



Unmanaged Switches

Moxa has a large portfolio of industrial unmanaged switches that have been specifically designed for industrial Ethernet infrastructure. Our unmanaged Ethernet switches uphold the stringent standards that are required for operational reliability in harsh environments.



DIN-rail Managed Switches

Our DIN-rail managed switches feature industrial-grade reliability, network redundancy, and security features based on the IEC 62443 standard. The compact DIN-rail managed switches have a variety of copper and fiber port combinations that provide customers with greater flexibility when deploying networks.



Rackmount Managed Switches

The industrial rackmount switches provide modular flexibility with 24 to 52-port routing and switching capabilities, security features based on the IEC 62443 standard, and millisecond-level, fast multicast traffic redundancy to strengthen IIoT infrastructures as in city, transportation, manufacturing, and surveillance applications.

Ethernet Switches

Moxa provides a wide range of industrial Ethernet switches that feature industrial-grade reliability, network redundancy, strengthened security, easy management, and competitive price-to-performance ratios. Our comprehensive portfolio includes unmanaged switches, managed switches, PoE switches, rackmount switches, and switches designed for use in the rail industry that meet parts of the EN 50155 standard.



Ethernet Switches
Product Pages



PoE Switches

We provide a wide range of PoE/PoE+ switches with up to 48-port fiber optic Gigabit PoE+ ports and up to 60 W output per port to deliver high-speed data transmission while powering high-power devices over long distances. With an industrial-grade design, our PoE switches provide surge protection of 3 kV per LAN port, and Smart PoE management features to simplify PoE network deployment and maintenance.



EN 50155 Ethernet Switches

Moxa is an IRIS-certified company that offers a large portfolio of rugged Ethernet switches that comply with the mandatory sections of the EN 50155 standard. These products have been deployed in many rail and metro systems around the world. With our innovative solutions and technologies, we help train builders achieve overall transport safety, efficiency, and significant cost and time savings on railway operation and maintenance.



Ethernet Extenders

Our Ethernet extenders simplify long-distance network deployment and reduce construction costs with existing twisted-pair copper wires. Our Ethernet extenders can achieve transmission speeds up to 100 Mbps and feature plug-and-play deployment, DSL bypass, millisecond-level redundancy, and multiple industry certifications, making them suitable for a variety of industrial applications.

Unmanaged Switches



Product Series	EDS-G308	EDS-G205	EDS-316	EDS-309	EDS-308	EDS-305	EDS-208A	EDS-205A	EDS-208	EDS-205	
Ethernet Interface											
Max. Number of Ports	8	5	16	9	8	5	8	5	8	5	
10/100/1000BaseT(X) Ports (RJ45 connector)	Up to 8	4	–	–	–	–	–	–	–	–	
10/100BaseT(X) Ports (RJ45 connector)	–	–	Up to 16	6	Up to 8	Up to 5	Up to 8	Up to 5	Up to 8	5	
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	Up to 2	1	–	–	–	–	–	–	–	–	
100BaseFX Ports (multi-mode SC connector)	–	–	Up to 2	Up to 3	Up to 2	Up to 1	Up to 2	Up to 1	Up to 1	–	
100BaseFX Ports (multi-mode ST connector)	–	–	Up to 2	Up to 3	Up to 2	Up to 1	Up to 2	Up to 1	Up to 1	–	
100BaseFX Ports (single-mode SC connector)	–	–	Up to 2	–	Up to 2	Up to 1	Up to 2	Up to 1	–	–	
100BaseFX Ports (single-mode SC connector, 80 km)	–	–	Up to 2	–	Up to 2	Up to 1	–	–	–	–	
Input Voltage											
24 VDC	–	–	–	–	–	✓	–	–	✓	✓	
12/24/48 VDC	✓	✓	✓	✓	✓	–	✓	✓	–	–	
Alarm Contact Channels											
1 Relay Output With Current Carrying Capacity of 1 A @ 24 VDC	✓	✓	✓	✓	✓	✓	–	–	–	–	
Installation Options											
DIN-rail Mounting	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Wall Mounting (with optional kit)	✓	✓	✓	✓	✓	✓	✓	✓	–	–	
Operating Temperature											
0 to 60°C (32 to 140°F)	–	–	–	–	–	✓	–	–	–	–	
-10 to 60°C (14 to 140°F)	✓	✓	✓	✓	✓	–	✓	✓	✓	✓	
-40 to 75°C (-40 to 167°F)	✓	✓	✓	✓	✓	✓	✓	✓	–	–	
Standards and Certifications											
EMI	CISPR 32, FCC Part 15B Class A										
Safety	UL 508, UL 60950-1		UL 508, UL 60950-1				UL 508			UL 508, EN 60950-1	
Hazardous Locations	ATEX, Class I Division 2						ATEX, Class I Division 2, IECEx		–		
Railway	EN 50121-4		–				EN 50121-4			–	
Traffic Control	–						NEMA TS2			–	
Power Substation	–										
Maritime	ABS, DNV GL, LR, NK		DNV GL		–		DNV GL		ABS, DNV GL, LR, NK		

Unmanaged Switches



	EDS-2018-ML	EDS-2016-ML	EDS-2010-ML	EDS-2008-EL	EDS-2008-ELP	EDS-2005-EL	EDS-2005-ELP
Ethernet Interface							
Max. Number of Ports	18	16	10	8	8	5	5
10/100/1000BaseT(X) Ports (RJ45 connector)	–	–	–	–	–	–	–
10/100BaseT(X) Ports (RJ45 connector)	16	Up to 16	8	Up to 8	8	5	5
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	2	–	2	–	–	–	–
100BaseFX Ports (multi-mode SC connector)	–	Up to 2 ¹	–	Up to 1	–	–	–
100BaseFX Ports (multi-mode ST connector)	–	Up to 2 ¹	–	Up to 1	–	–	–
100BaseFX Ports (single-mode SC connector)	–	Up to 2 ¹	–	–	–	–	–
Input Voltage							
12/24/48 VDC	✓	✓	✓	✓	✓	✓	✓
DIP Switch Configuration							
Quality of Service (QoS)	✓	✓	✓	✓	✓	✓	✓
Broadcast Storm Protection (BSP)	✓	✓	✓	✓	✓	✓	✓
Port Break Alarm	✓	✓	✓	–	–	–	–
Alarm Contact Channels							
1 Relay Output with Current Carrying Capacity of 1 A @ 24 VDC	✓	✓	✓	–	–	–	–
Installation Options							
DIN-rail Mounting	✓	✓	✓	✓	✓	✓	✓
Wall Mounting (with optional kit)	✓	✓	✓	✓	✓	✓	✓
Operating Temperature							
-10 to 60°C (14 to 140°F)	✓	✓	✓	✓	✓	✓	✓
-40 to 75°C (-40 to 167°F)	✓	✓	✓	✓	–	✓	–
Standards and Certifications							
EMI	CISPR 32, FCC Part 15B Class A			CISPR 22, 32, FCC Part 15B Class A			
Safety	UL 61010-2-201, EN 62368-1 (LVD)						
Hazardous Locations	–						
Railway	EN 50121-4			–			
Traffic Control	NEMA TS2	–	NEMA TS2	–			
Power Substation	–						
Marine	–						

