The Magnum DX40 provides a rugged and secure solution for extending fiber-based connectivity to remote devices in harsh environments, such as power utility substations.

**Features:**
- Hardened for harsh industrial environments
- Complies with IEEE1613 / IEC 61850-3 standards
- Serial and Ethernet interfaces
  - 2 RS232/RS485 ports software selectable
  - 2 Ethernet ports 10/100 BaseTX RJ45 OR 100FX SFP/SFF multi/single-mode
- Supports multiple protocols
  - Async and SCADA to TCP/IP
  - Ethernet, TCP/IP
  - IP routing
  - Network resiliency / RSTP
  - Serial multipoint and multimaster topologies
- Cyber Security protection:
  - Serial SSL
  - Secure HTTP
  - IPSec encrypted VPNs
  - Ethernet port security
  - TCP/IP firewall
  - Serial port SSL
  - Per-serial port VLANs
- Offers wide range of AC and DC power options
- Trouble-free maintenance – no fans or moving parts

The DX40’s dual-serial, dual-Ethernet configuration supports several flexible configurations. It provides resilient dual fiber-based extension from a core Ethernet network to serial device distributed across a large facility. It services as a multi-protocol concentration and access point for a fiber-based Ethernet wide area network (WAN) connection to a small site.

Encrypted per-session SSL and IPsec VPN capabilities, along with other IP firewall and port security features, assure cyber security protections will extend cost effectively all the way to end-point devices and small facilities.
Applications

The Magnum DX40 is ideal for any setting where the network must cover multiple facilities or remote locations. It is especially well suited to power utility substations.

Technical Information

### Serial Interface

**Physical Interface**
- 2 ports, RS232 or RS485, S/W selectable
- DB9 female connector
- Serial data rate from 300 bps to 230.4 kbps
- Data length: 1-32 bits support

**Protocols/Features**
- Async to TCP/IP
- DNP, Modbus, Telnet
- TCP/IP to serial terminal server, reverse terminal server
- Serial multipoint and multimaster topologies
- Select SCADA bit oriented protocols*

### Environmental

**Operating Temperature**
- -40°C to +85°C, no fans

**Storage Temperature**
- -40°C to +85°C

**Humidity**
- 95% non-condensing

**Industrial**
- IEEE 1613
- IEC 61850-3
- IEC 61000-6-5

**Emissions**
- EN50022A, FCC Part 15A

### Ethernet Interface

**Physical Interface**
- 2 copper or fiber ports
- Full Duplex, Half Duplex
- RJ45 modular connector ports
- 10/100 Base TX, auto-sensing or fixed speed
- 100FX Ethernet SFF or SFP modules
- Single-mode 8μ cable up to 40km
- Multi-mode 62.5μ /125 cable up to 2km

**Protocols/Features**
- Ethernet, TCP/IP
- IEEE 802.3x flow control
- Prioritization per IEEE 802.1p*
- VLANs per 802.1Q
- Port rate limiting
- Rapid Spanning Tree per IEEE 802.1w
- Support for 1024 MAC addresses

### Protocols/Features & Features

**Description**
- IP routing, RIP, RIP II, Static Routes
- Per VLAN routing
- ICMP, ARP
- OSPF
- Block / Allow / IP or PORT addresses
- DiffServ, traffic prioritization

### IP Routing Functions & Features

**Description**
- TCP/IP firewall
- Serial port SSL with AES/3DES
- IP VPN using IPSec
- Secure HTTP (HTTPS)
- Serial port VLANs
- Ethernet port security
- RSA/Radius Support
- Multilevel passwors with enforcement and aging
- Management activity logging and alarms

### Security

**Description**
- Web-based Graphical User Interface (GUI)
- CLI access via remote TELNET connection
- Powerful built-in protocol analyzer to monitor traffic on any port
- Comprehensive layer 1 through 3 statistics
- SNMP MIB II and SNMP traps
- PING and TELNET diagnostic functions
- Syslog event logging
- Proprietary Enterprise MIB
- XML-based config file

### Management & Diagnostics

**Description**
- Web-based Graphical User Interface (GUI)
- CLI access via remote TELNET connection
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- Syslog event logging
- Proprietary Enterprise MIB
- XML-based config file

### DX40 Port Configuration

![DX40 Port Configuration Diagram](image-url)

**Got questions? Need to talk to an expert? Send us an email:**

EMEA: garrettcomsalesinfo@belden.com US: ICS.Security@belden.com
Ordering Information

Model
DX40 = Serial Device Router

Ethernet Ports
01 = 1 x SFP, 1 x Twisted Pair RJ45
02 = 2 x SFP
03 = 2 x Twisted Pair RJ45

Power Supply
L = 24-48 VDC
H = 90-250 VAC/DC

Mounting
P = Panel
D = DIN-Rail

Choose SFP Transceivers

<table>
<thead>
<tr>
<th>Module No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFP100P-RJ45</td>
<td>100Mb Copper SFP transceiver, 10/100 auto-negotiating</td>
</tr>
<tr>
<td>SFP100P-FXMM2</td>
<td>100FX Fiber Optic SFP transceiver, multimode, 2Km</td>
</tr>
<tr>
<td>SFP100P-FXSM20</td>
<td>100FX Fiber Optic SFP transceiver, singlemode, 20Km.</td>
</tr>
<tr>
<td>SFP100P-FXSM40</td>
<td>100FX Fiber Optic SFP transceiver, singlemode, 40Km.</td>
</tr>
</tbody>
</table>
Belden Competence Center

As the complexity of communication and connectivity solutions has increased, so have the requirements for design, implementation and maintenance of these solutions. For users, acquiring and verifying the latest expert knowledge plays a decisive role in this. As a reliable partner for end-to-end solutions, Belden offers expert consulting, design, technical support, as well as technology and product training courses, from a single source: Belden Competence Center. In addition, we offer you the right qualification for every area of expertise through the world’s first certification program for industrial networks. Up-to-date manufacturer’s expertise, an international service network and access to external specialists guarantee you the best possible support for products. Irrespective of the technology you use, you can rely on our full support – from implementation to optimization of every aspect of daily operations.

About Belden

Belden Inc., a global leader in high quality, end-to-end signal transmission solutions, delivers a comprehensive product portfolio designed to meet the mission-critical network infrastructure needs of industrial, enterprise and broadcast markets. With innovative solutions targeted at reliable and secure transmission of rapidly growing amounts of data, audio and video needed for today’s applications, Belden is at the center of the global transformation to a connected world. Founded in 1902, the company is headquartered in St. Louis, USA, and has manufacturing capabilities in North and South America, Europe and Asia.

For more information, visit us at www.belden.com and follow us on Twitter @BeldenIND.

Got questions? Need to talk to an expert? Send us an email:

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