

IEX-402-VDSL2 Series

Managed VDSL2 Ethernet extender



- > High-speed connections - up to 100 Mbps over twisted-pair copper wires
- > Automatic CO/CPE negotiation reduces configuration time
- > Link Fault Pass-through (LFP) support
- > Link quality indicators for simple troubleshooting
- > Easy network management by web browser, Telnet/serial console, Windows utility, ABC-01, and Mxview



Introduction

The IEX-402-VDSL2 is an industrial managed Ethernet extender for extending up to 3 km of LAN segments over twisted-pair copper wires at data rates of up to 100 Mbps using the VDSL2 standard. The Ethernet extender is designed with one 10/100BaseT(X) and one DSL port. It is the perfect solution to extend copper cable networks beyond conventional Ethernet limitations by using existing twisted-pair copper wires to reduce new network cable installation costs.

The IEX-402-VDSL2 series is designed for use in harsh operating environments. The DIN-rail mount, wide operating temperature range

(-40 to 75°C), and dual power inputs make it ideal for installation in industrial applications.

To simplify configuration, the IEX-402-VDSL2 uses CO/CPE automatic negotiation (factory default setting). The device will automatically assign CPE status to one of each pair of IEX devices. In addition, advanced management and monitoring functionalities through NMS, including a virtual panel, improve the user experience for quick troubleshooting.

Features and Benefits

- Automatic CO/CPE negotiation reduces configuration time
- Standard VDSL2 data rate up to 100 Mbps, with up to 3 km transmission distance (performance varies with line conditions)
- Supports Link Fault Pass-Through(LFP)
- Supports SNMP v1/v2c/v3 for different levels of network management
- Interoperable with Turbo Ring/Turbo Chain network redundancy
- Support Modbus/TCP protocol for device management and monitoring
- Compatible with EtherNet/IP and PROFINET protocols for transparent transmission
- Easy network management through web browser, Telnet/Serial console, Windows utility, MXview, and ABC-01
- IPv6 Ready

Specifications

Technology

Standards:

IEEE 802.3 for 10BaseT

IEEE 802.3u for 100BaseT(X)

IEEE 802.3x for Flow Control

IEEE 802.1p for Class of Service

ITU G.993.2 for very high speed digital subscriber line transceivers 2

Protocols: SNMPv1/v2c/v3, DHCP Client, TFTP, SNMP, HTTP, Telnet, Syslog, LLDP, Modbus/TCP

MIB: MIB-II

Flow Control: IEEE 802.3x flow control, back pressure flow control

Switch Properties

MAC Table Size: 1K

Packet Buffer Size: 512K

Interface

DSL Port: RJ-11 (RJ45 connector) or detachable 2-contact terminal block

RJ45 Ports: 10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection

DIP Switches: CO/CPE, SNR/SPEED, STD/INP

LED Indicators: PWR1, PWR2, FAULT, STATE, LINK/ACT, CO/CPE, 10/100 (TP port)

Console Port: RS-232 (RJ45 connector)

Button: Reset button

Power Requirements

Input Voltage: 12/24/48 VDC (9.6 to 60 VDC), redundant dual inputs

Input Current: 0.33A @ 24V

Overload Current Protection: Present

Connection: 2 removable 2-contact terminal block

Reverse Polarity Protection: Present

Physical Characteristics

Housing: Metal, IP30 protection

Dimensions:

35 x 130 x 105 mm (1.38 x 5.12 x 4.13 in)

Weight: 275 g

Installation: DIN-Rail mounting, wall mounting (with optional kit)

Altitude: Up to 2000 m

Note: Contact Moxa for products guaranteed to function at higher altitudes.

Environmental Limits

Operating Temperature:

Standard Models: -10 to 60°C (14 to 140°F)

Wide Temp. Models: -40 to 75°C (-40 to 167°F)

Storage Temperature: -40 to 85°C (-40 to 185°F)

Ambient Relative Humidity: 5 to 95% (non-condensing)

Standards and Certifications

Safety: UL 508

EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A

EMS:

EN 61000-4-2 (ESD) Level 3, EN 61000-4-3 (RS) Level 3,

EN 61000-4-4 (EFT) Level 3, EN 61000-4-5 (Surge) Level 3,

EN 61000-4-6 (CS) Level 3, EN 61000-4-8

Traffic Control: NEMA TS2

Rail Traffic: EN 50121-4

Shock: IEC 60068-2-27

Freefall: IEC 60068-2-32

Vibration: IEC 60068-2-6

Note: Please check Moxa's website for the most up-to-date certification status.

