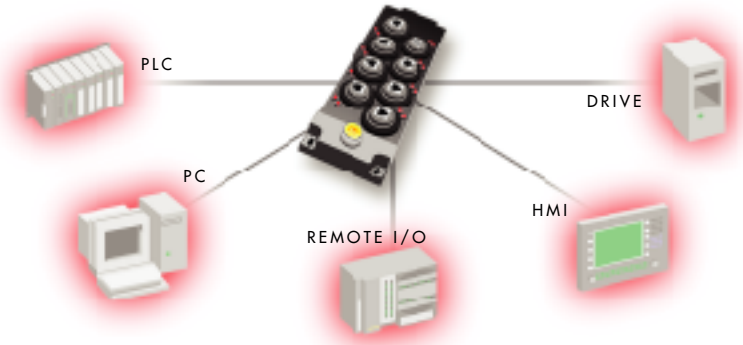
Since environmentally controlled telecom closets aren't common on the shop floor, RJ-Lnxx® switches are built to thrive in adverse conditions. Enclosures are eliminated, and network design is simplified, while your business enjoys the highest level of data integrity ▲

Ethernet Switches

Features

- **Extended temperature ranges**
- **Environmental Sealing**
- **Vibration Resistance**
- **Industrial Mounting Methods**
- **Hazardous Duty Ratings**



Ethernet networks consist of a star topology—all transmissions pass through a central device. The repeater hub is the simplest form of such a device, but has limitations in industrial applications:

- If more than one Ethernet device transmits at the same time, a data collision will occur, forcing each station to retransmit in order to deliver its message
- Hubs must transmit messages from all ports to reach the intended receiver, creating inefficient bandwidth usage

Ethernet switches, however, allow all devices to transmit simultaneously, without collision. This is essential for enabling deterministic delivery of time-critical information. Switches are intelligent devices, keeping track of device locations; this allows messages to be transmitted only from the necessary port, leading to improved network performance ▲

Specifications

Electrical

Required Power 10-30V DC
Power Consumption 1.9 Watts Typical
Network Isolation 1200V RMS for 1 min.

Environmental/Mechanical

Operating Temperature -40 to 176 F (-40 to 80 C)
Humidity 5 to 95% (non-condensing)
Power Connection 4 pole mini-change connector
Environmental Rating IP67 when mated with an RJ-Lnxx sealed connector
Electrical Safety UL 508
Hazardous Location UL 1604, CSA 22.2/213 (Class 1, Div.2)
EMI Emissions FCC Part 15, Class B
EMC Immunity EN61326-1
Vibration IEC68-2-6

Network

Ports Five 10/100 Base-T(x), Shielded RJ-45
Ethernet Standards IEEE 802.3, 802.3U, 802.3X
Ethernet Protocols All standard IEEE 802.3 protocols
Speed per Port 10 or 100Mbs (half duplex)
20 or 200Mbs (full duplex)
Buffers 1024, 128 Byte buffers available
Broadcast Storm Protection Broadcasts limited to 25% of available bandwidth
Flow Control Supported for both transmit and receive
Back Pressure Function Inhibit stations from transmitting
Total Bandwidth 1.4Gbps

RJoLnxx®
Harsh-Duty DataCom Solutions

Machine Mount Switch

The ENHSA is an 8 port switch designed to operate without the need for any type of enclosure. The device can be mounted anywhere (side of a machine, building pillar, on an oilrig), providing for network design flexibility ▲

- IEC IP67 Rating, when used with RJ-Lnxx cord sets, prevents contamination from dirt, oil & water
- Unsurpassed temperature operating range (-40 to 80 C) allows use in both the hottest and coldest conditions, without the need for environmental controls
- Class I/Div 2 rated for use in hazardous environments
- Store & forward switch with address auto-learning and 10/100 auto-negotiation enhances bandwidth efficiency, aiding determinism for control applications
- No programming required, allowing the switch to be installed and carrying data in minutes

Part Number	Description
ENHSAURR8	Active Switch—Machine Mount, Unmanaged, RJ-45 Comm. Ports, RJ-45 Uplink Port, 8 Total Ports

Woodhead Connectivity

Ethernet Switches

DIN Rail Mount Switch

Now with Fiber Optic Uplink!

