

4 port Gbit Ethernet switch extension unit (ModuCop) for edge applications in rail & buses

Features

- 1 slot (7 HP) extension unit for ModuCop Edge Computer
- 4x 1 Gbit/s Ethernet switch via 8p M12 x-coded
- 1x 1 Gbit/s Ethernet port to connect host CPU
- PoE Power-over-Ethernet (PSE) IEEE 802.3af*
- Smart managed
- Galvanic isolation
- EN 50155 compliant (integrated in ModuCop)



*PoE power budget depends on selected supply (PSU0x)

Introduction

The 4 port Gbit/s Ethernet switch unit *IOU02/IOU05* extends the functionality of the modular and flexibly expandable Edge Computer ModuCop MEC. Fully integrated in ModuCop, IOU02/IOU05 allows network communication as well as connection of decentralized Ethernet based sensors, actors or converters. Its PoE (Power-over-Ethernet) functionality (IOU02 only) allows powering those external devices and thus reduces cabling effort and cost.

The extension unit offers four 100/1000Mbit/s Ethernet switch interfaces at the front available at 4x M12 x-coded connectors. A fifth port connects backwards to the host CPU.

The IOU02 acts as a PoE power source equipment (PSE) according to IEEE 802.3af, providing max. power of up to 61,6 W. The max. power budget nevertheless is defined by the MEC power supply.

Through custom factory settings, IOU02/IOU05 switch functionality is partly configurable (e.g. VLANs)

The switch is powered by ModuCop's integrated power supply and controlled by its CPU unit.

Applications

- Condition-based / predictive maintenance
- CCTV
- Anomaly detection systems
- Fleet optimization
- Security Gateway
- Board computer

Software

Standalone Switch functionality— no further SW required

Factory setting possible

Specifications

Input/Output	S101-IOU02- (PoE)	S101-IOU05- (no PoE)
Ethernet Front	4x 100/1000 Mbit/s switch interfaces via 4x 8p M12 x-coded	
Ethernet Rear	1x 100/1000 Mbit/s Ethernet controller	
PoE PSE	IEEE 802.3af up to 61,6W*	n/a
Galvanic Isolation	500V DC between combined Ethernet interfaces and shield	
Power Input	Via ModuCop System	
Mechanics		
Dimensions	1 Slot (ModuCop System); 7 HP	
Installation	ModuCop Extension Slot	
Environmental**		
Operating Temperature	-40...+70°C / 85°C (10min) (EN 50155:2021 - OT4 + ST1)	
Storage Temperature	-40...+85°C (EN 50155:2021)	
Humidity	95% (EN 50125-1:2014)	
Altitude	3000 m max. above sea level (EN 50125-1:2014, class AX)	
Shock / Vibration	EN 61373:2010; Cat. 1; Class B	
EMC Emission / Immunity	Rail Applications: EN 50121-3-2:2016; EMV 06 (2.0) Class SI; EN 301 489-1 (V2.2.3)	
	Automotive Applications	
Safety	EN 50155:2017; EN 50153:2014+A1:2017; EN 50124-1:2017; EN ISO 13732-1:2008	
Fire&Smoke	Rail Applications: EN 45545-2:2013 + A1:2015; HL3	
Useful Life	20 years (EN 50155:2021, class L4)	
Pollution Degree	PD2 (EN 50124-1:2017)	

* PoE power budget depends on selected supply (PSU0x)

** All environmental data apply for proper installation in ModuCop Edge Computer.

Order Information

The product can only be ordered as integrated I/O extension unit in ModuCop Edge Computer.

Article number	Short	PoE PSE	PoE Power
S101-IOU02-	4 port ETH switch (PoE)	✓	61,6W max
S101-IOU05-	4 port ETH switch (non-PoE)	n/a	n/a

Accessories

N/A