MTBF (mean time between failures)

Time:

1,490,000 hrs

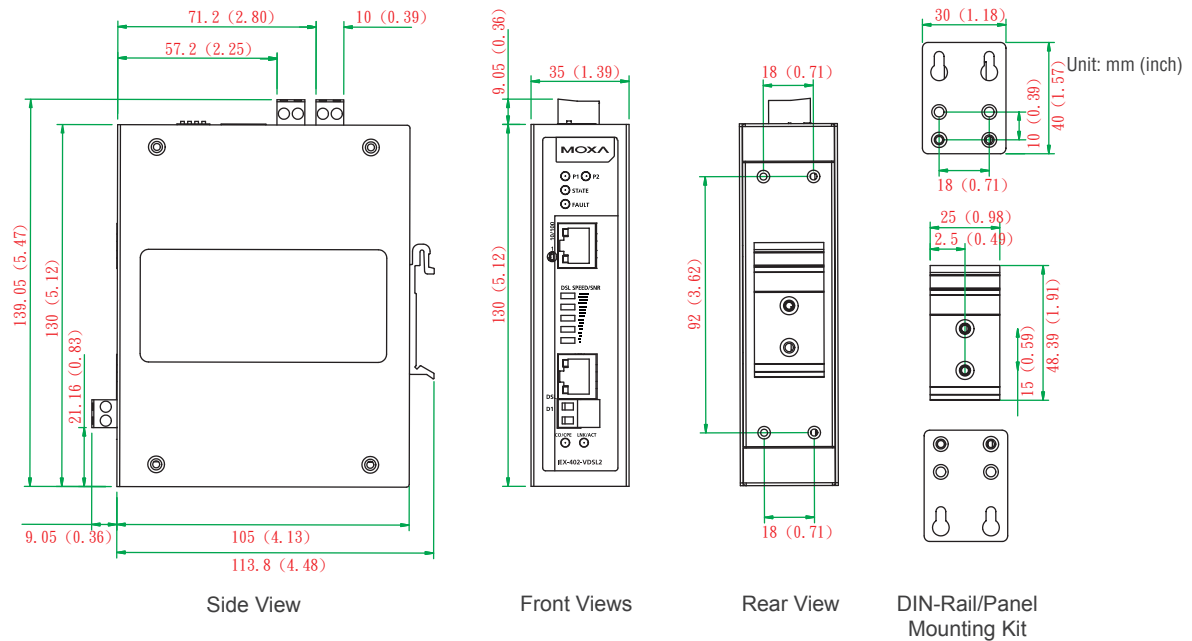
Database: Telcordia (Bellcore), GB

Warranty

Warranty Period: 5 years

Details: See www.moxa.com/warranty

Dimensions



: Ordering Information

Available Models		Port Interface	
Standard Temperature (-10 to 60°C)	Wide Temperature (-40 to 75°C)	10/100BaseT(X)	DSL
IEX-402-VDSL2	IEX-402-VDSL2-T	1	1

Optional Accessories (can be purchased separately)

MXview: Moxa industrial network management software with 50, 100, 250, 500, 1000, or 2000 nodes

EDS-SNMP OPC Server Pro: OPC server software that works with all SNMP devices

ABC-01: Configuration backup and restoration tool for managed Ethernet switches, 0 to 60°C operating temperature

DR-4524/75-24/120-24: 45/75/120 W DIN-Rail 24 VDC power supplies

MDR-40-24/60-24: 40/60 W DIN-rail 24 VDC power supplies, -20 to 70°C operating temperature

RK-4U: 4U-high 19" rack mounting kit

WK-46: Wall mounting kit

Package Checklist

- IEX-402-VDSL2 Ethernet Extender
- RJ45 to DB9 console port cable
- Documentation and software CD
- Hardware installation guide (printed)
- Warranty card