1. EDS-2016-ML fiber models will be available in the second half of 2020.

DIN-rail Managed Switches



	MDS-G4028	MDS-G4020	MDS-G4012
Ethernet Interface			
Max. Number of Ports	28	20	12
Modular 10/100/1000BaseT(X) or 1000BaseSFP Ports	Up to 28 (up to 24 for SFP ports)	Up to 20 (up to 16 for SFP ports)	Up to 12 (up to 8 for SFP ports)
Modular 10/100BaseT(X) or 100BaseSFP Ports	Up to 24	Up to 16	Up to 8
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP)	-	-	-
Optical Fiber			
100Base Fiber	Up to 24	Up to 16	Up to 8
1000Base Fiber	Up to 24	Up to 16	Up to 8
Filter			
802.1p Class of Service	✓	✓	✓
802.1Q VLAN	✓	✓	✓
IGMP v1/v2/v3 Snooping	✓	✓	✓
Industrial Protocols			
EtherNet/IP	-	-	-
Modbus TCP	-	-	-
PROFINET	-	-	-
Management			
DHCP Option 82	-	-	-
Port Mirror	✓	✓	✓
RMON	✓	✓	✓
SNMPv1/v2c/v3	✓	✓	✓
Syslog	✓	✓	✓
Console Port	✓	✓	✓
Telnet/SSH	✓	✓	✓
TFTP	✓	✓	✓
Redundancy Protocols			
STP/RSTP/MSTP	no MSTP	no MSTP	no MSTP
Turbo Ring/Turbo Chain	✓	✓	✓
Security			
HTTPS/SSL	✓	✓	✓
TACACS+	✓	✓	✓
MAC Sticky	✓	✓	✓
MAB Authentication	-	-	-
RADIUS	✓	✓	✓
SSH	✓	✓	✓
Access Control List	-	-	-
Layer 3 Switching	-	-	-
Input Voltage			
12 VDC	-	-	-
24 VDC	✓	✓	✓
48 VDC	✓	✓	✓
110 VAC/VDC	✓	✓	✓
220 VAC/VDC	✓	✓	✓
Installation			
DIN-rail Mounting	✓	✓	✓
Wall Mounting (with optional kit)	✓	✓	✓
Rack Mounting (with optional kit)	✓	-	-
Operating Temperature			
0 to 60°C (32 to 140°F)	-	-	-
-10 to 60°C (14 to 140°F)	✓	✓	✓
-40 to 75°C (-40 to 167°F)	✓	✓	✓
Standards and Certifications			
EMI	CISPR 32, FCC Part 15B Class A		
Safety	UL 62368-1, IEC/EN 62368-1, IEC/EN 60950-1		
Hazardous Locations	ATEX, Class I Division 2		
Railway	EN 50121-4		
Traffic Control	NEMA TS2		
Power Substation	IEC 61850 Edition 2 Class 1, IEEE 1613 Class 1		
Marine	-		

DIN-rail Managed Switches



Product Series	EDS-828	EDS-728	EDS-619	EDS-616	EDS-611	EDS-608
Ethernet Interface						
Max. Number of Ports	28	28	19	16	11	8
Modular 10/100/1000BaseT(X) or 1000BaseSFP Ports	Up to 4	Up to 4	–	–	–	–
Modular 10/100BaseT(X) or 100BaseSFP Ports	Up to 24	Up to 24	Up to 16	Up to 16	Up to 8	Up to 8
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP)	–	–	3	–	3	–
Optical Fiber						
100Base Fiber	Up to 24	Up to 24	Up to 16	Up to 16	Up to 8	Up to 8
1000Base Fiber	Up to 4	Up to 4	Up to 3	–	Up to 3	–
Filter						
802.1p Class of Service	✓	✓	✓	✓	✓	✓
802.1Q VLAN	✓	✓	✓	✓	✓	✓
IGMP v1/v2/v3 Snooping	✓	✓	✓	✓	✓	✓
Industrial Protocols						
EtherNet/IP	✓	✓	✓	✓	✓	✓
Modbus TCP	✓	✓	✓	✓	✓	✓
PROFINET	–	–	–	–	–	–
Management						
DHCP Option 82	✓	✓	✓	✓	✓	✓
Port Mirror	✓	✓	✓	✓	✓	✓
RMON	✓	✓	✓	✓	✓	✓
SNMPv1/v2c/v3	✓	✓	✓	✓	✓	✓
Syslog	✓	✓	✓	✓	✓	✓
Console Port	✓	✓	✓	✓	✓	✓
Telnet/SSH	✓	✓	✓	✓	✓	✓
TFTP	✓	✓	✓	✓	✓	✓
Redundancy Protocols						
STP/RSTP/MSTP	✓	✓	✓	✓	✓	✓
Turbo Ring/Turbo Chain	✓	✓	✓	✓	✓	✓
Security						
HTTPS/SSL	✓	✓	✓	✓	✓	✓
TACACS+	✓	✓	✓	✓	✓	✓
MAC Sticky	–	–	–	–	–	–
MAB Authentication	–	–	–	–	–	–
RADIUS	✓	✓	✓	✓	✓	✓
SSH	✓	✓	✓	✓	✓	✓
Access Control List	✓	–	–	–	–	–
Layer 3 Switching	✓	–	–	–	–	–
Input Voltage						
12 VDC	–	–	✓	✓	✓	✓
24 VDC	✓	✓	✓	✓	✓	✓
48 VDC	–	–	✓	✓	✓	✓
Installation						
DIN-rail Mounting	✓	✓	✓	✓	✓	✓
Wall Mounting (with optional kit)	✓	✓	✓	✓	✓	✓
Operating Temperature						
0 to 60°C (32 to 140°F)	✓	✓	✓	✓	✓	✓
-10 to 60°C (14 to 140°F)	–	–	–	–	–	–
-40 to 75°C (-40 to 167°F)	–	–	✓	✓	✓	✓
Standards and Certifications						
EMI	CISPR 32, FCC Part 15B Class A					
Safety	EN 60950-1, UL 508, UL 60950-1		EN 60950-1, UL 508, UL 60950-1			
Hazardous Locations	–		ATEX, Class I Division 2			
Railway	–		EN 50121-4			
Traffic Control	–		NEMA TS2			
Power Substation	–					
Maritime	ABS, DNV GL, LR, NK					