The ENHSD Switch is specifically designed to enable the Ethernet infrastructure to survive in the production area, eliminating long cable runs to an environmentally protected area. Available in 5- or 9-port versions, the dedicated uplink can be ordered for copper or for fiber transmission, depending on the length of the required cable runs ▲

- Simple DIN rail mount provides for quick, simple installation in an industrial enclosure
- Unsurpassed temperature operating range (-40 to 85 C) allows use in both the hottest and coldest conditions, without the need for additional environmental controls
- Class I/Div 2 rated for use in hazardous environments
- Store & forward switch with address auto-learning and 10/100 auto-negotiation enhances bandwidth efficiency, aiding in determinism for control applications
- No programming required, allowing the switch to be installed and carrying data in minutes

Part Number	Description
ENHSDURR5	Active Switch—DIN Rail Mount, Unmanaged, RJ-45 Comm. Ports, RJ-45 Uplink Port, 5 Total Ports
ENHSDURS5	Fiber Optic (SC) Uplink Port, 5 Total Ports
ENHSDURR9	9 Total Ports
ENHSDURS9	Fiber Optic (SC) Uplink Port, 9 Total Ports

Specifications

Electrical

Required Power 10-30V DC
Power Consumption 1.9 Watts Typical
Network Isolation 1200V RMS for 1 min.

Environmental/Mechanical

Operating Temperature -40 to 185 F (-40 to 85 C)
Humidity 5 to 95% (non-condensing)
Power Connection 4 pole mini-change connector
Environmental Rating IP67 when mated with an RJ-Lnxx sealed connector
Electrical Safety UL 508
Hazardous Location UL 1604, CSA 22.2/213 (Class 1, Div.2)
EMI Emissions FCC Part 15, Class B
EMC Immunity EN61326-1
Vibration IEC68-2-6

Network

Ports Five, Eight or Nine 10/100 Base-T(x), Shielded RJ-45 1 SC Fiber Optic connector
Ethernet Standards IEEE 802.3, 802.3U, 802.3X
Ethernet Protocols All standard IEEE 802.3 protocols
Speed per Port 10 or 100Mbs (half duplex) 20 or 200Mbs (full duplex)
Buffers 1024, 128 Byte buffers available
Broadcast Storm Protection Broadcasts limited to 25% of available bandwidth
Flow Control Supported for both transmit and receive
Back Pressure Function Inhibits station transmission for 20ms, if buffers are full
Total Bandwidth 1.4Gbps

Cabinet Mount Switch

The ENHSC Switch is a compact, economically priced switch for applications in less demanding environments. Despite its small size, the unit still offers full wire speed switching, and a host of advanced network functions ▲

- Unique magnet mounting allows the switch to be installed on any steel or iron surface without the need for brackets or Velcro®
- All ports can support MDI/MDIX autodetection of cross over, providing complete flexibility on designation of an uplink port
- Store & forward switch with address auto-learning and 10/100 auto-negotiation enhances bandwidth efficiency, aiding in determinism for control applications
- No programming required, allowing the switch to be installed and carrying data in minutes

Part Number	Description
ENHSCURR5	Active Switch—Cabinet Mount, Unmanaged, RJ-45 Uplink Port, 5 Total Ports

Specifications

Electrical

Required Power 120V AC to 9V DC external coverter (supplied)
Power Consumption 1.5 Watts Typical
EMI emissions FCC Part 15, Class B
Electrical Safety UL, cUL, TUV

Environmental/Mechanical

Operating Temperature 32 to 113 F (0 to 45 C)
Humidity 10 to 90% (non-condensing)
Environmental Rating IP20

Network

Ports Five 10/100 Base-T(x), RJ-45
Ethernet Standards IEEE 802.3, 802.3U, 802.3 auto-negotiation 10 or 100Mbs (half duplex), 20 or 200Mbs (full duplex)
Buffers 128 Kb buffer sharing
LED Indicators Per Port: Link.Activity, Duplex mode/collision, 10/100 Mbps
Per Unit: Power

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