



HIRSCHMANN

A **BELDEN** BRAND

New Product Bulletin

PB 336

Hirschmann™ Gigabit OCTOPUS Switches with M12 Ports

Robust Gigabit switches allow reliable transmission of high data rates even under rugged environmental conditions.



The New Gigabit OCTOPUS Switches from Hirschmann Offer High Bandwidths via M12 Ports for the Ever-growing Data Volumes in Road and Rail Vehicles.

- Enables faster data transfer for a wider range of infotainment applications such as passenger information systems and advertising opportunities
- Offers high bandwidth for increased number of applications such as interconnecting IP cameras for increased passenger safety and reduced vandalism
- Wireless internet access for enhanced passenger experience

The new Hirschmann Gigabit OCTOPUS switches offer high data rates together with robust hardware. Vibration, heat and cold pose no problem. Even water has no effect on these switches. They also meet the EMC and fire prevention requirements of the European standards that govern use in rail vehicles. A further advantage of the Hirschmann Gigabit OCTOPUS switches is PoE (Power over Ethernet). This enables terminal equipment such as IP cameras, VoIP telephones and WLAN Access Points to be powered without any additional cables. A variety of management and security functions and fast redundancy protocols round off the package.

Applications

The Hirschmann Gigabit OCTOPUS switches were developed primarily for use in road and rail vehicles: thanks to their wide bandwidth, they allow a host of different applications that provide passengers with more safety and convenience.

Benefits

The Gigabit OCTOPUS switches from Hirschmann™ make high bandwidth available in order to handle the steadily increasing network load in transport vehicles. As an example, they can be used to connect numerous IP cameras, thus helping to curb criminal behavior and vandalism. In addition, a wider range of infotainment options can be offered – for instance through fast internet access during the journey.

**A new product to
serve your needs.
Be certain.**



Hirschmann Gigabit-OCTOPUS OS32

The Gigabit OCTOPUS switches, which offer a variety of management and security functions as well as fast redundancy protocols, have two Gigabit Ethernet uplinks for twisted pair cables (1000 BASE-TX) connected via vibration-proof M12 ports. Eight or sixteen Fast Ethernet ports (10/100 BASE-TX), which are also designed for M12 connectors, are provided for connecting terminal equipment. Eight of the ports support PoE. The fanless design and redundant 48 V power supply also guarantee high operational reliability.

The Hirschmann Gigabit OCTOPUS switches are equipped with vibration-proof M12 connection technology for twisted pair cables.

The Advantages at a Glance

- Gigabit uplinks and Fast Ethernet ports with vibration-proof M12 connection technology for twisted pair cables
- Sturdy and compact die-cast zinc housing
- Industrial protection class IP54
- Redundant 48 V power supply
- Temperature range -40°C to +70°C
- PoE via phantom power method
- LEDs for equipment and network status and power supply
- Powerful software:
 - Configuration: CLI, Telnet, BootP, DHCP Option 82, HiDiscovery, Autoconfiguration adapter ACA21-M12
 - Diagnostics: RMON, SysLog support, port mirroring; relay contact for alarms
 - Management: standard web browser, SNMP
 - Redundancy protocols: HIPER-Ring, RSTP
 - Security mechanisms: IP and MAC port security, SNMP V3, SSHv3, SNMP access settings (VLAN/IP) and IEEE 802.1x
- EMC and fire prevention compliant with the requirements of the European standards that govern use in rail vehicles



Hirschmann OCTOPUS OS32-081602T6T6PEPHH





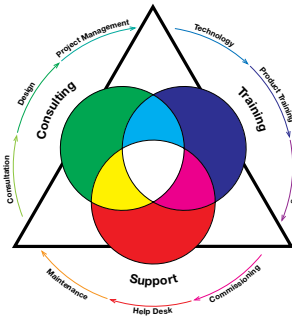
Product Information OCTOPUS OS32

Technical Information

Product Description		
Type OCTOPUS	OCTOPUS OS32-080802T6T6TPEPHH	OCTOPUS OS32-081602T6T6TPEPHH
		
Variants	2 GE + 8 PoE	2 GE + 8 PoE + 8 FE
Order-No.	942 069-002	942 069-001
Description	Managed IP54 switch in accordance with IEEE 802.3, store-and-forward-switching, software layer 2 professional, electrical Fast-Ethernet (10/100 Mbit/s) and Gigabit-Ethernet (1000BASE-TX) M12 Ports	
Port Type and Quantity	8 x10/100 BASE-TX PoE (phantom power) plus 8 x10/100 BASE-TX (16 Port version only), M12 D coding, 4-pole, plus 2 x1000 BASE-TX, M12 coding, 8-pole, TP cable, auto-crossing, auto-negotiation, auto-polarity	
More Interfaces		
V.24 Interface	1xM12 4-pole connector, A coding	
USB Interface	1xM12 5-pole socket, A coding	
Power Supply/Signaling Contact	1xM12 5-pole socket, A coding	
Network Size – Length of Cable		
Twisted Pair (TP)	0 – 100 m	
Network Size – Cascadability		
Line-/Star Topology	any	
Ring Structure (HIPER-Ring)	Quantity switches: 50 (reconfiguration time < 0.3 sec.)	
Power Requirements		
Operating Voltage DC	48 V to 58 V	
Power Consumption	max. 146 W	
Current Consumption at 48 V DC	0.3 A (no PD), max. 3 A (8 PD Class 0)	
Software		
Diagnostics	LEDs (power 1, power 2, link status, data, redundancy manager, error) cable tester, signalling contact, RMON (statistics, history, alarms, events), SysLog support, port mirroring	
Configuration	Command Line Interface (CLI scripting), auto-configuration adapter (ACA21-M12), TELNET, BootP, DHCP Option 82, HiDiscovery	
Security	Port security (IP and MAC), SNMP V3, SSHv3, SNMP access settings (VLAN/IP), IEEE 802.1x authentication	
Other Services	4 QoS queues, user priority (IEEE 802.1D/p), VLAN (IEEE 802.1Q), unknown multicast filtering, multicast support (IGMP Snooping/Querier, GMRP), broadcast limiter per port, ingress and egress packet limiter, Flow Control IEEE 802.3x, LLDP (topology discovery IEEE 802.1AB), Link Aggregation (IEEE 802.3ad), buffered real-time clock, PTP support (Precision Time Protocol) (IEEE 1588 client for system clock only), SNTP support (Simple Network Time Protocol, client/ server)	
Redundancy Functions	HIPER-Ring (ring structure), RSTP (Rapid Spanning Tree Protocol, IEEE 802.1w), redundant network/ring coupling, redundant power supply	
Mechanical Construction		
Dimensions (WxHxD)	261 mm x 189 mm x 70 mm	338 mm x 189 mm x 70 mm
Mounting	Wall mounting	
Weight	1950 g	2540 g
Protection Class	IP54	
Ambient Conditions		
Operating Temperature	-40° C to +70°C	
Storage/Transport Temperature	-40° C to +85°C	
Relative Humidity (non-condensing)	10% to 100%	
Approvals		
Safety of Industrial Control Equipment	cUL 60950-1	
Employment in Vehicles	E1	
EI. Mechanisms on rail-mounted Vehicles	EN50155, EN50121-4, DIN 5510-2, NF F 16-101, NF F16-102	



The Hirschmann Competence Center



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