



# HIRSCHMANN

A BELDEN BRAND

## Product Bulletin

PB 1097AG

### Hirschmann™ MSP30 Layer 3

This new managed rail switch offers – for the first time – high-performance routing combined with the unique security functions of the MSP30 family. Therefore maximum productivity is ensured at all times for connected machines and systems.



**The MSP30 Layer 3 switch guarantees all-around network protection, making this modular switch the most powerful industrial Ethernet system for DIN rails. Thanks to Power over Ethernet Plus (PoE+) support, terminal equipment can also be powered cost-effectively.**

- Layer 3 capability brings routing to the shop floor and enables communication between physically separated networks
- Unique security functions set standards for network availability
- Modular design allows flexible and cost-effective solutions

Belden has extended its range of configurable modular switches for mission-critical applications with an MSP30 Layer 3 switch, which offers all the benefits of the proven MSP30 switch family, plus high-performance routing. Since it supports standard redundancy protocols, it enables users to set up networks with sub-rings and therefore increase availability even further. Its support of dynamic routing protocols also makes it easy to install larger networks.

A modern Ethernet network is the key to efficient processes, but is also associated with a number of risks, which is why the MSP30 Layer 3 switch offers a host of security functions to monitor access to the network and reliably protect it against attacks.

Moreover, PoE+ support allows terminal equipment to be powered straight from the data line without the need for additional power packs or extra cables.

### Applications

The MSP30 Layer 3 switch, which can be installed either centrally in a control cabinet or locally in distribution boxes, provides comprehensive routing functionality covering both static and dynamic routing. This ensures that MSP can meet the most stringent Layer 3 requirements of every customer, even in harsh environments. This makes the switch suitable for most applications in automotive and transportation, as well as energy, power transmission and distribution, and a host of other industries.

### Your Benefits

Thanks to its modular design, the MSP30 can be used to create tailor-made and hence cost-effective solutions for your applications, allowing you to respond flexibly to future requirements without having to replace the entire switch. You can even use your existing MSP30 switch modules in the new routing version.

The MSP Layer 3 software brings routing to the shop floor and enables communication between physically separated networks. This allows segmentation of large networks, while the extremely robust design of the MSP enables the user to place the switch in harsh conditions, thus facilitating direct routing to other production floors without needing a backbone router.

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



Thanks to its dynamic unicast and multicast routing, the new MSP30 Layer 3 switch guarantees network segmentation and seamless production processes.

## Hirschmann™ MSP30 Layer 3

The new Hirschmann MSP30 Layer 3 switch extends the unique security functions of the MSP30 family to include high-performance routing. This functionality is offered in a variety of hardware packages. Unicast dynamic routing (UR) and multicast dynamic routing (MR) offer customers an attractive cost benefit – "Just pay for what you need." With its existing modular IPv6-ready hardware, the MSP30 Layer 3 switch enables complete solutions that meet all network requirements.

### Benefits at a Glance

- Extends the proven MSP30 switch family to include high-performance routing (unicast and multicast)
- All-around network protection through security functions such as port security, DHCP Snooping, Dynamic ARP Inspection, IP Source Guard, Ingress/Egress Access Control List (ACL), sFlow, storm control, automatic denial-of-service prevention and port access control via 802.1x, including multi-client authentication, Radius Virtual Local Area Network (VLAN)/policy assignment and guest/unauthenticated VLAN
- Support of standard redundancy protocols such as Media Redundancy Protocol (MRP) makes it possible to set up networks with sub-rings
- Individual configuration of functions and Ethernet ports, as a result of its modular design
- Click-in mechanism for tool-free module assembly
- Cost-effective powering of terminal equipment via PoE+ function with up to 120 W
- IP30 industrial protection class
- High level of resistance to shocks and vibrations
- Optionally extended operating temperature range from -40 °C to +70 °C (standard is from 0 °C to +60 °C); Printed Circuit Boards (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 Single Network Management Protocol (SNMP) interface
- Standards and approvals:
  - Transformer stations: IEC 61850-3, IEEE 1613
  - Hazardous areas: ISA 12.12.01, CSA 22.2 number 213; ATEX Zone 2
  - Transportation: NEMA TS2, EN 50121-4
  - Safety: EN 60950-1, cUL508
  - Marine approvals: GL, BV, DNV, ABS, LR
  - Railroad approvals: EN 50121-4:2006 declaration
- MSP30 Layer 3 is the next generation of PowerMICE with considerably better hardware performance
- Compatible with the proven industrial 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 3 A X X . X

