



# HIRSCHMANN

A BELDEN BRAND

## New Product Bulletin

NP 1052HE

### New PowerMICE from Hirschmann™

Thanks to its unique security functions, the new PowerMICE guarantees all-round network protection, allowing maximum productivity for connected machines and systems at all times.



**A Variety of Security Functions Combined With Innovative Hardware Redundancy Protocols Make This Modular Switch the Most Powerful Industrial Ethernet System for DIN Rails. Thanks to PoE Plus Support, Terminal Equipment can also be Powered Cost-effectively.**

- Unique security functions set new standards for network availability
- Innovative hardware redundancy protocols ensure absolutely uninterrupted data communication
- Modular design allows flexible and cost-effective solutions

When Hirschmann™ launched its Modular Industrial Communication Equipment series (MICE) in 2002, it marked a milestone in network technology since these Industrial Ethernet switches for DIN rails could accommodate a variety of media modules. This allowed both functions and Ethernet ports to be configured individually. In what is now the family's third generation, the new PowerMICE retains this advantage while setting entirely new standards for network security and availability. Like its predecessor, the 2nd generation of PowerMICE, this switch features four Gigabit Ethernet ports for fast and easy migration. Moreover, PoE Plus support allows terminal equipment to be powered straight from the data line without the need for additional power packs or extra cables. In short, the 3rd generation offers maximum flexibility and future security.

#### Applications

The new PowerMICE, which can either be installed centrally in the switch cabinet or locally in the distribution box, is ideal for applications that require secure and uninterrupted data communication.

For example, since it can be seamlessly integrated into PROFINET and EtherNet/IP environments, it can be used to reliably connect automotive production cells to the control layer.

In the network backbones of petrochemical plants, the new PowerMICE ensures safe control and monitoring of all processes and are equally at home networking wind parks, road tunnels and railway stations. In addition, it can be used in numerous industries to transmit closed circuit television signals (CCTV) enabling video surveillance systems to be connected to the network.

#### Your Benefits

A modern Ethernet network is the key to efficient processes, but is also associated with a number of risks, which is why the 3rd generation offers a host of security functions to regulate access to the network and reliably protect it against attacks. In addition, its innovative hardware redundancy protocol now allows networks to be implemented for the first time that guarantee absolutely uninterrupted data communication with connected machines and systems resulting in maximum productivity. The new PowerMICE also facilitates economic solutions since its modular design permits customized versions for your applications, allowing you to respond flexibly to future requirements without having to replace the entire switch.

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



State-of-the-art chipsets turn the 3rd generation of the PowerMICE into the first high-end security platform

## Hirschmann™ PowerMICE – 3rd Generation

The new PowerMICE is IPv6 ready and offers an extremely high level of network security and availability. It comes in three basic versions for 12, 20 or 28 ports, four of which support Gigabit Ethernet. In addition, depending on the version, it can be equipped with up to six 4 port Fast Ethernet media modules for twisted pair cables, various types of optical fibers or I/O functionality. Various security functions regulate network access and reliably protect it against attacks. Innovative hardware redundancy methods such as PRP (Parallel Redundancy Protocol) and HSR (High Availability Seamless Redundancy) also guarantee absolutely uninterrupted data communication. And last but not least, the integrated PoE Plus function allows power terminal equipment to be powered via the data line.

### Benefits at a Glance

- All-round network protection through security functions such as port security, DHCP snooping, dynamic ARP inspection, IP source guard, ingress/egress ACL, sFlow, storm control, automatic denial-of-service prevention and port access control via 802.1x, including multi-client authentication, Radius VLAN/policy assignment and guest/unauthenticated VLAN
- The redundancy protocols PRP and HSR guarantee switchover times of 0 seconds, and RSTP, MRP and Fast MRP are also supported
- Seamless integration into PROFINET and EtherNet/IP environments
- Individual configuration of functions and Ethernet ports thanks to modular design
- Click-in mechanism for tool-free module assembly
- Terminal equipment connected via Fast Ethernet (100 BASE-TX/100 BASE-FX)
- Cost-effective powering of terminal equipment via PoE Plus function with up to 120 W
- Industrial protection class P30
- High shock and vibration resistance
- Optionally extended temperature range from -40°C to +70°C (standard is from 0°C to +60°C) and PCBs are protected against condensation (conformal coating)
- High-grade metal/aluminum housing for mounting on a DIN rail
- Simple configuration and diagnosis using HiDiscovery, Industrial HiVision or web interface
- Convenient management via standard web browser and SNMP interface
- Standards and approvals:
  - Transformer stations: IEC 61850-3, IEEE 1613
  - Hazard ratings: ISA 12.12.01, CSA 22.2 no. 213; ATEX zone 2
  - Traffic approvals: NEMA TS2, EN 50121-4
  - Safety: EN 60950-1, cUL508
  - Marine approvals: GL, BV, DNV, ABS, LR
  - Railroad approvals: EN 50121-4:2006 declaration
- Can be combined with Ethernet cables from Belden®