DIN-rail Managed Switches



Product Series	EDS-G516E	EDS-G512E	EDS-G509	EDS-G508E	EDS-528E	EDS-518E	EDS-510E
Ethernet Interface							
Max. Number of Ports	16	12	9	8	28	18	10
10/100/1000BaseT(X) Ports (RJ45 connector)	12	8	4	8	–	–	–
10/100BaseT(X) Ports (RJ45 connector)	–	–	–	–	24	Up to 14	7
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	–	–	5	–	4	4	3
100/1000Base SFP Slots	4	4	–	–	–	–	–
100BaseFX Ports (ST or SC connector)	–	–	–	–	–	Up to 2	–
Filter							
802.1p Class of Service	✓	✓	✓	✓	✓	✓	✓
802.1Q VLAN	✓	✓	✓	✓	✓	✓	✓
IGMP v1/v2/v3 Snooping	✓	✓	✓	✓	✓	✓	✓
Industrial Protocols							
EtherNet/IP	✓	✓	✓	✓	✓	✓	✓
Modbus TCP	✓	✓	✓	✓	✓	✓	✓
PROFINET	✓	✓	–	✓	✓	✓	✓
Management							
DHCP Option 82	✓	✓	✓	✓	✓	✓	✓
Port Mirror	✓	✓	✓	✓	✓	✓	✓
RMON	✓	✓	✓	✓	✓	✓	✓
SNMPv1/v2c/v3	✓	✓	✓	✓	✓	✓	✓
Syslog	✓	✓	✓	✓	✓	✓	✓
Console Port	✓	✓	✓	✓	✓	✓	✓
Telnet/SSH	✓	✓	✓	✓	✓	✓	✓
TFTP	✓	✓	✓	✓	✓	✓	✓
Redundancy Protocols							
STP/RSTP/MSTP	✓	✓	✓	✓	✓	✓	✓
Turbo Ring/Turbo Chain	✓	✓	✓	✓	✓	✓	✓
Security							
HTTPS/SSL	✓	✓	✓	✓	✓	✓	✓
TACACS+	✓	✓	✓	✓	✓	✓	✓
MAC Sticky	✓	✓	–	✓	✓	✓	✓
MAB Authentication	✓	✓	–	✓	✓	✓	–
RADIUS	✓	✓	✓	✓	✓	✓	✓
Access Control List	✓	✓	–	✓	✓	✓	–
Layer 3 Switching	–	–	–	–	–	–	–
Input Voltage							
12 VDC	✓	✓	✓	✓	✓	✓	✓
24 VDC	✓	✓	✓	✓	✓	✓	✓
48 VDC	✓	✓	✓	✓	✓	✓	✓
-48 VDC	✓	✓	–	✓	✓	✓	✓
110/220 VDC/VAC	–	–	–	–	✓	–	–
Installation							
DIN-rail Mounting	✓	✓	✓	✓	✓	✓	✓
Wall Mounting (with optional kit)	✓	✓	✓	✓	✓	✓	✓
Operating Temperature							
0 to 60°C (32 to 140°F)	–	–	✓	–	–	–	–
-10 to 60°C (14 to 140°F)	✓	✓	–	✓	✓	✓	✓
-40 to 75°C (-40 to 167°F)	✓	✓	✓	✓	✓	✓	✓
Standards and Certifications							
EMI	CISPR 32, FCC Part 15B Class A						
Safety	UL 508	All models: UL 508 PoE models: EN 60950-1 (LVD)	UL 508, EN 60950-1	UL 508	UL 61010-2-201, EN 60950-1 (LVD)	UL 508, EN 60950-1 (LVD)	UL 508
Hazardous Locations	ATEX, Class I Division 2	non-PoE models: ATEX, Class I Division 2	–	ATEX, Class I Division 2	–	ATEX, Class I Division 2	
Railway	EN 50121-4						
Traffic Control	NEMA TS2	non-PoE models: NEMA TS2	–	NEMA TS2	–	NEMA TS2	
Power Substation	IEC 61850-3, IEEE 1613			–	IEC 61850-3, IEEE 1613		
Maritime	ABS, DNV GL, LR, NK	ABS, DNV GL, LR, NK	ABS, DNV GL, LR, NK	ABS, DNV GL, LR, NK	–	ABS, DNV GL, LR, NK	

DIN-rail Managed Switches



Product Series	EDS-518A	EDS-516A	EDS-510A	EDS-508A	EDS-505A
Ethernet Interface					
Max. Number of Ports	18	16	10	8	5
10/100/1000BaseT(X) Ports (RJ45 connector)	–	4	Up to 3	–	–
10/100BaseT(X) Ports (RJ45 connector)	Up to 16	12	7	Up to 8	Up to 5
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	2	–	–	–	–
1000Base SFP Slots	–	–	Up to 3	–	–
100BaseFX Ports (ST or SC connector)	Up to 2	–	–	Up to 2	Up to 2
Filter					
802.1p Class of Service	✓	✓	✓	✓	✓
802.1Q VLAN	✓	✓	✓	✓	✓
IGMP v1/v2/v3 Snooping	✓	✓	✓	✓	✓
Industrial Protocols					
EtherNet/IP	✓	✓	✓	✓	✓
Modbus TCP	✓	✓	✓	✓	✓
PROFINET	–	–	–	–	–
Management					
DHCP Option 82	✓	✓	✓	✓	✓
Port Mirror	✓	✓	✓	✓	✓
RMON	✓	✓	✓	✓	✓
SNMPv1/v2c/v3	✓	✓	✓	✓	✓
Syslog	✓	✓	✓	✓	✓
Console Port	✓	✓	✓	✓	✓
Telnet/SSH	✓	✓	✓	✓	✓
TFTP	✓	✓	✓	✓	✓
Redundancy Protocols					
STP/RSTP/MSTP	✓	✓	✓	✓	✓
Turbo Ring/Turbo Chain	✓	✓	✓	✓	✓
Security					
HTTPS/SSL	✓	✓	✓	✓	✓
TACACS+	✓	✓	✓	✓	✓
MAC Sticky	–	–	–	–	–
MAB Authentication	–	–	–	–	–
RADIUS	✓	✓	✓	✓	✓
Access Control List	–	–	–	–	–
Layer 3 Switching	–	–	–	–	–
Input Voltage					
12 VDC	–	–	–	✓	✓
24 VDC	✓	✓	✓	✓	✓
48 VDC	–	–	–	✓	✓
Installation					
DIN-rail Mounting	✓	✓	✓	✓	✓
Wall Mounting (with optional kit)	✓	✓	✓	✓	✓
Operating Temperature					
0 to 60°C (32 to 140°F)	✓	✓	–	–	–
-10 to 60°C (14 to 140°F)	–	–	✓	✓	✓
-40 to 75°C (-40 to 167°F)	✓	✓	✓	✓	✓
Standards and Certifications					
EMI	CISPR 32, FCC Part 15B Class A				
Safety	EN 60950-1, UL 60950-1, CSA C22.2 No. 60950-1, UL 508				
Hazardous Locations	ATEX, Class I Division 2				
Railway	–				
Traffic Control	–	NEMA TS2		–	
Power Substation	–				
Maritime	DNV GL, NK	DNV GL	–		