#### 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** = 4 x 10/100/1000 Mbit/s

#### Number of 10 Gigabit Ethernet Ports

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

#### Temperature Range

**S** = Standard 0°C to +60°C  
**T** = Extended -40°C to +70°C  
**E** = Extended -40°C to +70°C with 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

<b>Z9</b> = CE, FCC, EN 61131 (EN 60950)	<b>VT</b> = VY + EN50121-4
<b>Y9</b> = Z9 + cUL508 (UL60950)	<b>T9</b> = Z9 + EN50121-4
<b>W9</b> = Z9 + ATEX Zone 2	<b>TY</b> = T9 + cUL508 (UL60950)
<b>WY</b> = Y9 + ATEX Zone 2	<b>U9</b> = Z9 + GL (ABS, BV, DNS, LR)
<b>X9</b> = Y9 + ISA 12.12.01 Class 1 Div. 2	<b>UY</b> = U9 + cUL508 (UL60950)
<b>V9</b> = Z9 + IEC 61850, IEEE 1613	<b>UW</b> = UY + ATEX Zone 2
<b>VY</b> = V9 + cUL508 (UL60950)	<b>UX</b> = UY + ISA 12.12.01 Class 1 Div. 2
<b>VU</b> = VY + GL (ABS, BV, DNS, LR)	

#### Software Packages

**99** = Reserved  
**UR** = Unicast Routing  
**MR** = Multicast Routing

#### Customization

**HH** = Hirschmann Standard

#### Software Configuration

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

#### Software Level

**3A** = HiOS Layer 3 Advanced  
**2A** = HiOS Layer 2 Advanced

#### Software Release

**XX.X** = Current Software Release  
**03.0** = Software Version 03.0  
**02.0** = Software Version 02.0

**NOTE:** The last four categories (**Customization, Software Configuration, Software Level and Software Release**) are optional.



## MSM20/MSM24/MSM40/MSM42 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 9 E 99.9 99

### Design

- MSM20 = Fast Ethernet Ports
- MSM24 = Fast Ethernet Digital Input/Output
- MSM40** = Fast Ethernet/Gigabit Ethernet Ports
- MSM42 = Fast Ethernet/Gigabit Ethernet Ports with PoE(+) Capability

### Port Type 1. Uplink

- T1** = Twisted Pair (TX)/RJ45 (10/100/1000 Mbit/s)
- C1 = Combo Port Twisted Pair (TX)/RJ45 (10/100/1000 Mbit/s) & - Fiber Optic SFP Cage (100/1000 Mbit/s)
- G2 = Singlemode Long Haul FX DSC 200 km (100 Mbit/s)
- L2 = Singlemode Long Haul FX DSC (100 Mbit/s)
- S2 = Singlemode FX DSC (100 Mbit/s)
- S4 = Singlemode FX ST (100 Mbit/s)
- M2 = Multimode FX DSC (100 Mbit/s)
- M4 = Multimode FX ST (100 Mbit/s)
- I/O = 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** = Z9 + cUL508 (UL60950)
- W9** = Z9 + ATEX Zone 2
- WY** = Y9 + ATEX Zone 2
- X9** = Y9 + ISA 12.12.01 Class 1 Div. 2
- V9** = Z9 + IEC 61850, IEEE 1613
- VY** = V9 + cUL508 (UL60950)
- VU** = VY + GL (ABS, BV, DNS, LR)
- VT** = VY + EN50121-4
- T9** = Z9 + EN50121-4
- TY** = T9 + cUL508 (UL60950)
- U9** = Z9 + GL (ABS, BV, DNS, LR)
- UY** = U9 + cUL508 (UL60950)
- UW** = UY + ATEX Zone 2
- UX** = UY + ISA 12.12.01 Class 1 Div. 2

### Customization

- HH** = Hirschmann Standard

### Hardware Configuration

- 9** = No FPGA

### Software Configuration

- E** = Entry (without configuration)

### Software Release

- 99.9** = No Software

### Maintenance

- 99** = No Maintenance Version

NOTE: The categories (Customization, Hardware Configuration, Software Configuration and Software Release) are optional.