

ETHERNET SWITCHES

Ethernet Switches, Media Converters and Extenders

Ethernet isn't just for business networks anymore. More and more, you need to get your devices connected to Ethernet backbones and networks. That's why we offer a huge selection of rugged and reliable Ethernet devices designed with your demanding applications and environments in mind.

From ultra-compact 5 and 8-port models that take up less than an inch in your crowded cabinet, to 24-port rack mount models for complex applications, we've got you covered. Most of our switches have options like single and multi-mode fiber optic ports, and wide operating temperatures for use in hot enclosures and sun-baked installations. We even add redundant power inputs so you can add a back-up power supply to keep your connections up and running. We have gigabit, Power-over Ethernet (PoE) and sophisticated management options, too.

Need to reach out farther than Ethernet's 100-meter limit? Try our innovative Ethernet Extenders. They can expand your network up to 5 km over your existing copper wires. Go even farther over fiber optic lines with our Ethernet media converters.

On top of this selection, you always get fast delivery and unmatched Technical Support - before, during and after the sale. Try us. Your satisfaction is guaranteed.

New in Ethernet Switches...

ULTRA-COMPACT, UNMANAGED SWITCHES

If you're tight on space and budget, you'll love these hardened little workhorses. With LC fiber ports, you can add single and multi-mode fiber options in the same small, tiny little footprint.

See page 24 for details



WIDE-TEMPERATURE, UNMANAGED SWITCHES

If you need the extra resilience of wide-temperature protection, or extra SC or ST fiber ports, the hardened ESW200 series is your best bet. This impressive level of performance is yours at an exceptional price.

See page 24 for details



SECTION CONTENTS



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New! Ultra-compact Industrial Hardened Unmanaged Switches

Great things do come in small packages

Check out the full line of fiber combinations online at www.bb-europe.com



ESW100 series – the smallest fiber switch on the market

- 5 or 8 port, copper and LC fiber port options
- 6 panel mount options or DIN rail mount – all less than 1 inch wide
- Level 3, 61000-6-2 heavy industrial specifications
- IEC60068-2 shock and vibration tested
- Redundant power inputs to run on AC or DC
- Temperature range -10 to 60°C
- 5 port is 3.94" X .98" X 2.95"
- 8 port is 5.7" X .94" X 2.95"

ESW200 series

- Wide temperature options (-40 to 75°C)
- Up to 8 different copper, single and multi-mode fiber port combinations
- Same heavy industrial certifications as the ESW100 series
- Check online for features and options! www.bb-europe.com

APPLICATIONS: Industrial Automation, SCADA, Traffic Control, Water Management, Building Automation

	10/100	Multi-Mode	Single-Mode
ESW105	5		
ESW105-ML	4	1 (LC)	
ESW-105-SL	4		1 (LC)
ESW108	8		
ESW108-ML	7	1 (LC)	
ESW108-SL	7		1 (LC)
ESW205	5		
ESW208	8		
ESW205-T*	5		
ESW208-T*	8		

* Wide temperature options (-40 to 75°C)

Don't let the small size fool you. The Ultra-Compact ESW100 switches are built to tough, heavy industrial specifications. Wherever space is at a premium, they'll slot right in. Six panel mount options and a DIN rail footprint of just less than an inch let you stick them where you need them. Once installed, they barely take more room than the connectors themselves. And, with LC fiber ports, you can add single or multi-mode fiber options without a bigger box. It's the smallest fiber switch on the market.

If you need more fiber ports or the extra resilience of wide-temperature, then the ESW200 series offers you 8 different copper, single and multi-mode fiber options. Same heavy industrial specifications, same features, more possibilities.

Why Wide-Temperature?

Industrial equipment usually isn't in a nice, air conditioned office. Just being in a cabinet, your Ethernet switch can experience temperatures that are a minimum of 10°C hotter than surrounding air. If the sun hits the enclosure, think the inside of your car – in August – with the windows up. If you need reliability and peace of mind, consider adding Wide Temperature Protection.

Accessories...

