•	•	•	•
TCP flooding protection	•	•	•	•	•
ICMP flooding protection	•	•	•	•	•
Unicast storm control	•	•	•	•	•
Multicast storm control	•	•	•	•	•
Broadcast storm control	•	•	•	•	•
IPv4/v6 Standard/Extended ACL	•	•	•	•	•
MAC ACL	•	•	•	•	•
Port ACL	•	•	•	•	•
ACL log	•	•	•	•	•
Mac Forced Forwarding	•	•	•	•	•
Loopback Detection	•	•	•	•	•
VLAN Isolation	•	•	•	•	•
HMAC-SHA256 (RIP, OSPF)	•	•	•	•	•
Key Chain		•	•	•	•
APR Check	•	•	•	•	•
AARF	•	•	•	•	•

MTS Switches Software Functionality: QoS, Virtualization, SDN

QoS	Basic	Standard	Enhanced	Advanced	MTS8000
Class based QoS schedule	•	•	•	•	•
CAR	•	•	•	•	•
SP	•	•	•	•	•
WRR	•	•	•	•	•
SP + WRR	•	•	•	•	•
RED	•	•	•	•	•
WRED	•	•	•	•	•
Traffic Shaping	•	•	•	•	•
Traffic policy	•	•	•	•	•
802.1p mapping	•	•	•	•	•
DSCP mapping	•	•	•	•	•

Virtualization	Basic	Standard	Enhanced	Advanced	MTS8000
Stack	•	•	•	•	•
M-LAG	•	•	•	•	•
MAD	•	•	•	•	•
Vertical Virtualization	•	•	•	•	•

SDN	Basic	Standard	Enhanced	Advanced	MTS8000
OpenFlow				•	•
XML API/NETCONF	•	•	•	•	•

SDN is fully supported on MTS8000 series -A high performance media modules and MTS2XXX-A products.

MTS2824-6X-E, MTS2848-6X-S, MTS2748-6X-MP-E, MTS2724-6X-MP-E, MTS2848-6X-E and MTS2832TF-4X-E are hardware ready for Openflow only.

MTS Switch Software - New Functionality for OT Networks
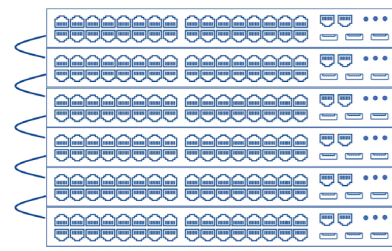
Ethernet Switch Stacking

Ethernet switch stacking offers significant advantages in industrial automation networks. It provides scalability, simplifying network expansion by adding switches to the existing stack, thereby accommodating growing automation needs efficiently without network disruption. High availability is achieved by consolidating switches into a single logical unit, reducing downtime as traffic seamlessly reroutes in case of a switch failure. Simplified management of the stack streamlines configuration and monitoring, enhancing efficiency. Stacking aggregates bandwidth from multiple switches, crucial for data-heavy automation tasks. Additionally, it offers resilience through redundant links, ensuring network continuity, even during cable or switch failures. These benefits collectively optimize network performance and reliability in OT environments.
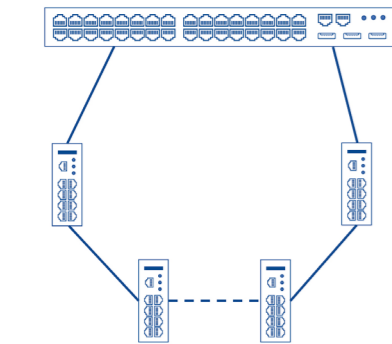
Ethernet Ring Protection Switching

ERPS, or Ethernet Ring Protection Switching, is a valuable technology for industrial networks. It enhances network resilience by creating redundant paths within a ring topology, swiftly switching in the event of a failure to maintain uninterrupted operations. With millisecondlevel convergence times, ERPS ensures data continuity, preventing loss of communication. Its scalability suits networks of varying sizes and geographical dispersion, facilitating expansion. Moreover, ERPS minimizes planned maintenance downtime, crucial in industries where interruptions are costly. It also offers cost-effective redundancy, eliminating the need for complex configurations or additional equipment, making it a practical choice for industrial automation networks.

Multi-Chassis Link Aggregation

Multi-chassis Link Aggregation (MC-LAG) offers crucial benefits in industrial networks. Firstly, it ensures enhanced redundancy by providing links to multiple switches, guaranteeing uninterrupted operation even during switch failures. Secondly, MC-LAG provides increased bandwidth by combining multiple links, handling growing data volumes. Thirdly, it offers load balancing to evenly distribute traffic, preventing congestion and optimizing the use of available bandwidth. In addition, MC-LAG leads to reduced downtime during maintenance, as one switch can be serviced while the another handles the traffic. Finally, MC-LAG saves costs by ensuring that all links are active simultaneously.
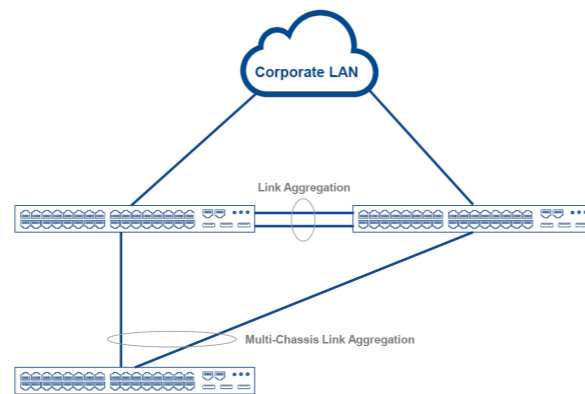
MTS Switch Ordering Guide

Hirschmann IT MTS switches can be placed in three categories: fixed format, modular format, and chassis format.