DIN-rail Managed Switches



Product Series	EDS-408A	EDS-405A	EDS-405A-PTP	SDS-3008
Ethernet Interface				
Max. Number of Ports	8	5	5	8
10/100BaseT(X) Ports (RJ45 connector)	Up to 8	Up to 5	5	8
100BaseFX Ports (ST or SC connector)	Up to 3	Up to 2	-	-
Optical Fiber				
100Base Fiber	Up to 3	Up to 2	-	-
1000Base Fiber	-	-	-	-
Filter				
802.1p Class of Service	✓	✓	✓	Fixed profiles
802.1Q VLAN	✓	✓	✓	✓
IGMP v1/v2/v3 Snooping	✓	✓	✓	Enabled by EtherNet/IP function
Industrial Protocols				
EtherNet/IP	✓	✓	✓	✓
Modbus TCP	✓	✓	✓	✓
PROFINET	-PN models	-PN models	-	✓
Management				
DHCP Option 82	✓	✓	✓	-
Port Mirror	✓	✓	✓	✓
RMON	✓	✓	✓	-
SNMPv1/v2c/v3	✓	✓	✓	✓
Syslog	✓	✓	✓	✓
Console Port	✓	✓	✓	-
Telnet/SSH	Telnet only	Telnet only	Telnet only	✓
TFTP	✓	✓	✓	✓
Redundancy Protocols				
STP/RSTP/MSTP	✓	✓	✓	STP/RSTP only
Turbo Ring/Turbo Chain	✓	✓	✓	-
Security				
HTTPS/SSL	-	-	-	✓
TACACS+	-	-	-	-
MAC Sticky	-	-	-	-
MAB Authentication	-	-	-	-
RADIUS	-	-	-	-
Access Control List	-	-	-	-
Layer 3 Switching	-	-	-	-
Input Voltage				
12 VDC	✓	✓	✓	✓
24 VDC	✓	✓	✓	✓
48 VDC	✓	✓	✓	✓
-24 VDC	✓	-	-	-
-48 VDC	✓	-	-	✓
Installation				
DIN-rail Mounting	✓	✓	✓	✓
Wall Mounting (with optional kit)	✓	✓	✓	-
Operating Temperature				
0 to 60°C (32 to 140°F)	-	-	-	-
-10 to 60°C (14 to 140°F)	✓	✓	✓	✓
-40 to 75°C (-40 to 167°F)	✓	✓	✓	✓
Standards and Certifications				
EMI	CISPR 32, FCC Part 15B Class A			
Safety	All models: EN 60950-1, UL 508 EDS-408A/408A-T, EDS-408A-MM-SC/MM-ST/ SS-SC Series, EDS-408A-EIP/PN Series: UL 60950-1	UL 508, UL 60950-1	UL 508	EN 60950-1 (LVD), UL 61010-2-201, UL 508
Hazardous Locations	EDS-408A/408A-T, EDS-408A-MM-SC/MM-ST/ SS-SC Series, EDS-408A-EIP/PN Series: ATEX, Class I Division 2	ATEX, Class I Division 2	-	-
Railway	EN 50121-4	-	-	-
Traffic Control	NEMA TS2	NEMA TS2	-	-
Power Substation	-	-	-	-
Maritime	EDS-408A/408A-T, EDS-408A-MM/SS Series: NK EDS-408A/408A-T, EDS-408A-MM/SS Series, EDS-408A-EIP/PN Series: DNV GL	DNV GL	-	-

Product Series	PT-508/510	PT-G503-PHR-PTP
Ethernet Interface		
Max. Number of Ports	8/10	3
Gigabit Ethernet 10/100/1000 BaseT(X)	-	3
Gigabit Ethernet 1000BaseSFP	-	3
Fast Ethernet 10/100 BaseT(X)	6/8	-
Fast Ethernet 100BaseFX	2/2	-
Filter		
802.1Q VLAN	✓	-
IGMP v1/v2/v3	✓	-
802.1p Class of Service	✓	-
Management		
DHCP Option 82	✓	✓
SNMPv1/v2c/v3	✓	✓
Fiber Check	-	✓
Power Substation		
IEC 61850 QoS	-	-
GOOSE Check	-	-
MMS Server	-	✓
Redundancy Protocols		
STP	✓	-
RSTP	✓	✓
MSTP	✓	-
Turbo Ring/Turbo Chain	✓	-
PRP / HSR	-	✓
Security		
Access Control List	-	-
Broadcast Storm Protection	-	-
HTTPS/SSL	✓	✓
RADIUS / TACACS+	✓	✓
Port Lock	✓	-
Rate Limit	✓	-
SSH	✓	✓
Time Management		
SNTP / NTP Server / Client	✓	✓
IEEE 1588v2 PTP (hardware-based)	-	✓
Available Power Input		
24/48 VDC	✓	✓
110/220 VDC/VAC	✓	✓
Operating Temperature		
-40 to 85°C (-40 to 167°F)	✓ ¹	✓
Standards and Certifications		
Safety	UL 508	
EMI	EN 55032 Class A, CISPR 32, FCC Part 15B Class A	
Power Substation	IEC 61850-3, IEEE 1613	

1. Cold start requires minimum of 100 VAC at -40°C.

Rackmount Managed Switches



Product Series	ICS-G7852A	ICS-G7850A	ICS-G7848A	ICS-G7752A	ICS-G7750A	ICS-G7748A	ICS-G7828A	ICS-G7826A
Modular Switch	✓	✓	✓	✓	✓	✓	–	–
Ethernet Interface								
Max. Number of Ports	52	50	48	52	50	48	28	26
10GbE SFP+ Slots	4	2	–	4	2	–	4	2
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	–	–	–	–	–	–	4	4
Gigabit Ethernet 10/100/1000	Up to 48	Up to 48	Up to 48	Up to 48	Up to 48	Up to 48	20	20
Filter								
IGMP v1/v2/v3	✓	✓	✓	✓	✓	✓	✓	✓
802.1p Class of Service	✓	✓	✓	✓	✓	✓	✓	✓
802.1Q VLAN	✓	✓	✓	✓	✓	✓	✓	✓
Management								
Port Mirror	✓	✓	✓	✓	✓	✓	✓	✓
RMON	✓	✓	✓	✓	✓	✓	✓	✓
DHCP Option 82	✓	✓	✓	✓	✓	✓	✓	✓
LLDP	✓	✓	✓	✓	✓	✓	✓	✓
SNMPv1/v2c/v3	✓	✓	✓	✓	✓	✓	✓	✓
Console Port	✓	✓	✓	✓	✓	✓	✓	✓
Telnet/SSH	✓	✓	✓	✓	✓	✓	✓	✓
TFTP	✓	✓	✓	✓	✓	✓	✓	✓
Redundancy Protocols								
STP/RSTP/MSTP	✓	✓	✓	✓	✓	✓	✓	✓
Turbo Ring/Turbo Chain	✓	✓	✓	✓	✓	✓	✓	✓
Layer 3 Software Features								
Layer 3 Switching	✓	✓	✓	–	–	–	✓	✓
Multicast Routing	✓	✓	✓	–	–	–	✓	✓
VRRP	✓	✓	✓	–	–	–	✓	✓
Security								
MAB Authentication	✓	✓	✓	✓	✓	✓	✓	✓
HTTPS/SSL	✓	✓	✓	✓	✓	✓	✓	✓
Sticky MAC	✓	✓	✓	✓	✓	✓	✓	✓
TACACS+	✓	✓	✓	✓	✓	✓	✓	✓
RADIUS	✓	✓	✓	✓	✓	✓	✓	✓
Access Control List	✓	✓	✓	✓	✓	✓	✓	✓
802.1X	✓	✓	✓	✓	✓	✓	✓	✓
Available Power Input								
24 VDC	–	–	–	–	–	–	–	–
48 VDC	–	–	–	–	–	–	–	–
110/220 VAC	✓	✓	✓	✓	✓	✓	✓	✓
Installation								
Rack Mounting	✓	✓	✓	✓	✓	✓	✓	✓
Operating Temperature								
-10 to 60°C (14 to 140°F)	✓	✓	✓	✓	✓	✓	✓	✓
-40 to 75°C (-40 to 167°F)	–	–	–	–	–	–	✓	✓
Standards and Certifications								
EMI	CISPR 32, FCC Part 15B Class A							
Safety	UL 60950-1, EN 60950-1							
Railway	EN 50121-4							

