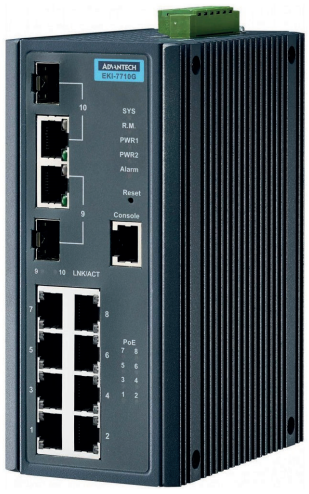
PRA-ES8P2S Ethernet switch, 8xPoE, 2xSFP

www.boschsecurity.com

BOSCH
Invented for life



- 8 x Gigabit ports with PoE
- 2 x Gigabit combo ports with SFP sockets for glass fiber transceivers
- Network redundancy via STP/MSTP/RSTP
- Dual power supply connections
- Fault relay

The PRA-ES8P2S is a compact DIN-rail mounted Ethernet switch with eight Gigabit copper ports, supporting Power over Ethernet (PoE) and two Gigabit SFP combo ports. This Ethernet switch is an OEM switch, made for Bosch by Advantech for use in Bosch Public Address and Voice Alarm systems. It is a preconfigured version of the EKI-7710G-2CPI-AE switch, optimized for PRAESENSA and PAVIRO. The PRA-ES8P2S is certified for EN 54-16 in combination with PRAESENSA and PAVIRO systems. It can be used in addition to the switch ports of the PRAESENSA system controller and multifunction power supply, especially in large systems where more SFP ports are needed for long distance interconnections on glass fiber or more PoE-enabled ports are need to power PRAESENSA call stations.

Functions

Intended for PA/VA systems

- Managed industrial Gigabit Ethernet switch with convection cooling and DIN-rail mounting, designed for long term continuous operation.
- Redundant wide range DC power input.
- Protected against overloads and short circuits.
- Comes with pre-installed and pre-configured firmware for quick installation and optimum performance.
- Certified for EN 54-16 in combination with Bosch PRAESENSA and PAVIRO systems.

Advanced features

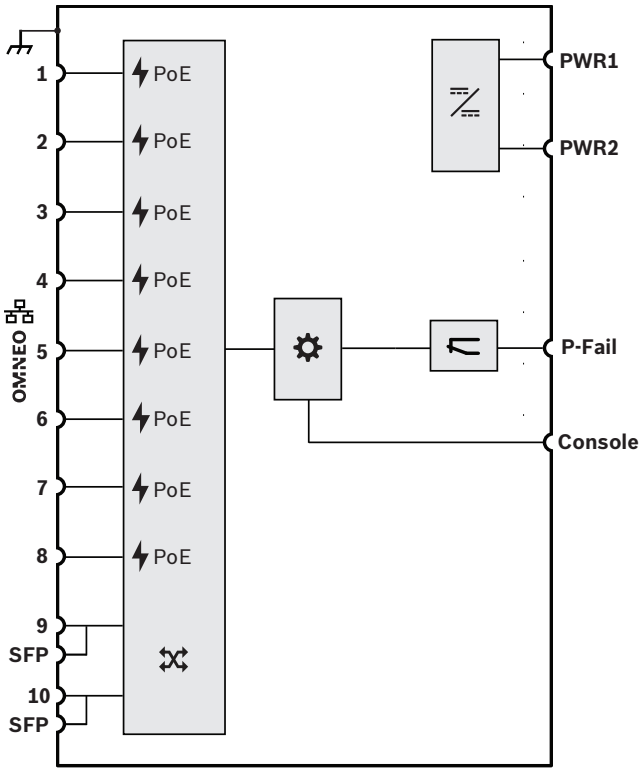
- Managed switch, configurable via web browser, with eight Gigabit copper ports with PoE and two SFP combo ports for PRA-SFPLX single mode and/or PRA-SFPSX multimode fiber transceiver modules.
- Deactivated Energy Efficient Ethernet (EEE) mode on all ports to avoid problems in combination with audio clock synchronization (IEEE 1588) in combination with OMNEO, Dante and AES67.
- Wire speed switching in hardware to avoid variable latency that may cause audio streaming problems.
- Full Quality of Service (QoS) through differentiated services (DiffServ) on all ports, compatible with OMNEO Docent diagnostic tool.
- Support for Rapid Spanning Tree Protocol (RSTP) according to IEEE 802.1d to create redundant loops.
- Fault output relay for fault reporting into PA/VA system.
- Large MAC address table (8k addresses) for large system broadcasting.

