

PB 363

GarrettCom[®] Magnum CP80 Series Hardened Industrial Switch

The Magnum CP80-Series Hardened Ethernet switches provide modern Ethernet connectivity for a variety of factory automation and SCADA applications.



The CP80-Series Industrial Grade Switch is DC-powered by 12VDC and 24VDC for Factory Floor or 48VDC for Tariffed Carrier Field Facilities, has a Rugged Metal Case and Metal Mounting Brackets Suitable for Panel Mounting.

Features

- Provides eight hardened 10/100 switched RJ-45 ports
- One additional 100Mb fiber backbone port of any type
- Hardened for industrial use, UL rated -25° C to 60° C
- DC power input, 12 VDC, 24 VDC and -48 VDC, DIN-Rail mounting. Dual-Source optional
- Ideal for factory automation and telecom (NEBS-compliant)

Ideally Suited for Factory Automation Systems

In factory automation control systems, fieldbus control systems are giving way to IP-based networks. The Magnum CP80-Series Hardened Ethernet switches provide modern Ethernet connectivity for a variety of factory automation and SCADA applications.

Ethernet networks in factory control systems provide interoperability and bandwidth with universal connectivity via 10/100 RJ-45 ports, all at an economical cost. In control system cabinets, a small group of IEDs, PLCs, sensors, WAPs and control devices are co-located and connected into the network using twisted-pair copper cabling. Then, this group of devices is linked into the overall industrial network, typically with a fiber cable for noise immunity and distance. The Magnum CP80-Series Hardened Ethernet Switches are ideal for these applications.

GarrettCom Magnum CP80 - Industrial Hardened Switch

Copper and Fiber Mix

Magnum CP80F switches provide eight 10/100 copper ports and one 100Mb fiber up-link port. They are hardened to withstand the stress of industrial environments, highly reliable (over 25 years MTBF) and easily fit into industrial and telecom control cabinets. Operation is "plug-and-play." Front-mounted LEDs provide status information on each port. Multiple CP80-Series switches can be linked in a cascaded or "daisychain" manner for expansion of the network.

The fiber port is available with a 2KM multi-mode ST, SC, LC, or MTRJ type connector, or with a single-mode LC, ST, and SC-type to support 20 and 40 kilometers distance. (Other special fiber

port types are available on request). The 100Mb fiber port of the Magnum CP80F supports full distance fiber LAN cabling to a switch upstream.

Power Options

The CP80-Series industrial grade switch is DC-powered by 12VDC and 24VDC for factory floor or 48VDC for tariffed carrier field facilities, has a rugged metal case and metal mounting brackets suitable for panel mounting. Models with a DIN-Rail mounting bracket included are available.

Warranty

Three years.

Product Specifications

Type	CP80
Product Description	Magnum CP80-Series Hardened Industrial Switch.
Performance	
Fiber Ports	100 Mb FDX, all connector types, multi-mode or single-mode RJ-45 Ports: 10 / 100 Mb, FDX and HDX modes. Auto-negotiation and auto-cross MDI-MDIX on RJ-45 ports occur at LINK-enable. No cross-over cables required.
Processing Type	Store and Forward, with IEEE 802.3x full duplex, flow control non-blocking.
System Aggregate Forwarding and Filtering Rate	1190K pps @ 100BASE-TX / FX (All ports at 100 Mb full speed). 1536 bytes max packet size.
Packet Buffers	256KB, Address Table size: 4K nodes.
Latency	Less than 5ms (not including packet time).
VLANs Support	
Data packets that have the 4 bytes tagged VLAN field (IEEE 802.1q) inserted in them are received and transmitted unchanged by all CP80-series switches.	
Network Standards	
Ethernet	IEEE 802.3u, 100Base-TX, FX; IEEE 802.3, 10Base-T.
Auto Negotiation and Auto-Cross	IEEE 802.3u occurs at LINK enable, for each port. All 10 Mb ports obey the rules for configuring 10 Mb Ethernet, all 100 Mb ports use Fast Ethernet rules.
Network Cable Connectors	
RJ45	Category 5 UTP/STP, 10 Mb: Cat. 3,4, 5 UTP.
Fiber	100 Mb, 100BASE-FX, all port connector types.
Power Supply (Internal)	
12V DC	Internal (range of 9 to 15V DC) built-in screw terminal for +, -, ground.
24V DC	Internal (range of 18 to 36V DC) built-in screw terminal for +, -, ground.
-48V DC	Internal (range of 36 to 60V DC), built-in screw terminal block for +, -, ground.
Dual Source DC power input for redundancy is a configuration option at 12V, 24V, and -48VDC	
Power Supply Rating	0.6A @ 12V; 0.3A @ 24V; 0.15A at 48V.
Power Input	8 watts typical, 9 max.
Surge Rating	IEC61000-4-3, Class 3/ 4 (4KV for DC).

