



# Modular Industrial Patch Panel - MIPP

Combines both copper and fiber cable termination in one future-proof solution

The MIPP is designed for harsh environments, where its robust construction and high port density with multiple connector types make it ideal for installation in industrial networks.



**Maximum system flexibility & versatility** by combining copper and fiber management in one patch panel.



**Highest level of reliability** due to its solid metal construction, designed for use in indoors industrial environments without a cabinet.



**Quick and easy installation** of structured cabling to reduce installation costs (CapEx) and maintenance costs (OpEx).

## Key Features

- High port density: up to 72 fibers and 24 copper cables
- LC, SC, ST and E-2000 fiber duplex adapters
- Support singlemode and multimode fibers
- Double fiber module accommodates hybrid fiber cables
- RJ45 copper keystone jacks (shielded and unshielded, CAT5E, CAT6, CAT6A)
- RJ45 copper coupler (shielded and unshielded, CAT6A)
- RJ45 copper Industrial REVConnect jacks (shielded and unshielded, CAT6A)
- RJ45 copper Industrial REVConnect couplers (unshielded, CAT6A)
- Module can be removed from housing for easy cable installation
- 100% factory tested pre-terminated MPO cassette for fast, reliable fiber installation
- Wide temperature range from -20 °C to +70 °C
- UL approval (UL 1863)



Due to their compact dimensions, up to 6 modules can be combined in any permutation – and when required, each module can be easily removed or replaced.

**Be certain.  
Belden.**



MIPP Mix



Pre-Terminated MPO Cassette

### MIPP: A Versatile, Modular Patch Panel for Industrial Applications

The MIPP provides the ideal connection between Belden cables and Hirschmann switches. Its industrial modular design is suitable for industrial applications where active devices or end devices must be connected to infrastructure cabling.

It can easily be mounted on a DIN Rail, or attached at the sides of the cabinets by simply using a wall mount plate.

The MIPP Pre-Terminated MPO Cassette is 100% tested during manufacture. No need to splice, cleave or polish when installing on the plant floor.

### The MIPP is available as both single and double modules:

- Single Fiber Modules (up to 12 fiber connections)
  - 6 x SC duplex adapters
  - 6 x LC duplex adapters
  - 6 x ST duplex adapters
  - 6 x E-2000 duplex adapters
- Single Copper Modules
  - 2 or 4 x RJ45 keystone shielded
  - 2 or 4 x RJ45 keystone unshielded
  - 2 or 4 x RJ45 coupler shielded
  - 2 or 4 x RJ45 coupler unshielded
  - 2 or 4 x RJ45 Industrial REVConnect jack shielded
  - 2 or 4 x RJ45 Industrial REVConnect jack unshielded
  - 2 or 4 x RJ45 Industrial REVConnect coupler unshielded
- Double Fiber Modules (up to 24 fiber connections)
  - 12 x SC duplex adapters
  - 12 x LC duplex adapters
  - 12 x ST duplex adapters
  - 12 x E-2000 duplex adapters









### Applications and Markets

The MIPP is ideal for use in a wide range of industrial applications requiring maximum system reliability and flexibility. The industrial design makes it highly suited for use in Machine Building, Transportation, Alternative Power Generation, Oil & Gas, and Power Transmission & Distribution markets, as well as more general use in enterprise, buildings and other applications.







## Technical Information

Housing Type and Description						
Description	Modular Industrial Patch Panel, DIN Rail					
Number of Single Modules	1	2	3	4	5	6
Mechanical Construction						
Material Housing	Aluminium					
Dimensions (WxHxD)	42 x 138 x 122 mm	72 x 138 x 122 mm	102 x 138 x 122 mm	132 x 138 x 122 mm	162 x 138 x 122 mm	192 x 138 x 122 mm
Dimensions with Adapters and Gland, max. (HxD)	165 x 133 mm	165 x 133 mm	165 x 133 mm	165 x 133 mm	165 x 133 mm	165 x 133 mm
Mounting	DIN Rail					
Appr. Weight Housing	360 g	530 g	697 g	865 g	1034 g	1200 g
Dimension Wallmount Plate (WxH)	38 x 157 mm	68 x 157 mm	98 x 157 mm	128 x 157 mm	158 x 157 mm	188 x 157 mm
Appr. Weight Wallmount Plate	67 g	119 g	172 g	223 g	277 g	329 g

## Technical Information

Module Type and Description						
	MIPP Fiber Splice Box				MIPP Copper Patch Panel	
Type	Single Module	Single Module	Single Module	Single Module	Single Module	Single Module
Description	6 x SC Duplex	6 x LC Duplex	6 x ST Duplex	6 x E-2000 Duplex	4 x RJ45 Keystone Jack, Unshielded	4 x RJ45 Coupler, Unshielded
						