- Support for Simple Network Management Protocol (SNMP) and Link Layer Discovery Protocol (LLDP).
- All copper ports provide PoE (IEEE 802.3 af/at) to power PRAESENSA call stations or other devices.

Fault tolerance

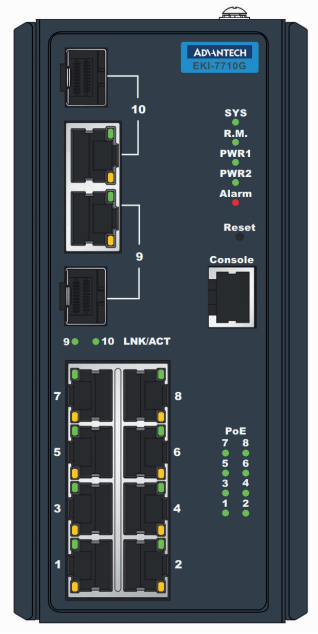
- All ports support RSTP for loop connections to adjacent devices with recovery from a broken link.
- Dual redundant 24 to 48 V DC-inputs.

Connection and functional diagram



	Power over Ethernet power source		DC to DC converter
	Controller		Fault relay
SFP	Socket for SFP module		OMNEO network switch

Front view



Front panel indicators

Port 1-10 ∧	Link activity	Green
Port 1-10 ∨	100 Mbps network 1Gbps network	Yellow Green
PoE 1-8	PoE activated	Green
SYS	System is operating normally	Green
R.M.	Active when determining ring master	Green
PWR1	Power on power supply input 1	Green
PWR2	Power on power supply input 2	Green
Alarm	SFP port disconnected or link down	Red

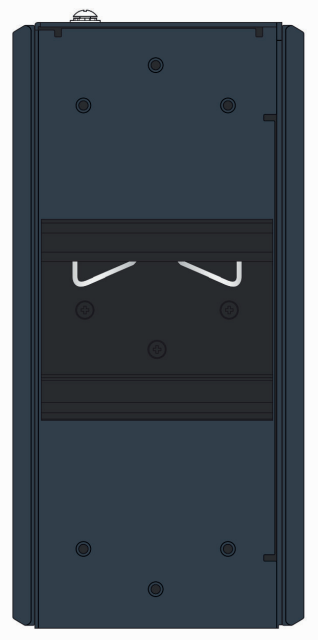
Front panel control

Reset	System soft reset or factory reset	Switch

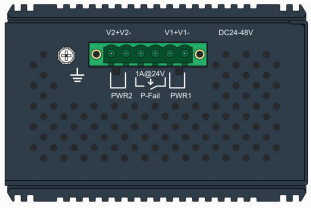
Front panel connections

Port 1-8	Network port 1-8 with PoE	
Port 9-10	Network combo port 9-10	
Console	Console serial RS232 cable COM port	

Rear view



Top view



Top panel connections

⏚	Chassis ground	⊕
PWR1	24 to 48 Vdc input 1	
PWR2	24 to 48 Vdc input 2	
P-Fail	Fault relay	

Certifications and approvals

Emergency standard certifications	
Europe	EN 54-16
International	ISO 7240-16

Environmental directive compliancy	
Safety	UL 508
Immunity	EN 55024 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8
Emissions	EN 55032 class A EN 61000-6-4 FCC-47 part 15B class A
Railway	EN 50121-4
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Conformity declarations	
Europe	CE/CPR
USA/Canada	FCC/c-UL
Korea	KE
Environment	RoHS

Parts included

Quantity	Component
1	10-port industrial Ethernet switch
1	Screw connector
2	Wall-mounting bracket
1	DIN-rail mounting bracket and screws
1	Startup manual
1	EKI Device Configuration Utility CD ROM

