

**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
<b>Product Description</b>	Magnum CP80-Series Hardened Industrial Switch.
<b>Performance</b>	
<b>Fiber Ports</b>	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.
<b>Processing Type</b>	Store and Forward, with IEEE 802.3x full duplex, flow control non-blocking.
<b>System Aggregate Forwarding and Filtering Rate</b>	1190K pps @ 100BASE-TX / FX (All ports at 100 Mb full speed). 1536 bytes max packet size.
<b>Packet Buffers</b>	256KB, Address Table size: 4K nodes.
<b>Latency</b>	Less than 5ms (not including packet time).
<b>VLANs Support</b>	
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.	
<b>Network Standards</b>	
<b>Ethernet</b>	IEEE 802.3u, 100Base-TX, FX; IEEE 802.3, 10Base-T.
<b>Auto Negotiation and Auto-Cross</b>	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.
<b>Network Cable Connectors</b>	
<b>RJ45</b>	Category 5 UTP/STP, 10 Mb: Cat. 3,4, 5 UTP.
<b>Fiber</b>	100 Mb, 100BASE-FX, all port connector types.
<b>Power Supply (Internal)</b>	
<b>12V DC</b>	Internal (range of 9 to 15V DC) built-in screw terminal for +, -, ground.
<b>24V DC</b>	Internal (range of 18 to 36V DC) built-in screw terminal for +, -, ground.
<b>-48V DC</b>	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	
<b>Power Supply Rating</b>	0.6A @ 12V; 0.3A @ 24V; 0.15A at 48V.
<b>Power Input</b>	8 watts typical, 9 max.
<b>Surge Rating</b>	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)

<b>MSC</b>	100BASE-FX-SC: fiber optic multi-mode, SC type, 2 km.
<b>MST</b>	100BASE-FX-ST: fiber optic multi-mode, ST type, 2 km.
<b>MTRJ</b>	100BASE-FX-MTRJ: fiber optic multi-mode, MTRJ type, 2 km.
<b>MLC</b>	100BASE-FX-MLC: fiber optic multi-mode, LC type, 2Km.
<b>SSC</b>	100BASE-FX-SSC: fiber optic single-mode, SC type, 20 km.
<b>SSCL</b>	100BASE-FX-SSCL: fiber optic single-mode, SC type, "Long Reach" 40 km.
<b>SST</b>	100BASE-FX-SST: fiber optic single-mode, ST type, 20 km.
<b>SLC</b>	100BASE-FX-SLC: fiber optic single-mode, LC type, 20 km.
<b>SLCL</b>	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
<b>CP80-24VDC</b>	X		24V DC	Panel Clips
<b>CP80R-24VDC</b>	X		24V DC	DIN-Rail
<b>CP80-12VDC</b>	X		12V DC	Panel Clips
<b>CP80R-12VDC</b>	X		12V DC	DIN-Rail
<b>CP80-48VDC</b>	X		48V DC	Panel Clips
<b>CP80R-48DC</b>	X		48V DC	DIN-Rail
<b>CP80F-ff-24VDC</b>	X	X	24V DC	Panel Clips
<b>CP80FR-ff-24VDC</b>	X	X	24V DC	DIN-Rail
<b>CP80F-12VDC</b>	X	X	12V DC	Panel Clips
<b>CP80FR-12VDC</b>	X	X	12V DC	DIN-Rail
<b>CP80F-ff-48VDC</b>	X	X	48V DC	Panel Clips
<b>CP80FR-ff-48VDC</b>	X	X	48V DC	DIN-Rail
<b>DUAL-SOURCE-CP80</b>	Dual Source DC power input for redundancy is a configuration option at 12V, 24V, and -48VDC			

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