Mechanical Construction						
Material	Steel					
Adapter/Keystone Types	<ul style="list-style-type: none"> <li>Blue SC adapter OS2 UPC zirconia ceramic</li> <li>Beige SC adapter OM1/OM2 PC phosphor bronze</li> <li>Aqua SC adapter OM3/OM4 PC zirconia ceramic</li> </ul>	<ul style="list-style-type: none"> <li>Blue LC adapter OS2 UPC zirconia ceramic</li> <li>Beige LC adapter OM1/OM2 PC phosphor bronze</li> <li>Aqua LC adapter OM3/OM4 PC zirconia ceramic</li> </ul>	<ul style="list-style-type: none"> <li>Blue ST adapter OS2 UPC zirconia ceramic</li> <li>Beige ST adapter OM1/OM2 PC phosphor bronze</li> <li>Aqua ST adapter OM3/OM4 PC zirconia ceramic</li> </ul>	<ul style="list-style-type: none"> <li>Blue E-2000 adapter OS2 UPC zirconia ceramic</li> <li>Beige E-2000 adapter OM1/OM2 PC zirconia ceramic</li> <li>Aqua E-2000 adapter OM3/OM4 PC zirconia ceramic</li> </ul>	<ul style="list-style-type: none"> <li>CAT5E Modular Jack, Keyconnect, black</li> <li>CAT6+ Modular Jack, Keyconnect, black</li> <li>CAT6A/10GX Modular Jack, Keyconnect, black</li> <li>CAT6A/10GX Industrial REVConnect Jack, black</li> </ul>	<ul style="list-style-type: none"> <li>CAT6A/10GX Modular Jack, Keyconnect Couple, black</li> <li>CAT6A/10GX Industrial REVConnect Coupler, black</li> </ul>
Appr. Weight Module	218 g	218 g	218 g	218 g	516 g	516 g
Protection Class	IP40	IP40	IP40	IP40	IP20	IP20
Cable Entry	3 x M16 Glands	3 x M16 Glands	3 x M16 Glands	3 x M16 Glands	<ul style="list-style-type: none"> <li>1 cable entry point</li> <li>with tie wrap fixing latch</li> </ul>	<ul style="list-style-type: none"> <li>1 cable entry point</li> <li>with tie wrap fixing latch</li> </ul>
Maximum Diameter Cable	10 mm	10 mm	10 mm	10 mm	8.6 mm	8.6 mm
Cable Types	Fiber cables up to 12 fibers: loose tube, mini-breakout, breakout cables				CAT5E unshielded, CAT6 unshielded, CAT6A unshielded	

Module Type and Description						
Type	Double Modules	Double Modules	Double Modules	Double Modules	Single Module	Single Module
Description	12 x SC Duplex	12 x LC Duplex	12 x ST Duplex	12 x E-2000 Duplex	4 x RJ45 Keystone Jack, Shielded	4 x RJ45 Coupler, Shielded
						