## MSP30/MSP32 MICE Switch Power Configurations

### Gigabit Ethernet Uplink Ports, Gigabit Ethernet Uplink Ports with PoE(+) Capability

M S P 3 0 - 0 8 0 4 0 S C Z 9 9 9 H H E 2 A 0 2 . 0

#### Design

**MSP30** = Gigabit Ethernet Uplink Ports  
**MSP32** = Gigabit Ethernet Uplink Ports with PoE(+) Capability

#### Number of Fast Ethernet Ports

**08** = 08 x 10/100 Mbit/s  
**16** = 16 x 10/100 Mbit/s  
**24** = 24 x 10/100 Mbit/s

#### Number of Gigabit Ethernet Ports

**04** = 04 x 10/100/1000 Mbit/s

#### Number of 10 Gigabit Ethernet Ports

**0** = 10/100/1000/10000 Mbit/s

#### Temperature Range

**S** = 0°C to +60°C  
**T** = -40°C to +70°C  
**E** = -40°C to +70°C inclusive Conformal Coating

#### Power Supply

**C** = 24/36/48 V DC (18 to 60 V DC)  
**P** = 47 to 57 V DC (PoE), 53 to 57 V DC (PoE+)

#### Approvals

**Z9** = CE, FCC, EN 61131 (EN 60950)  
**Y9** = CE, FCC, EN 61131 (EN 60950) + cUL508 (UL60950)  
**V9** = CE, FCC, EN 61131 (EN 60950) + IEC 61850, IEEE 1613  
**VY** = CE, FCC, EN 61131 (EN 60950) + IEC 61850, IEEE 1613 + cUL508 (UL60950)  
**VU** = CE, FCC, EN 61131 (EN 60950) + IEC 61850, IEEE 1613 + cUL508 (UL60950) + GL (ABS, BV, DNS, LR)  
**U9** = CE, FCC, EN 61131 (EN 60950) + GL (ABS, BV, DNS, LR)  
**UY** = CE, FCC, EN 61131 (EN 60950) + GL (ABS, BV, DNS, LR) + cUL508 (UL60950)

#### Software Packages

**99** = Reserved

#### OEM Type

**HH** = Standard

#### Configuration

**E** = Entry (Hirschmann Standard Configuration)

#### Software Version

**2A** = HiOS Layer 2 Advanced

#### Software Release

**02.0** = Software Version 02.0  
**XX.X** = Current Software Release

**NOTE:** The last four categories (**OEM type**, **configuration**, **software version** and **software release**) are optional.



## MSM20/MSM40/MSM42/MSM45 MICE Switch Power Media Module Configurations

Fast Ethernet Ports, Fast Ethernet/Gigabit Ethernet Ports, Fast Ethernet/Gigabit Ethernet Ports with PoE(+) Capability, Fast Ethernet/Gigabit Ethernet Ports with Enhanced Redundancy and PTP

MSM40-T1 T1 T1 T1 S Z9 HH SE 02.0

### Design

- MSM20 = Fast Ethernet Ports
- MSM40** = Fast Ethernet/Gigabit Ethernet Ports
- MSM42 = Fast Ethernet/Gigabit Ethernet Ports with PoE(+) Capability
- MSM45 = Fast Ethernet/Gigabit Ethernet Ports with Enhanced Redundancy and PTP Capability

### Port Typ 1. Uplink

- T1** = Twisted Pair RJ45
- M2 = Multimode SC
- M4 = Multimode ST
- S2 = Single Mode SC
- S4 = Single Mode ST
- L2 = Long Haul SC
- G2 = Long Haul + SC
- C1 = Combo Port Twisted Pair (TX)/RJ45 and Fiber Optic SFP Cage
- IO = Digital Input/Output

### Port Type 2. Uplink

(see port type 1. Uplink)

### Port Type 3. Uplink

(see port type 1. Uplink)

### Port Type 4. Uplink

(see port type 1. Uplink)

### Temperature Range

- S** = 0°C to + 60°C
- T** = -40°C to + 70°C
- P** = -40°C to + 70°C inclusive Conformal Coating

### Approvals

- Z9** = CE, FCC, EN 61131 (EN 60950)
- Y9** = CE, FCC, EN 61131 (EN 60950) + cUL508 (UL60950)
- V9** = CE, FCC, EN 61131 (EN 60950) + IEC 61850, IEEE 1613
- VY** = CE, FCC, EN 61131 (EN 60950) + IEC 61850, IEEE 1613 + cUL508 (UL60950)
- VU** = CE, FCC, EN 61131 (EN 60950) + IEC 61850, IEEE 1613 + cUL508 (UL60950) + GL (ABS, BV, DNS, LR)
- U9** = CE, FCC, EN 61131 (EN 60950) + GL (ABS, BV, DNS, LR)
- UY** = CE, FCC, EN 61131 (EN 60950) + GL (ABS, BV, DNS, LR) + cUL508 (UL60950)

### OEM Type

- HH** = Standard

### Hardware Configuration

- S** = FPGA configuration (S = Standard)
- M** = FPGA configuration (M = FMRP)
- H** = FPGA configuration (H = HSR)
- P** = FPGA configuration (P = PRP)
- 9** = No FPGA

### Software Configuration

- E** = Entry (without configuration)

### Software Release

- 02.0** = Software Version 02.0
- XX.X** = Current Software Release
- 99.9** = No Software Release

**NOTE:** The last four categories (OEM Type, hardware configuration, software configuration and software version) are optional.

Product Overview