- Fixed format switches require no additional device components for operation. Accessories such as SFPs and tacking cables are available.
- Modular format switches require additional device components, for example power supplies or fans. Accessories such as SFPs and stacking cables are available.
- Chassis-based switches are built from individual components for maximum flexibility.

Fixed format switches

Model	Part Number
MTS2624-4X-B	942999847
MTS2648-6X-B	942999839
MTS2724-4X-FP-S	942999835
MTS2832TF-4X-E	942999846
MTS2824F-4X-S	942999845
MTS2824-4X-S	942999844
MTS2848-6X-S	942999843
MTS2824-6X-E	942999842
MTS2848-6X-E	942999841

MTS2624-4X-B: fixed

MTS2748-6X-MP-E: modular

MTS2832TF-4X-E: fixed

MTS2948X-6Q-A: modular

Modular format switches

| Model	Part Number	PSU Op ons	Fan Module	Media Module	Notes
MTS2724-6X-MP-E	942999832	942999834 MTM2700-PSU120 942999833 MTM2700-PSU500 942999837 MTM2700-PSU880		942999836 MTM2700-2X	PSU min. 1, max. 2 Media module max. 1
MTS2748-6X-MP-E	942999831	942999834 MTM2700-PSU120 942999833 MTM2700-PSU500 942999837 MTM2700-PSU880		942999836 MTM2700-2X	PSU min. 1, max. 2 Media module max. 1
MTS2848TF-4X-E	942999849	942999840 MTM2800-PSU120		942999850 MTM2800-2X	PSU min. 1, max. 2 Media module max. 1
MTS2948X-6Q-A	942999824	942999822 MTM2900-PSU250	942999823 MTM2900-FAN		PSU min. 1, max. 2 Fans min. 4, max 4

Accessories

Model	Part Number	Notes
Serial cable USB to RJ45	942096001	All MTS switches must first be configured via the console port
ACA22-USB (EEC)	942124001	Hirschmann ACA can be a;ached to the rack next to the MTS switch
SFPs		Available from 100Mb/s to 100Gb/s
Stacking cables		Available from 10Gb/s to 100Gb/s

MTS Switch Ordering Guide (Continued)

MTS8003

Model	Part Number	Notes
MTS8003 chassis	942999801	
MTM8003 fan trays	942999804	Min. 2, max. 2
Power supplies	942999803	Min. 1, max. 4
Engine modules	942999802	Min. 1, max. 2
Switching fabric modules		None required
Media modules		Min. 1, max. 3
SFPs		As required
Stacking cables		As required
Slot covers		As required
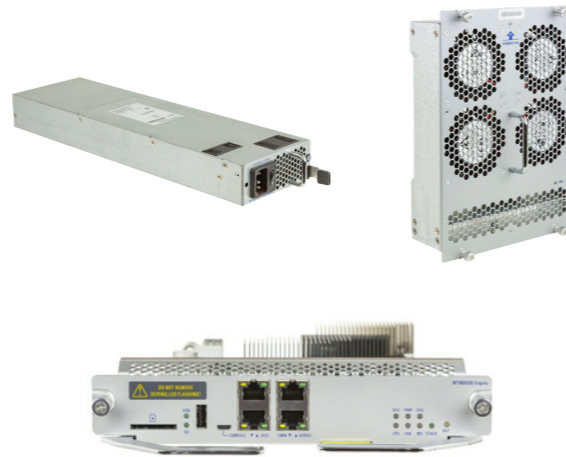
MTS8006

Model	Part Number	Notes	Chassis Slot Capacity
MTS8003 chassis	942999801		
MTM8003 fan trays	942999804	Min. 2, max. 2	
Power supplies	942999803	Min. 1, max. 4	
Engine modules	942999802	Min. 1, max. 2	
Switching fabric modules		Min. 1, max. 2	Media modules and switching fabric modules cannot exceed 6
Media modules		Min. 1, max. 5	Media modules and switching fabric modules cannot exceed 6
SFPs		As required	
Stacking cables		As required	
Slot covers		As required	

MTS8010

Model	Part Number	Notes	Chassis Slot Capacity
MTS8003 chassis	942999791		
MTM8003 fan trays	942999797	Min. 2, max. 2	
Power supplies	942999803	Min. 1, max. 4	
Engine modules	942999802	Min. 1, max. 2	
Switching fabric modules		Min. 1, max. 2	Media modules and switching fabric modules cannot exceed 10
Media modules		Min. 1, max. 9	Media modules and switching fabric modules cannot exceed 10
SFPs		As required	
Stacking cables		As required	
Slot covers		As required	

Notes about Switching Fabric modules:

- Module types cannot be mixed in one chassis
- Performance must match media modules
  - High performance modules (-A) for media modules ending in -A
  - Standard (-S) or high performance modules (-A) for media modules ending in -S

About Belden

Belden Inc. delivers the infrastructure that makes the digital journey simpler, smarter and secure. We're moving beyond connectivity, from what we make to what we make possible through a performance-driven portfolio, forward-thinking expertise and purpose-built solutions. With a legacy of quality and reliability spanning 120-plus years, we have a strong foundation to continue building the future. We are headquartered in St. Louis and have manufacturing capabilities in North America, Europe, Asia, and Africa.

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