MDR-20-14	24 VDC, 1.0A DIN rail power supply
MDR-40-24	24 VDC, 1.7A DIN rail power supply
C5UMB3FBG	Ethernet Cat5e cable, 3ft
C5UMB7FBG	Ethernet Cat5e cable, 7ft
DR19RMKT	Adjustable 19" rack mount kit

More Options

Cables
See online for details

Power Supplies
See online for details

Plug and Play Ethernet Switches

Heavy duty industrial grade workhorses

Customers consistently select this standard 6-port copper model



EIR306

Features & Benefits

- Meets NEMA TS2 requirements for temperature, shock & vibration
- Wide temperature (-40 to +75°C)
- Redundant power inputs with alarm relay outputs keeps your LAN up
- 1500V isolation keeps spikes and surges from damaging equipment

EIR306	6 port copper Ethernet switch
MDR-60-24	24 VDC, 2.5A DIN rail power supply

Also Consider:

EIRSP1 Industrial Ethernet Surge Suppressor

ERPMKT Optional Panel Mount Kit

Find a Full Range of Copper/Fiber Port Configurations Online!

Our Most Popular 8 Port Copper Unmanaged Switch

Higher port count - same rugged reliability



EIR308

Features & Benefits

- Same industrial certifications as the 6 port model above
- 10 to 30 VDC redundant power inputs for wide range power input
- IP30 metal DIN rail mount cases
- 10/100–full/half-duplex, MDI/MDIX, auto negotiation

EIR308	8 port copper Ethernet switch
MDR-60-24	24 VDC, 2.5A DIN rail power supply

Also Consider:

EIRSP1 Industrial Ethernet Surge Suppressor

ERPMKT Optional Panel Mount Kit

Find a Full Range of Copper/Fiber Port Configurations Online!

6 Copper Ports, 2 ST Multi-mode Fiber Ports

Our most popular multi-mode fiber switch



EIR308-2ST

Features & Benefits

- Same heavy industrial specifications as the copper port models above
- Wide temperature (-40 to +75°C)
- 6 copper ports, 2 fiber ports with ST multi-mode connectors

EIR308-2ST	6 copper 2 ST fiber Ethernet switch
MDR-60-24	24 VDC, 2.5A DIN rail power supply

Also Consider:

EIRSP1 Industrial Ethernet Surge Suppressor

ERPMKT Optional Panel Mount Kit

Find a Full Range of Copper/Fiber Port Configurations Online!

Industrial Gigabit and PoE Switches for Special Applications

Gigabit speed and the versatility of PoE in a variety of port configurations

For flexibility and future expansion options, several models have SFP dual port options. We also offer several PoE models. PoE offers reduced installation costs, easy setup and the ability to remotely power end devices.

These pages contain some of our most popular options. Unfortunately, we can't list each and every model. If you don't see exactly what you need, chances are it's online. Check out our full product selection online, including more Managed Switches. If you have questions about Gigabit, SFP or PoE (Power over Ethernet) – contact our Tech Support Team at **+353 (0)91 792 444** we're always happy to help you find the right solution.

Our Popular 5-Port Unmanaged Gigabit Ethernet Switch



EIR405-T

Features & Benefits

- Rugged IP30 DIN/panel mount case – built tough for industrial environments
- Wide temperature (-40 to +75°C)
- Dual power inputs with alarm output for network redundancy

EIR405-T	5 port unmanaged Gigabit switch
MDR-60-24	24 VDC, 2.5A DIN rail power supply

Unmanaged Switch at Gigabit Speed – Dual Function Port – Wide Temp



EIR418-2SFP-T

Features & Benefits

- 18 total ports – 16 10/100 and 2 10/100/100/SFP
- Wide temperature (-40 to +75°C)
- Wide power range input (12 - 48 VDC) – for a variety of applications

EIR418-2SFP-T	18 port Gigabit switch w/ SFP dual port
MDR-60-24	24 VDC, 2.5A DIN rail power supply
	SFP expansion models available online

5-Port PoE Unmanaged Industrial Ethernet Switch



EIRP305-T

Features & Benefits

- 1 standard 10/100 and 4 PoE 10/100 ports
- Wide temperature (-40 to +75°C)
- 48 VDC power input

EIRP305-T	5 port PoE unmanaged switch
MDR-100-48	48 VDC, 2A DIN rail power supply

10-Port PoE Managed Industrial Switch at Gigabit Speed



EIR610-2SFP-T

Features & Benefits

- 8 PoE 10/100 and 2 Gigabit/SFP ports
- Wide temperature (-40 to +75°C)
- Dual power inputs with alarm output for network redundancy

EIR610-2SFP-T	10 port Gigabit managed switch
SDR-240-48	48 VDC, 5A DIN rail power supply
	SFP expansion models available online

Ethernet Extenders

Stretch your Ethernet up to 1 1/2 miles over existing copper or coaxial cable

Commercial grade and rugged industrial models available



EIS Commercial Grade

- Unique case allows stand-alone use (desktop style) or rack mount
- Easy set-up using DIP switch (local or remote setting)
- Status LED's for monitoring and connection status
- Sold as single units – however, two are required for operation
- EIS and EIR models are compatible – choose each end based on environment