Rackmount Managed Switches



Product Series	ICS-G7528A	ICS-G7526A	IKS-G6824A	IKS-G6524A	IKS-G728A	IKS-G726A
Modular Switch	–	–	–	–	✓	✓
Ethernet Interface						
Max. Number of Ports	28	26	24	24	28	26
10GbE SFP+ Slots	4	2	–	–	–	–
Combo Ports 10/100/1000BaseT(X) or 100/1000BaseSFP	4	4	4	4	4	2
Gigabit Ethernet 10/100/1000	20	20	20	20	–	–
Fast Ethernet 10/100	–	–	–	–	Up to 24	Up to 24
Filter						
802.1p Class of Service	✓	✓	✓	✓	✓	✓
802.1Q VLAN	✓	✓	✓	✓	✓	✓
IGMP v1/v2/v3	✓	✓	✓	✓	✓	✓
Management						
Port Mirror	✓	✓	✓	✓	✓	✓
DHCP Option 82	✓	✓	✓	✓	✓	✓
LLDP	✓	✓	✓	✓	✓	✓
SNMPv1/v2c/v3	✓	✓	✓	✓	✓	✓
Console Port	✓	✓	✓	✓	✓	✓
Telnet/SSH	✓	✓	✓	✓	✓	✓
TFTP	✓	✓	✓	✓	✓	✓
Redundancy Protocols						
STP/RSTP/MSTP	✓	✓	✓	✓	✓	✓
Turbo Ring/Turbo Chain	✓	✓	✓	✓	✓	✓
Layer 3 Software Features						
Layer 3 Switching	–	–	✓	–	–	–
Multicast Routing	–	–	✓	–	–	–
VRRP	–	–	✓	–	–	–
Security						
MAB Authentication	✓	✓	✓	✓	✓	✓
HTTPS/SSL	✓	✓	✓	✓	✓	✓
Sticky MAC	✓	✓	✓	✓	✓	✓
TACACS+	✓	✓	✓	✓	✓	✓
RADIUS	✓	✓	✓	✓	✓	✓
Access Control List	✓	✓	✓	✓	✓	✓
802.1X	✓	✓	✓	✓	✓	✓
Available Power Input						
24 VDC	–	–	–	–	✓	✓
48 VDC	–	–	–	–	✓	✓
110/220 VAC	✓	✓	✓	✓	✓	✓
Installation						
Rack Mounting	✓	✓	✓	✓	✓	✓
Operating Temperature						
-10 to 60°C (14 to 140°F)	✓	✓	✓	✓	–	–
-40 to 75°C (-40 to 167°F)	✓	✓	✓	✓	✓	✓
Standards and Certifications						
EMI	CISPR 32, FCC Part 15B Class A					
Safety	UL 60950-1, EN 60950-1					
Railway	EN 50121-4					
Maritime	–				non-PoE models: ABS, DNV GL, LR, NK	ABS, DNV GL, LR, NK

Rackmount Managed Switches



Product Series	PT-G7828	PT-G7728	PT-7728-PTP	PT-7828	PT-7728	PT-7528	PT-7710	PT-G7509
Modular Switch	✓	✓	✓	✓	✓	✓	✓	–
Ethernet Interface								
Max. Number of Ports	28	28	28	28	28	28	10	9
Gigabit Ethernet 10/100/1000 BaseT(X)	2 to 26	2 to 26	–	–	–	–	–	9
Gigabit Ethernet 1000BaseSFP	2 to 26	2 to 26	Up to 4	Up to 4	Up to 4	Up to 4	Up to 2	9
Fast Ethernet 10/100 BaseT(X)	–	–	Up to 28	Up to 28	Up to 28	Up to 28	Up to 10	–
Fast Ethernet 100BaseFX	–	–	Up to 24	Up to 24	Up to 24	Up to 20	–	–
Filter								
802.1Q VLAN	✓	✓	✓	✓	✓	✓	✓	✓
IGMP v1/v2/v3	✓	✓	✓	✓	✓	✓	✓	✓
802.1p Class of Service	✓	✓	✓	✓	✓	✓	✓	✓
Management								
DHCP Option 82	–	–	✓	✓	✓	✓	✓	✓
SNMPv1/v2c/v3	✓	✓	✓	✓	✓	✓	✓	✓
Fiber Check	✓	✓	✓	✓	✓	✓	–	–
Power Substation								
IEC 61850 QoS	✓	✓	✓	✓	✓	✓	✓	✓
GOOSE Check	✓	✓	–	–	–	–	–	–
MMS Server	✓	✓	✓	–	✓	✓	–	–
Redundancy Protocols								
STP	✓	✓	✓	✓	✓	✓	✓	✓
RSTP	✓	✓	✓	✓	✓	✓	✓	✓
MSTP	✓	✓	✓	✓	✓	✓	✓	✓
Turbo Ring/Turbo Chain	✓	✓	✓	✓	✓	✓	✓	✓
PRP / HSR	–	–	✓	–	–	–	–	–
Layer 3 Software Features								
Multicast Routing	✓	–	–	✓	–	–	–	–
VRRP	✓	–	–	✓	–	–	–	–
Security								
Access Control List	✓	✓	–	✓	–	–	–	–
Broadcast Storm Protection	✓	✓	✓	✓	✓	✓	✓	–
HTTPS/SSL	✓	✓	✓	✓	✓	✓	✓	✓
RADIUS / TACACS+	✓	✓	✓	✓	✓	✓	✓	✓
Port Lock	✓	✓	✓	✓	✓	✓	✓	✓
Rate Limit	✓	✓	✓	✓	✓	✓	✓	–
SSH	✓	✓	✓	✓	✓	✓	✓	✓
Time Management								
SNTP / NTP Server / Client	✓	✓	✓	✓	✓	✓	✓	✓
IEEE 1588v2 PTP (hardware-based)	✓	✓	✓	–	–	–	–	–
Available Power Input								
24/48 VDC	✓	✓	✓	✓	✓	✓	✓ ¹	✓
110/220 VDC/VAC	✓	✓	✓	✓	✓	✓	✓	✓
Operating Temperature								
-40 to 85°C (-40 to 167°F)	✓	✓	✓ ²	✓ ²	✓ ²	✓ ²	✓ ²	✓ ²
Standards and Certifications								
Safety	UL 62368-1		UL 60950-1			UL 508	UL 60950-1, EN 60950-1, CSA C22.2 No. 60950-1	
EMI	CISPR 32, FCC Part 15B Class A		EN 55032 Class A, CISPR 32, FCC Part 15B Class A					
Power Substation	IEC 61850-3 Edition 2.0 Class 2, IEEE 1613		IEC 61850-3, IEEE 1613			IEC 61850-3, IEEE 1613 Class 2 ³	IEC 61850-3, IEEE 1613	