MAGNUM CP80

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Product Specifications (continued)

Operating Environment	
Ambient Temperature	-25°C to 60°C.
Storage Temperature	-50°C to 75°C
Ambient Relative Humidity	10% - 95% (non-condensing)
Conformal Coating (humidity protection)	Request quote
Mechanical	
Enclosure	Rugged high-strength sheet metal. Models with either DIN-Rail bracket included or with metal panel-mount brackets included are available.
Dimensions	1.25 in H x 6.6 in W x 6.0 in D (3.18 cm x 16.36 cm x 15.24 cm).
Weight	1.0 lb (454 g.)
Cooling Method	Convection.
LED Indicators on Chassis (LEDs are viewed coincident with the port connectors).	
Power	Steady on when power applied.
LED Indicators Per Port	
Speed	ON = 100 Mb; OFF = 10 Mb (with LINK ON (RJ-45 ports).
Link/Act	Steady ON for LINK w/ no traffic, blinking indicates port is transmitting & receiving.
F/H	ON for full-duplex mode, OFF for half-duplex.
Agency Approval	
UL Listed	cUL, CE, Emissions meet FCC Part 15, Class A.
Emissions	Pending
Warranty	
Warranty	Three Years

Magnum CP80 Ordering Information

Fiber Port Connectors

Note: "ff" selections of the "fiber flavor" (see table below)

MSC	100BASE-FX-SC: fiber optic multi-mode, SC type, 2 km.
MST	100BASE-FX-ST: fiber optic multi-mode, ST type, 2 km.
MTRJ	100BASE-FX-MTRJ: fiber optic multi-mode, MTRJ type, 2 km.
MLC	100BASE-FX-MLC: fiber optic multi-mode, LC type, 2Km.
SSC	100BASE-FX-SSC: fiber optic single-mode, SC type, 20 km.
SSCL	100BASE-FX-SSCL: fiber optic single-mode, SC type, "Long Reach" 40 km.
SST	100BASE-FX-SST: fiber optic single-mode, ST type, 20 km.
SLC	100BASE-FX-SLC: fiber optic single-mode, LC type, 20 km.
SLCL	100BASE-FX-SLCL: fiber optic single-mode LC type, "Long Reach" 40 km.



Model No.	Eight 10/100 RJ-45 Ports	One Fiber Port	Power Input	Mounting
CP80-24VDC	X		24V DC	Panel Clips
CP80R-24VDC	X		24V DC	DIN-Rail
CP80-12VDC	X		12V DC	Panel Clips
CP80R-12VDC	X		12V DC	DIN-Rail
CP80-48VDC	X		48V DC	Panel Clips
CP80R-48DC	X		48V DC	DIN-Rail
CP80F-ff-24VDC	X	X	24V DC	Panel Clips
CP80FR-ff-24VDC	X	X	24V DC	DIN-Rail
CP80F-12VDC	X	X	12V DC	Panel Clips
CP80FR-12VDC	X	X	12V DC	DIN-Rail
CP80F-ff-48VDC	X	X	48V DC	Panel Clips
CP80FR-ff-48VDC	X	X	48V DC	DIN-Rail
DUAL-SOURCE-CP80	Dual Source DC power input for redundancy is a configuration option at 12V, 24V, and -48VDC			

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