Mechanical Construction						
Material	Steel					
Adapter/Keystone Types	<ul style="list-style-type: none"> <li>Blue SC adapter OS2 UPC zirconia ceramic</li> <li>Beige SC adapter OM1/OM2 PC phosphor bronze</li> <li>Aqua SC adapter OM3/OM4 PC zirconia ceramic</li> </ul>	<ul style="list-style-type: none"> <li>Blue LC adapter OS2 UPC zirconia ceramic</li> <li>Beige LC adapter OM1/OM2 PC phosphor bronze</li> <li>Aqua LC adapter OM3/OM4 PC zirconia ceramic</li> </ul>	<ul style="list-style-type: none"> <li>Blue ST adapter OS2 UPC zirconia ceramic</li> <li>Beige ST adapter OM1/OM2 PC phosphor bronze</li> <li>Aqua ST adapter OM3/OM4 PC zirconia ceramic</li> </ul>	<ul style="list-style-type: none"> <li>Blue E-2000 adapter OS2 UPC zirconia ceramic</li> <li>Beige E-2000 adapter OM1/OM2 PC phosphor bronze</li> <li>Aqua E-2000 adapter OM3/OM4 PC zirconia ceramic</li> </ul>	<ul style="list-style-type: none"> <li>CAT5E Shielded Modular Jack, Keyconnect, metal body</li> <li>CAT6+ Shielded Modular Jack, Keyconnect, metal body</li> <li>CAT6A/10GX Shielded Modular Jack, Keyconnect, metal body</li> <li>CAT6A/10GX Shielded Industrial REVConnect Jack, metal body</li> </ul>	<ul style="list-style-type: none"> <li>CAT6A/10GX Shielded Modular Jack, Keyconnect Coupler, metal body</li> </ul>
Appr. Weight Module	450 g	450 g	450 g	450 g	636 g	636 g
Protection Class	IP40	IP40	IP40	IP40	IP20	IP20
Cable Entry	1 x M20 Gland 2 x M16 Glands	1 x M20 Gland 2 x M16 Glands	1 x M20 Gland 2 x M16 Glands	1 x M20 Gland 2 x M16 Glands	<ul style="list-style-type: none"> <li>1 cable entry point</li> <li>with tie wrap fixing latch</li> </ul>	<ul style="list-style-type: none"> <li>1 cable entry point</li> <li>with tie wrap fixing latch</li> </ul>
Maximum Diameter Cable	13 mm for G20 10 mm for G16	13 mm for G20 10 mm for G16	13 mm for G20 10 mm for G16	13 mm for G20 10 mm for G16	8.6 mm	8.6 mm
Cable Types	Fiber cables up to 24 fibers: loose tube, mini-breakout Hybrid fiber cable: 6 x SM + 6 x OM1, 6 x SM + 6 x OM2, 6 x SM + 6 x OM3, 6 x SM + 6 x OM4				CAT5E shielded, CAT6 shielded, CAT6A shielded, CAT7 shielded	
Accessories						
Pigtails (1 pack of 12 pigtails, 900 micron, 0.6 m in 12 different colours)	<ul style="list-style-type: none"> <li>SC/UPC SM 9/125, OS2</li> <li>SC/PC MM 62.5/125, OM1</li> <li>SC/PC MM 50/125, OM2</li> <li>SC/PC MM 50/125, OM3</li> <li>SC/PC MM 50/125, OM4</li> </ul>	<ul style="list-style-type: none"> <li>LC/UPC SM 9/125, OS2</li> <li>LC/PC MM 62.5/125, OM1</li> <li>LC/PC MM 50/125, OM2</li> <li>LC/PC MM 50/125, OM3</li> <li>LC/PC MM 50/125, OM4</li> </ul>	<ul style="list-style-type: none"> <li>ST/UPC SM 9/125, OS2</li> <li>ST/PC MM 62.5/125, OM1</li> <li>ST/PC MM 50/125, OM2</li> <li>ST/PC MM 50/125, OM3</li> <li>ST/PC MM 50/125, OM4</li> </ul>	<ul style="list-style-type: none"> <li>E-2000/UPC SM 9/125, OS2</li> <li>E-2000/PC MM 62.5/125, OM1</li> <li>E-2000/PC MM 50/125, OM2</li> <li>E-2000/PC MM 50/125, OM3</li> <li>E-2000/PC MM 50/125, OM4</li> </ul>	<ul style="list-style-type: none"> <li>Universal cable crimping tool</li> <li>Core pack 10 pcs</li> <li>Core Pack 20 pcs</li> <li>Core Pack 50 pcs</li> </ul> <p>For MIPP housings equipped with Industrial RevConnect jacks or couplers</p>	<ul style="list-style-type: none"> <li>Universal cable crimping tool</li> <li>Core pack 10 pcs</li> <li>Core Pack 20 pcs</li> <li>Core Pack 50 pcs</li> </ul> <p>For MIPP housings equipped with Industrial RevConnect jacks or couplers</p>
Brilliance Field Installable Connector (900 micron)	12 brilliance connectors SC: <ul style="list-style-type: none"> <li>SM 9/125, OS2, blue</li> <li>MM 62.5/125, OM1, beige</li> <li>MM 50/125, OM2, black</li> <li>MM 50/125, OM3/OM4, aqua</li> </ul>	12 brilliance connectors LC: <ul style="list-style-type: none"> <li>SM 9/125, OS2, blue</li> <li>MM 62.5/125, OM1, beige</li> <li>MM 50/125, OM2, black</li> <li>MM 50/125, OM3/OM4, aqua</li> </ul>	24 brilliance connectors ST: <ul style="list-style-type: none"> <li>SM 9/125, OS2, blue</li> <li>MM 62.5/125, OM1, beige</li> <li>MM 50/125, OM2, black</li> <li>MM 50/125, OM3/OM4, aqua</li> </ul>			

## MIPP Configurator

Please Choose your Configuration Code in the Designated Boxes

Housing				Module 1			Module 2				Module 3										
M	I	P	P	/	L	D	/	2	S	3	P	/	c	u	e	4	/	1	N	N	N