1. Supports 12/24/48 VDC.

2. Cold start requires minimum of 100 VAC at -40°C.

3. Models with MCS and SSC fiber ports are compliant with IEEE 1613 Class 1.

PoE Switches



Product Series	IKS-6728A-8PoE	EDS-G512E-8PoE	EDS-P510A-8PoE	EDS-P510	EDS-P506E-4PoE	EDS-G205A-4PoE	EDS-P206A-4PoE
Ethernet Interface							
Max. Number of Ports	28	12	10	10	6	5	6
Combo Ports (10/100/1000BaseT(X) or 100/1000BaseSFP+)	4	-	2	3	2	-	-
PoE Ports (10/100BaseT(X), RJ45 connector)	Up to 24	-	8	4	4	-	4
PoE Ports (10/100/1000BaseT(X), RJ45 connector)	-	8	-	-	-	4	-
10/100/1000BaseT(X) Ports (RJ45 connector)	-	-	-	-	-	Up to 1	-
10/100BaseT(X) Ports (RJ45 connector)	Up to 16	-	-	3	-	-	Up to 2
100/1000BaseSFP Slots	-	4	-	-	-	Up to 1	-
100BaseFX Ports	-	-	-	-	-	-	Up to 2
Filter							
802.1Q VLAN	✓	✓	✓	✓	✓	-	-
802.1p Class of Service	✓	✓	✓	✓	✓	-	-
IGMP v1/v2/v3 Snooping	✓	✓	✓	✓	✓	-	-
Management							
Port Mirror	✓	✓	✓	✓	✓	-	-
DHCP Option 82	✓	✓	✓	✓	✓	-	-
LLDP	✓	✓	✓	✓	✓	-	-
SNMPv1/v2c/v3	✓	✓	✓	✓	✓	-	-
Fiber Check	✓	✓	✓	✓	✓	-	-
Redundancy Protocols							
Link Aggregation	✓	✓	✓	✓	✓	-	-
STP/RSTP	✓	✓	✓	✓	✓	-	-
MSTP	✓	✓	✓	✓	✓	-	-
Turbo Ring/Turbo Chain	✓	✓	✓	✓	✓	-	-
Security							
MAB Authentication	✓	✓	-	-	✓	-	-
Sticky MAC	✓	✓	-	-	✓	-	-
TACACS+	✓	✓	✓	✓	✓	-	-
RADIUS	✓	✓	✓	✓	✓	-	-
HTTPS/SSL	✓	✓	✓	✓	✓	-	-
802.1X	✓	✓	✓	✓	✓	-	-
Access Control List	✓	✓	-	-	✓	-	-
Input Voltage							
12/24 VDC	-	-	-	-	✓	✓	✓
48 VDC	✓	✓	✓	✓	✓	✓	✓
Power Over Ethernet							
802.3af/at	✓	✓	✓	802.3af only	✓	✓	✓
High Power PoE	✓	✓	✓	-	✓	✓	✓
Total PD Consumption (max.)	720 W	240 W	240 W	61.6 W	180 W @ 48 VDC 150 W @ 24 VDC 62 W @ 12 VDC	144 W @ 48 VDC 120 W @ 24 VDC 62 W @ 12 VDC	120 W @ 48 VDC 120 W @ 24 VDC 62 W @ 12 VDC
Each PoE Port (max.)	36 W	36 W	36 W	15.4 W	60 W	36 W	30 W
Installation							
DIN-rail Mounting	-	✓	✓	✓	✓	✓	✓
Wall Mounting (with optional kit)	-	✓	✓	✓	✓	✓	✓
Rack Mounting	✓	-	-	-	-	-	-
Operating Temperature							
0 to 60°C (32 to 140°F)	-	-	-	✓	-	✓	-
-10 to 60°C (14 to 140°F)	-	✓	✓	-	✓	-	✓
-40 to 75°C (-40 to 167°F)	✓	✓	✓	✓	✓	✓	✓
Standards and Certifications							
EMI	CISPR 32, FCC Part 15B Class A						
EMC	EN 55032/24	EN 61000-6-2/-6-4	EN 55032/24	EN 55032/24	EN 61000-6-2/-6-4	EN 61000-6-2/-6-4	EN 55032/24
Safety	UL 60950-1, EN 60950-1	UL 508, EN 60950-1	UL 508	UL 508	UL 61010-2-201, EN 61010-2-201	UL 508	UL 508
Hazardous Locations	-	-	Class I Division 2	-	-	-	-
Railway	EN 50121-4	EN 50121-4	EN 50121-4	-	EN 50121-4	EN 50121-4	-
Traffic Control	-	-	NEMA TS2	-	NEMA TS2	-	-
Maritime	-	-	-	ABS, DNV GL, LR, NK	-	-	-