EIR Industrial Series

- Ruggedized for DIN rail mount or panel mount (with optional kit sold below)
- Wide temperature rated (-40 to +75°C)
- Dual power inputs via terminal block connections
- Meets IEC61000-6-2 EMC standards for industrial environment Class 1/Div2
- Flexible extension port connectivity – RJ-11 or terminal block

WHICH MODEL? IF YOU'RE USING COPPER WIRE, CHOOSE THE BASE MODEL. IF YOU'RE USING CO-AXIAL CABLE, CHOOSE THE EXTEND-C MODEL. CO-AXIAL CABLE IS OFTEN USED FOR IP VIDEO SUPPORT.

You'll find these Ethernet Extenders are easy to use and easy to install. Two are required, one for each end of your extension points. For the best performance, be sure the extender wire/cable is free of load coils, filters and splitters.

Choose the model you need based on three factors:

1. Media type (copper or coaxial)
2. Distance vs. speed requirements
3. Environment (mounting, power inputs and temperature specifications)

If you're extending over copper, use a base model. If you're using coaxial cable, then choose the EXTEND-C models.

If you need higher speed or greater distance than shown, check out the extreme distance extenders on the next page.

Think about each end of your extension. If you have a rack or desktop at one end, and DIN rail at the other, choose one EIS and one EIR model. Why pay for more features than you need? Make the best choice for your environment.

- More information available online about B&B Electronic's rack system for Ethernet EIS extenders and media converters. www.bb-europe.com

	EIS-EXTEND	EIS-EXTEND-C	EIR-EXTEND	EIR-EXTEND-C
Wire/Cable	Copper	Coaxial	Copper	Coaxial
Maximum Distance/ Resulting Speed	1900m/1 Mbps	2600m/1-5 Mbps	1900m/1 Mbps	2600m/1-5 Mbps
Maximum Speed/ Resulting Distance	50 Mbps/300m	75-85 Mbps/200m	50 Mbps/300m	75-85 Mbps/200m
Ethernet Ports	1	1	1	1
Extension Port	RJ-11	BNC or F Style	RJ-11, TB	BNC or F Style
Temperature Rating	0 to 60°C	-10 to 60°C	-40 to 75°C	-40 to 75°C
Power Input	PS included	PS included	(2) 12 to 30 VDC	(2) 12 to 30 VDC
Mounting	Desk, Rack (EIS-RACK-16)	Desk, Rack (EIS-RACK-16)	DIN, optional Panel (EIRPMKT)	DIN, optional Panel (EIRPMKT)

Power Supplies

MDR-20-24
MDR-40-24

See online for details

Need Cables?

Cat 5e
patch cords

See online for details

Mounting Options

EIS-RACK-16

19 inch rack system

EIRPMKT

Panel mount kit (EIR series)

New! Managed and Extreme Distance Copper Extenders

When standard extenders don't get the job done – step up to these models

EIRM Managed 1 and 8-port models

- Same rugged industrial specifications as EIR-EXTEND (facing page)
- Web based browser or console port interface
- SNMP management
- EIRM-EXTEND-8 model has 2 VDSL extender ports, IGMP snooping V3 and port –based VLAN and IEEE802.1Q VLAN tagging

EIDM Extreme Distance Model

- Uses an SHDSL technology
- Console port for configuration
- Extends over 3.5 miles (6,248m)
- Extensions consist of 1 or 2 pairs of copper (best speed achieved with 2 pair)
- Ruggedized metal enclosure

ALSO AVAILABLE ON-LINE: UNMANAGED STANDARD 4 PORT, SINGLE AND MULTI-PORT PoE EXTENDERS



EIRM-EXTEND-8

EIDM-EXTEND-2 (FRONT)

(BACK)

	EIRM-EXTEND	EIRM-EXTEND-8	EIDM-EXTEND-2
	Managed	Managed	Distance
Wire/Cable	Copper	Copper	Copper
Maximum Distance/ Resulting Speed	1900m/1 Mbps	1900m/1 Mbps	6248m/384 kbps
Maximum Speed/ Resulting Distance	50 Mbps/300m	50 Mbps/300m	9216 kbps/1828m
Ethernet Ports	1	8	2
Extension Port	RJ-11, Terminal block	(2) RJ-11, Terminal block	RJ-45/48
Temperature Rating	-40 to 75°C	-40 to 75°C	0 to 50°C
Power Input	(2) 12 to 30VDC	(2) 12 to 30VDC	Built-in

Customers have requested managed extenders and extenders that stretched distance limits even further. We're pleased to present even more options for your consideration with the managed EIRM-EXTEND models and the EIDM-EXTEND-2 rugged distance extender.