### Housing

- X = No housing
- A = 1 x single module
- B = 2 x single module
- C = 3 x single module
- D = 4 x single module
- E = 5 x single module
- F = 6 x single module
- G = 1 x double module fiber
- H = 2 x double module fiber
- I = 3 x double module fiber
- J = 1 x single + 1 x double fiber
- K = 1 x single + 2 x double fiber
- L = 2 x single + 1 x double fiber
- M = 2 x single + 2 x double fiber
- N = 3 x single + 1 x double fiber
- O = 4 x single + 1 x double fiber

Note: A double module requires two places

### Mounting

- D = Standard DIN Rail
- W = Wall mount plate included
- X = No housing

### Fiber Splice Box Module

- 1 = Single module for 12 fibers
- 2 = Double module for 24 fibers

### Adapter

- B = ST – ST metal duplex adapters
- T = ST – ST duplex adapters
- M = SC – SC metal duplex adapters
- S = SC – SC duplex adapters
- L = LC – LC duplex adapters
- E = E-2000 – E-2000 adapters

### Application

- 1 = MM/OM1
- 2 = MM/OM2
- 3 = MM/OM3
- 4 = MM/OM4
- 5 = 6 x SM/OS2 / 6 x OM1
- 6 = 6 x SM/OS2 / 6 x OM2
- 7 = 6 x SM/OS2 / 6 x OM3
- 8 = 6 x SM/OS2 / 6 x OM4
- 9 = SM/OS2 UPC
- A = SM/OS2 APC

Note: 5-8 for double module only

### Accessories

- P = Pigtails
- B = Brilliance field installable connectors
- N = No accessories

### Example Module 2

c	u	e	4
---	---	---	---

### Copper Patch Panel Module

- c = Single copper module

### Keystones / Couplers

- c = Unshielded couplers
- d = Shielded couplers
- u = Unshielded keystones
- s = Shielded keystones
- r = Unshielded Industrial REVConnect couplers
- j = Unshielded Industrial REVConnect jacks
- v = Shielded Industrial REVConnect jacks

### Category

- d = CAT5E
- e = CAT6
- a = CAT6A

### Number of Connections

- 2 = 2 keystones / couplers
- 4 = 4 keystones / couplers

### Example Module 3

1	N	N	N
---	---	---	---

### Blind Module

- 1 = Single blind module
- 2 = Double blind module

### Accessories for MIPP with Industrial REVConnect

Tool	942-290-001	Universal Cable Crimping Tool
Cores:	942-290-002	Core pack 10 pcs.
• Cable Manager	942-290-003	Core Pack 20 pcs.
• Termination Cap	942-290-004	Core Pack 50 pcs.

For additional Fiber Splice Box and Copper Patch Panel accessories, please contact customer service.

## MIPP Pre-Terminated MPO Cassette Configurator

Housing				Cassette 1			Cassette 2				Cassette 3				Cassette 4				Cassette 5				Cassette 6																							
M	I	P	P	/	A	D	/	P	4	M	A	/	X	X	X	X	/	X	X	X	X	/	X	X	X	X	/	X	X	X	X	/	X	X	X	X	/	X	X	X	X	/	X	X	X	X

### Housing

- X = No housing
- A = 1 x single module
- B = 2 x single module
- C = 3 x single module
- D = 4 x single module
- E = 5 x single module
- F = 6 x single module

### Mounting

- D = Standard DIN Rail
- W = Wall mount plate included
- X = No housing

For additional housings and cassette combinations, please contact customer service.

### Fiber MPO Cassette

- P = Pre-Terminated MPO Cassette

### Fiber Type (Applications)

- 4 = LC duplex MM/OM4
- 9 = LC duplex SM/OS2 UPC

### Connector (Trunk Side)

- M = 1-port MPO-12 (m)

### Polarity

- A = Type A

### Example Part Numbers

Configuration	Description in DIN Rail Design
MIPP/AD/P9MA	MIPP with Pre-Terminated MPO Cassette with 6 LC OS2/UPC duplex adapters (blue) to 1 MPO-12 (male), Polarity Type-A
MIPP/AD/P4MA	MIPP with Pre-Terminated MPO Cassette with 6 LC OM4 duplex adapters (aqua) to 1 MPO-12 (male), Polarity Type-A

Can be inserted in any slot of a MIPP housing

Belden, Belden Sending All The Right Signals, GarrettCom, Hirschmann, Lumberg Automation, Tofino Security, Tripwire and the Belden logo are trademarks or registered trademarks of Belden Inc. or its affiliated companies in the United States and other jurisdictions. Belden and other parties may also have trademark rights in other terms used herein.