EN 50155 Ethernet Switches



Product Series	TN-G4516	TN-G6512	TN-4516A	TN-4516A-PoE	TN-4516A-PoE-ODC	TN-4524A-PoE	TN-4528A-PoE	TN-4528A-PoE-ODC
Ethernet Interface								
Max. Number of Ports	16	12	16	16	16	24	28	28
10/100/1000 BaseT(X) Ports (M12 X-coded 8-pin female connector)	4	4	Up to 4	–	–	–	–	–
10/100 BaseT(X) Ports (M12 D-coded 4-pin female connector)	–	–	12	–	–	8	8	8
10G Ports (M12 connector with bypass relay)	Up to 2	–	–	–	–	–	–	–
PoE Ports (10/100 BaseT(X), M12 D-coded 4-pin female connector)	–	–	–	12	12	16	16	16
PoE Ports (100/1000 BaseT(X), M12 X-coded 8-pin female connector)	8	8	–	Up to 4	2	–	Up to 4	2
PoE Ports (10G BaseT(X), M12 connector)	Up to 4	–	–	–	–	–	–	–
10/100/1000 BaseT(X) Ports (M12 X-coded 8-pin female connector with bypass relay)	–	–	Up to 2	Up to 2	–	–	Up to 2	–
10/100/1000 BaseT(X) Ports, Q-ODC Fiber Connector	–	–	–	–	2	–	–	2
Filter								
802.1Q	✓	✓	✓	✓	✓	✓	✓	✓
IGMP v1/v2/v3	✓	✓	✓	✓	✓	✓	✓	✓
Port-based VLAN	✓	✓	✓	✓	✓	✓	✓	✓
Management								
DHCP Option 66/67/82	✓	✓	✓	✓	✓	✓	✓	✓
IPv4/IPv6	✓	✓	✓	✓	✓	✓	✓	✓
QoS/CoS/ToS	✓	✓	✓	✓	✓	✓	✓	✓
Redundancy Protocols								
MSTP	✓	✓	✓	✓	✓	✓	✓	✓
RSTP	✓	✓	✓	✓	✓	✓	✓	✓
Turbo Ring v1/v2	✓	✓	✓	✓	✓	✓	✓	✓
Turbo Ring With DRC	✓	✓	✓	✓	✓	✓	✓	✓
Security								
HTTPS/SSL	✓	✓	✓	✓	✓	✓	✓	✓
TACACS+	✓	✓	✓	✓	✓	✓	✓	✓
Port Lock	✓	✓	✓	✓	✓	✓	✓	✓
RADIUS	✓	✓	✓	✓	✓	✓	✓	✓
Time Management								
IEEE 1588 PTP v1/v2	✓	✓	✓	✓	✓	✓	✓	✓
NTP Server/Client	✓	✓	✓	✓	✓	✓	✓	✓
Power Parameters								
Input Voltage	24/36/48/72/96/110 VDC, redundant dual inputs							
Power Connector	M12 K-coded male connector			M23 connector				
Total PoE Power Budget	120 W	96 W	–	120 W				
Physical Characteristics								
IP Rating	IP40	IP67	IP42					
Protection	-CT models: PCB conformal coating (optional)							
Environmental Limits								
Operating Temperature	-40 to 70°C (-40 to 158°F)			-40 to 75°C (-40 to 167°F)				
Standards and Certifications								
EN 50121-4	✓	✓	✓	✓	✓	✓	✓	✓
EN 50155 ¹	✓	✓	✓	✓	✓	✓	✓	✓
EN 45545-2	✓	✓	✓	✓	✓	✓	✓	✓

1. This product is suitable for rolling stock railway applications, as defined by the EN 50155 standard. For a more detailed description, please visit our website.

EN 50155 Ethernet Switches



Product Series	TN-5508A	TN-5508A-8PoE	TN-5510A	TN-5510A-8PoE	TN-5510A-0DC
Ethernet Interface					
Max. Number of Ports	8	8	10	10	10
10/100/1000 BaseT(X) Ports (M12 X-coded 8-pin female connector)	–	–	Up to 2	Up to 2	–
10/100 BaseT(X) Ports (M12 D-coded 4-pin female connector)	8	–	8	–	Up to 8
PoE Ports (10/100 BaseT(X), M12 D-coded 4-pin female connector)	–	8	–	8	Up to 8
PoE Ports (100/1000 BaseT(X), M12 X-coded 8-pin female connector)	–	–	–	–	–
10/100/1000 BaseT(X) Ports (M12 X-coded 8-pin female connector with bypass relay)	–	–	Up to 2	Up to 2	–
10/100/1000 BaseT(X) Ports, Q-ODC Fiber Connector	–	–	–	–	2
Filter					
802.1Q	✓	✓	✓	✓	✓
IGMP v1/v2/v3	✓	✓	✓	✓	✓
Port-based VLAN	✓	✓	✓	✓	✓
Management					
DHCP Option 66/67/82	✓	✓	✓	✓	✓
IPv4/IPv6	✓	✓	✓	✓	✓
QoS/CoS/ToS	✓	✓	✓	✓	✓
Redundancy Protocols					
MSTP	✓	✓	✓	✓	✓
RSTP	✓	✓	✓	✓	✓
Turbo Ring	✓	✓	✓	✓	✓
Turbo Ring With DRC	✓	✓	✓	✓	✓
Security					
HTTPS/SSL	✓	✓	✓	✓	✓
TACACS+	✓	✓	✓	✓	✓
Port Lock	✓	✓	✓	✓	✓
RADIUS	✓	✓	✓	✓	✓
Time Management					
IEEE 1588 PTP v1/v2	✓	✓	✓	✓	✓
NTP Server/Client	✓	✓	✓	✓	✓
Power Parameters					
Input Voltage	24/36/48/72/96/110 VDC, redundant dual inputs				
Power Connector	M23 connector				
Total PoE Power Budget	–	120 W	–	120 W	120 W (for PoE model)
Physical Characteristics					
IP Rating	IP54				
Protection	TN-5500A Series -CT models: PCB conformal coating (optional)				
Environmental Limits					
Operating Temperature	-40 to 75°C (-40 to 167°F)				
Standards and Certifications					
EN 50121-4	✓	✓	✓	✓	✓
EN 50155 ¹	✓	✓	✓	✓	✓
EN 45545-2	✓	✓	✓	✓	✓

1. This product is suitable for rolling stock railway applications, as defined by the EN 50155 standard. For a more detailed description, please visit our website.

EN 50155 Ethernet Switches



Product Series	TN-5516A	TN-5516A-8PoE	TN-5518A	TN-5518A-8PoE
Ethernet Interface				
Max. Number of Ports	16	16	18	18
10/100/1000 BaseT(X) Ports (M12 X-coded 8-pin female connector)	–	–	Up to 2	Up to 2
10/100BaseT(X) Ports (M12 D-coded 4-pin female connector)	16	8	16	8
10/100BaseT(X) Ports (M12 D-coded 4-pin female connector with bypass relay)	–	–	–	–
PoE Ports (10/100 BaseT(X), M12 D-coded 4-pin female connector)	–	8	–	8
PoE Ports (100/1000 BaseT(X), M12 X-coded 8-pin female connector)	–	–	–	–
10/100/1000 BaseT(X) Ports (M12 X-coded 8-pin female connector with bypass relay)	–	–	Up to 2	Up to 2
10/100/1000 BaseT(X) Ports, Q-ODC Fiber Connector	–	–	–	–
Filter				
802.1Q	✓	✓	✓	✓
IGMP v1/v2/v3	✓	✓	✓	✓
Port-based VLAN	✓	✓	✓	✓
Management				
DHCP Option 66/67/82	✓	✓	✓	✓
IPv4/IPv6	✓	✓	✓	✓
QoS/CoS/ToS	✓	✓	✓	✓
Redundancy Protocols				
MSTP	✓	✓	✓	✓
RSTP	✓	✓	✓	✓
Turbo Ring	✓	✓	✓	✓
Turbo Ring With DRC	✓	✓	✓	✓
Security				
HTTPS/SSL	✓	✓	✓	✓
TACACS+	✓	✓	✓	✓
Port Lock	✓	✓	✓	✓
RADIUS	✓	✓	✓	✓
Time Management				
IEEE 1588 PTP v1/v2	✓	✓	✓	✓
NTP Server/Client	✓	✓	✓	✓
Power Parameters				
Input Voltage	24/36/48/72/96/110 VDC, redundant dual inputs			
Power Connector	M23 connector			
Total PoE Power Budget	–	120 W	–	120 W
Physical Characteristics				
IP Rating	IP54			
Protection	TN-5500A Series -CT models: PCB conformal coating (optional)			
Environmental Limits				
Operating Temperature	-40 to 75°C (-40 to 167°F)			
Standards and Certifications				
EN 50121-4	✓	✓	✓	✓
EN 50155 ¹	✓	✓	✓	✓
EN 45545-2	✓	✓	✓	✓