The EIRM-EXTEND series comes in 1 port and 8 port versions, offering you all the advantages of our rugged, industrial extenders with the convenience of managing your network from your desk.

Managing remote assets at distances up to 3 times greater than our standard extenders is the job of the new EIDM-EXTEND-2. It uses SHDSL technology instead of VDSL, and has a console port for easy configuration. Extensions consist of 1 or 2 pairs of copper, however, your best speed performance will come with 2 pairs.

If you have any questions about which extenders are right for you, call our free technical support team at +353 (0)91 792 444 and they'll be glad to help. Or, check out the full line of Ethernet Extenders online at www.bb-europe.com.

Power Supplies

MDR-20-24
MDR-40-24

See online for details

Accessories...

EIRSP1	Panel mount kit (EIR models)
EIRPMKT	Industrial Ethernet surge suppressor
DR19RMKT	Adjustable 19-in rack mount kit
EIS-RACK-16	Ethernet pass through receptacle

Need Cables?

Cat 5e patch cords

See online for details

Extend Ethernet Distance over Fiber Optic with Media Converters

The Versatility of Ethernet with the Range and Immunity of Fiber

Communicate with remote devices - gain the signal advantages of fiber



EIR-S-SC



EIR-M-ST



EIR-M-SC



EIR-G-SFP-T



EIS-M-ST



EIS-M-SC

Media converters do more than just convert copper Ethernet signals to fiber. They allow your LAN to be extended beyond the normal 100 meter limit. By using a pair of media converters, LANs can be extended up to 2km with multi-mode fiber and up to 20km with single-mode fiber.

WANT GIGABIT? BOTH THE INDUSTRIAL EIR SERIES AND THE COMMERCIAL GRADE EIS SERIES HAVE A GIGABIT OPTION THAT REQUIRES AN SFP MODULE. FOR SFP OPTIONS, PLEASE VISIT US ONLINE OR CALL FOR FREE TECHNICAL SUPPORT AT +353 (0)91 792 444

Since your data is traveling via fiber, it's protected from ground loop problems and electrical interference present along the cable run.

If you're looking for industrial toughness, wide temperature protection, built in alarms, and DIN rail mount metal cases – the EIR line is for you.

If you prefer a rack mount, wall or desk converter, you'll be happy with the more economical EIS series.

Accessories...

EIRPMKT	Panel mount kit (EIR models)
EIRSP1	Industrial Ethernet surge suppressor
DR19RMKT	Adjustable 19-in rack mount kit
ENSP1F5	Ethernet pass through receptacle
EIS-RACK-16	19-in rack system (EIS models)
EIS-RACK-PS	Additional power supply for EIS-RACK-16

Need Cables?

Cat 5e patch cords
See online for details

Find Surge Suppressors
See online for details

	EIR-S-SC	EIR-M-ST	EIR-M-SC	EIR-G-SFP-T	EIS-M-ST	EIS-M-SC
Series	Industrial	Industrial	Industrial	Industrial	Commercial	Commercial
Copper (RJ-45) port	10/100	10/100	10/100	10/100/1000	10/100	10/100
Fiber Port	Single-mode (SC)	Multi-mode (ST)	Multi-mode (SC)	SFP (Requires module)	Multi-mode (ST)	Multi-mode (SC)
Temperature	-34 to +74°C	-34 to +74°C	-34 to +74°C	-40 to +75°C	0 to 50°C	0 to 50°C
Power Input	10 to 48 VDC	10 to 48 VDC	10 to 48 VDC	12 to 48 VDC	12 VDC (included)	12VDC (included)
Redundant Power Input	Via terminal blocks	Via terminal blocks	Via terminal blocks	Via terminal blocks		
Output Alarm	✓	✓	✓	✓		
Mount	DIN Rail	DIN Rail	DIN Rail	DIN Rail	Desk/Wall	Desk/Wall
Front LED Indicators	✓	✓	✓	✓	✓	✓
Dip Switch Configuration	✓	✓	✓	✓		
MAC Address	2K	2K	2K	4K		
Hardened IEC61000-6-2	✓	✓	✓	✓		
Rack Mount?					Optional	Optional
Panel Mount?	Optional	Optional	Optional	Optional		