MSP40
Full Gigabit Layer 3 Switch

The MSP40 switch offers complete modularity and various high-speed port options with up to 10 Gbit/s. This single device gives you access to far more Gigabit ports than any other similar modular compact switches on the market.

+ **Deliver on increasing bandwidth demands** without requiring system downtime, with flexible design through configurable port options.

+ **Adapt to high data levels** with up to four 2.5 Gigabit Ethernet ports or two 10 Gigabit Ethernet ports.

+ **Supply more PoE+ power** through Power over Ethernet Plus (PoE+) module accessibility to offer up to 120 more watts, per module.

Key Features

- Increase bandwidth with up to 28 Gigabit Ethernet (GE) ports
  - Reusable modules that can be used on any slot (first slot reserved for a 2.5 GE module and a newly-designed 10 GE module)
  - Up to four 2.5 GE or two 10 GE ports for high availability with media redundancy protocol (MRP) and link aggregation
- Modular setup with hot swappable ports and Layer 2/Layer 3 capabilities
- High-grade metal/aluminum housing for mounting on a DIN rail
- Temperature range of -40 °C to +70 °C
- Click-in mechanism for tool-free module assembly
- Cost-effective powering of terminal equipment via PoE+ function up to 120 watts per media module
- Simple configuration and diagnosis using HiDiscovery, Industrial HiVision or web interface

Meet high bandwidth needs in large industrial networks with a 28-port, full Gigabit Ethernet switch that's compactly designed and highly ruggedized.

Be certain.
Belden.

MSP40 Full Gigabit Layer 3 Switch and MSP PoE+ Module

The MSP40 switch offers a unique combination of features – all designed to help network engineers and system integrators keep pace with growing bandwidth requirements in large-scale industrial networks. As more data is transferred to the network layer (Layer 3), the MSP40 switch can easily adapt to these high data levels by enabling each port to support Gigabit speeds.

Depending on your network's current and future bandwidth needs, you can select from 28 single Gigabit ports, or opt to use the device's first module slot for up to four 2.5 GE ports. This port option is unique to Belden and Hirschman products – shifting toward a future IEEE standard.

For networks that require a 10-Gigabit bandwidth, the MSP40 offers the flexibility to enable these speeds by simply plugging in the newly designed MSM60 module with two 10-GE ports in the device's first module slot.

The MSP40 family supports 120-watt power requirements through Power over Ethernet Plus (PoE+) with built-in power supply. For applications that require more power, such as pan-tilt-zoom cameras, the MSP PoE+ Module with external power supply is available. This module does not take power from the switch, but from an external source. It offers significantly more power by placing the module into the existing device for an additional 120 watts of power.

Applications

The switch can meet the bandwidth needs of larger industrial network or networks that may expand their size or distance in the future. Legacy networks with copper cabling can use the MSP40 switches today, as well as if they upgrade to fiber cabling in the future. The switch's interchangeable modules make this update from copper to fiber simple, eliminating the need to buy and install a new switch.

Markets

With its extensive port options housed in a rugged, yet compact device, the MSP40 switch is ideal for harsh and space constrained applications, especially in the transportation, discrete manufacturing, automotive and mining industries.

More Gigabit ports make it easy to grow your bandwidth due to changing demands. Available as a 3-, 5-, and 7-slot device, MSP40 slots modules are interchangeable, on a live network – without requiring a network shutdown.

MSP Configurations

Up to 10 Gigabit Ethernet Uplink Ports with optional PoE+ Capability

`MSP40-00 28 0 S C Z9 99 HH E 3A XX.X`

Design

MSP40 = Full Gigabit Ethernet Ports
MSP42 = Full Gigabit Ethernet Ports with PoE+ Capability
MSP30 = Gigabit Ethernet Uplink Ports
MSP32 = Gigabit Ethernet Uplink Ports with PoE+ Capability

Number of Fast Ethernet Ports

00	= 00 x 10/100 Mbit/s (MSP40/MSP42)	16	= 16 x 10/100 Mbit/s
08	= 08 x 10/100 Mbit/s	24	= 24 x 10/100 Mbit/s

Number of Gigabit Ethernet Ports

00	= 00 x 10/100/1000 Mbit/s	20	= 20 x 10/100/1000 Mbit/s (MSP40/MSP42)
12	= 12 x 10/100/1000 Mbit/s (MSP40/MSP42)	**28**	= 28 x 10/100/1000 Mbit/s (MSP40/MSP42)

Number of 10 Gigabit Ethernet Ports

0 = Only available with MSM60 media module

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

Z9 = CE, FCC, EN 61131 (EN 60950)	VT	= VY + EN50121-4
Y9 = Z9 + cUL508 (UL60950)	T9	= Z9 + EN50121-4
W9 = Z9 + ATEX Zone 2 (MSP3x only)	TY	= T9 + cUL508 (UL60950)
WY = Y9 + ATEX Zone 2 (MSP3x only)	U9	= Z9 + GL (ABS, BV, DNS, LR)
X9 = Y9 + ISA 12.12.01 Class 1 Div. 2 (MSP3x only)	UY	= U9 + cUL508 (UL60950)
V9 = Z9 + IEC 61850, IEEE 1613	UW	= UY + ATEX Zone 2 (MSP3x only)
VY = V9 + cUL508 (UL60950)	UX	= UY + ISA 12.12.01 Class 1 Div. 2 (MSP3x only)
VU = VY + GL (ABS, BV, DNS, LR)		

Software Packages

99 = Reserved
UR = Unicast Routing
MR = Multicast Routing

Customization

HH = Hirschmann Standard
HX = Hirschmann Extreme

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
07.5 = Software Release for MSP40/MSP42

NOTE: Available **Approvals** vary dependent on MSP Design. The last four categories (**Customization, Software Configuration, Software Level** and **Software Release**) are optional.

MSM Media Module Configurations

Up to 10 Gigabit Ethernet Ports with optional PoE+ Capability

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
MSM46 = Fast Ethernet/Gigabit Ethernet Ports with PoE+ Capability
over external power
MSM50 = 2.5 Gigabit/Gigabit Ethernet Ports
MSM60 = 10 Gigabit/Gigabit Ethernet Ports (2 Ports)

Port Type 1. Uplink

T1 = Twisted Pair (TX)/RJ45 (10/100/1000 Mbit/s)
T5 = Twisted Pair (TX)/M12 (10/100 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)
S4 = Singlemode FX ST (100 Mbit/s)
Q6 = SFP Slot (1000/2500 Mbit/s or 1000/10.000 Mbit/s)

M2 = Multimode FX DSC (100 Mbit/s)
M4 = Multimode FX ST (100 Mbit/s)
I/O = Digital Input/Output
S2 = Singlemode FX DSC (100 Mbit/s)

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 (MSM60 = -40 °C to + 60 °C)
P = -40 °C to +70 °C inclusive conformal coating (MSM60 = -40 °C to + 60 °C)

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
HX = Hirschmann Extreme

Hardware Configuration

9 = No FPGA

Software Configuration

E = Entry (without configuration)

Software Release

99.9 = No Software

Maintenance

99 = No Maintenance Version

NOTE: Available **Approvals** vary dependent on MSM Design. The categories (**Customization, Hardware Configuration, Software Configuration** and **Software Release**) are optional.