Technical specifications

Electrical

Power transfer	
Power supply input PWR1-2	
Input voltage	24 to 48 Vdc
Input voltage tolerance	16.8 to 62.4 Vdc
Power consumption (48 V)	
Active mode, no PoE	12 W
Active mode, with PoE	< 140 W
Power over Ethernet	
Standard	IEEE 802.3 af/at
Output power, all ports together	< 120 W
Output power, per port (1-8)	< 30 W

Supervision	
Redundant power failure	P-Fail relay / Alarm LED
Port link down	P-Fail relay / Alarm LED
Fiber link down	P-Fail relay / Alarm LED
Device status reporting	SNMP, SMTP

Network interface	
Ethernet	
Speed	100BASE-TX 1000BASE-T
Ports 1-8	RJ45
Ports 9-10	RJ45/SFP combo
Console	
Standard	RS232
Port	RJ45

Functional

Switching	
MAC address table size	8k
VLAN	IEEE 802.1Q
Group	256 (VLAN ID1-4094)
Arrange	Port based, Q-in-Q, GVRP
Multicast	IGMP snooping v1/v2/v3, MLD snooping, IGMP immediate leave
Energy Efficient Ethernet	IEEE 802.3az EEE
Redundancy	IEEE 802.1D-STP IEEE 802.1s-MSTP IEEE 802.1w-RSTP

QoS	
Priority queue scheduling	SP, WRR
Class of service (CoS)	IEEE 802.1p, DiffServ (DSCP)
Rate limiting	Ingress, Egress
Link aggregation	IEEE 802.3ad Static, Dynamic (LACP)

Security	
Port security	Static, Dynamic
Authentication	IEEE 802.1X, port based
Storm control	Broadcast, Unknown multicast, Unknown unicast

Management	
DHCP	Client, Server
Access	SNMP v1/v2c/v3, RMON, Telnet, SSH, HTTP(S), CLI
Software upgrade	TFTP, HTTP (dual image)
NTP	SNTP client

Environmental

Climatic conditions	
Temperature	
Operating	-40 to +75°C (-40 to 167°F)
Storage and transport	-40 to +85°C (-40 to 1858°F)
Humidity (non condensing)	5% to 95%

Reliability	
MTBF	> 800.000 h

Mechanical

Enclosure	
Dimensions (WxHxD)	74 x 152 x 105 mm (2.9 x 6.0 x 4.1 in)
Ingress protection	IP30
Mounting	TS35 DIN Rail (EN 60715), Wall-mounting
Case	Aluminum
Weight	1.3 kg (2.7 lb)

Ordering information

PRA-ES8P2S Ethernet switch, 8xPoE, 2xSFP
Managed 10-port Ethernet switch with PoE and SFP.
Order number **PRA-ES8P2S**

Represented by:

Americas:
Bosch Security Systems, Inc.
12000 Portland Avenue South
Burnsville MN 55337, USA
Phone: +1-800-392-3497
Fax: +1-800-955-6831
audiosupport@us.bosch.com
www.boschsecurity.com

Europe, Middle East, Africa:
Bosch Security Systems B.V.
P.O. Box 80002
5617 BA Eindhoven, The Netherlands
Phone: + 31 40 2577 284
Fax: +31 40 2577 330
emea.securitysystems@bosch.com
www.boschsecurity.com

Asia-Pacific:
Robert Bosch (SEA) Pte Ltd, Security Systems
11 Bishan Street 21
Singapore 573943
Phone: +65 6571 2808
Fax: +65 6571 2699
apr.securitysystems@bosch.com
www.boschsecurity.asia

China:
Bosch (Shanghai) Security Systems Ltd.
201 Building, No. 333 Fuquan Road North IBP
Changning District, Shanghai
200335 China
Phone +86 21 22181111
Fax: +86 21 22182398
www.boschsecurity.com.cn

America Latina:
Robert Bosch Ltda Security Systems Division
Via Anhanguera, Km 98
CEP 13065-900
Campinas, Sao Paulo, Brazil
Phone: +55 19 2103 2860
Fax: +55 19 2103 2862
latam.boschsecurity@bosch.com
www.boschsecurity.com

42291154187 | en, V1, 15. Aug 2018