1. This product is suitable for rolling stock railway applications, as defined by the EN 50155 standard. For a more detailed description, please visit our website.

EN 50155 Ethernet Switches



Product Series	TN-5305	TN-5308	TN-5308-PoE	TN-5816A	TN-5818A
Ethernet Interface					
Max. Number of Ports	5	8	8	16	18
10/100/1000 BaseT(X) Ports (M12 X-coded 8-pin female connector)	-	-	-	-	-
10/100BaseT(X) Ports (M12 D-coded 4-pin female connector)	5	8	Up to 4	12	12
10/100BaseT(X) Ports (M12 D-coded 4-pin female connector with bypass relay)	-	-	-	4	4
PoE Ports (10/100 BaseT(X), M12 D-coded 4-pin female connector)	-	-	Up to 8	-	-
PoE Ports (100/1000 BaseT(X), M12 X-coded 8-pin female connector)	-	-	-	-	-
10/100/1000 BaseT(X) Ports (M12 X-coded 8-pin female connector with bypass relay)	-	-	-	-	2
10/100/1000 BaseT(X) Ports, Q-ODC Fiber Connector	-	-	-	-	-
Filter					
802.1Q	-	-	-	✓	✓
IGMP v1/v2/v3	-	-	-	✓	✓
Port-based VLAN	-	-	-	✓	✓
Management					
DHCP Option 66/67/82	-	-	-	✓	✓
IPv4/IPv6	-	-	-	IPv4	IPv4
QoS/CoS/ToS	-	-	-	✓	✓
Redundancy Protocols					
MSTP	-	-	-	-	-
RSTP	-	-	-	✓	✓
Turbo Ring	-	-	-	✓	✓
Turbo Ring With DRC	-	-	-	-	-
Security					
HTTPS/SSL	-	-	-	✓	✓
TACACS+	-	-	-	-	-
Port Lock	-	-	-	-	-
RADIUS	-	-	-	✓	✓
Time Management					
IEEE 1588 PTP v1/v2	-	-	-	✓	✓
NTP Server/Client	-	-	-	✓	✓
Power Parameters					
Input Voltage	18 to 30 VAC (47 to 63 Hz), 24 to 36 VDC	-LV Series: 12 to 48 VDC -MV Series: 72 to 110 VDC	48 VDC	24/36/48/72/96/110 VDC, redundant dual inputs	
Power Connector	M12 A-coded male connector	-LV Series: M12 A-coded male connector -MV Series: M23 connector	M12 A-coded male connector	M23 connector	
Total PoE Power Budget	-	-	-	-	-
Physical Characteristics					
IP Rating	IP67	IP40		IP54	
Protection	-	-CT models: PCB conformal coating			
Environmental Limits					
Operating Temperature	Standard Models: -25 to 60°C (-13 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F)			-40 to 75°C (-40 to 167°F)	
Standards and Certifications					
EN 50121-4	✓	✓	✓	✓	✓
EN 50155 ¹	✓	✓	✓	✓	✓
EN 45545-2	✓	✓	✓	✓	✓

1. This product is suitable for rolling stock railway applications, as defined by the EN 50155 standard. For a more detailed description, please visit our website.

Ethernet Extenders

Preliminary



Product Series	IEX-408E	IEX-402-SHDSL	IEX-402-VDSL2
Ethernet Interface			
10/100BaseT(X) Ports (RJ45 connector)	6	1	1
Combo Port, RJ-11 (RJ45 connector) or Detachable 2-contact Terminal Block	2	1	1
Input Voltage			
110/220 VDC/VAC	✓	–	–
12/24/48 VDC	✓	✓	✓
Filter			
Port-based VLAN	✓	–	–
802.1Q VLAN	✓	–	–
802.1p Class of Service	✓	✓	✓
IGMP v1/v2c/v3 Snooping	✓	–	–
GVRP	✓	–	–
GMRP	✓	–	–
Industrial Protocols			
EtherNet/IP	✓	–	–
Modbus TCP	✓	–	–
PROFINET	✓	–	–
Management			
BOOTP	✓	–	–
LLDP	✓	✓	✓
DHCP Server	✓	–	–
DHCP Client	✓	✓	✓
DHCP Option 82	✓	–	–
RMON	✓	–	–
SNMPv1/v2c/v3	✓	✓	✓
Syslog	✓	✓	✓
Console Port	✓	✓	✓
Telnet/SSH	✓	–	–
TFTP	✓	✓	✓
Redundancy Protocols			
STP/RSTP	✓	–	–
MSTP	✓	–	–
Link Aggregation	✓	–	–
Turbo Ring / Turbo Chain	✓	–	–
Security			
HTTPS/SSL	✓	–	–
RADIUS	✓	–	–
TACACS+	✓	–	–
Port Lock	✓	–	–
Broadcast Storm Protection	✓	–	–
Sticky MAC	✓	–	–
NTP Authentication	✓	–	–
Operating Temperature			
-10 to 60°C (14 to 140°F)	✓	✓	✓
-40 to 75°C (-40 to 167°F)	–	✓	✓
Max. Supported Speed/Distance Over Twisted-pair Copper			
100 Mbps / 3 km	✓	–	✓
15.3 Mbps / 8 km	–	✓	–
Standards and Certifications			
EMI	CISPR 32, FCC Part 15B Class A	CISPR 32, FCC Part 15B Class A	CISPR 32, FCC Part 15B Class A
Safety	All models: UL 61010-2-201 IEX-408E-2VDSL2-LV Series: EN 60950-1	UL 508	UL 508
Hazardous Locations	–	–	ATEX, Class I Division 2
Railway	EN 50121-4	EN 50121-4	EN 50121-4
Traffic Control	NEMA TS2	–	NEMA TS2
Power Substation	–	–	–
Maritime	–	–	–