

IEX-402 Series

Industrial managed SHDSL Ethernet extenders



Features and Benefits

- Automatic CO/CPE negotiation reduces configuration time
- Link Fault Pass-Through (LFPT) support and interoperable with Turbo Ring and Turbo Chain
- LED indicators to simplify troubleshooting
- Easy network management by web browser, Telnet/serial console, Windows utility, ABC-01, and MXview

Certifications



EN 50121-4



Introduction

The IEX-402 is an entry-level industrial managed Ethernet extender designed with one 10/100BaseT(X) and one DSL port. The Ethernet extender provides a point-to-point extension over twisted copper wires based on the G.SHDSL standard. The device supports data rates of up to 15.3 Mbps and a long transmission distance of up to 8 km for G.SHDSL connections.

The IEX-402 Series is designed for use in harsh 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 uses CO/CPE auto-negotiation. By factory default, the device will automatically assign CPE status to one of each pair of IEX devices. In addition, Link Fault Pass-through (LFP) and network redundancy interoperability enhance the reliability and accessibility of communication networks. In addition, advanced managed and monitored functionality through MXview, including a virtual panel, improve the user experience for quick troubleshooting.

Additional Features and Benefits

- Standard G.SHDSL data rate up to 5.7 Mbps, with up to 8 km transmission distance (performance varies by cable quality)
- Moxa proprietary Turbo Speed connections up to 15.3 Mbps
- Supports Link Fault Pass-Through (LFP) and Line-swap fast recovery
- Supports SNMP v1/v2c/v3 for different levels of network management
- Interoperable with Turbo Ring and Turbo Chain network redundancy
- Support Modbus TCP protocol for device management and monitoring
- Compatible with EtherNet/IP and PROFINET protocols for transparent transmission
- IPv6 Ready

Specifications

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	1 Auto negotiation speed Full/Half duplex mode Auto MDI/MDI-X connection
Combo Port, RJ-11 (RJ45 connector) or Detachable 2-Contact Terminal Block	1
Standards	IEEE 802.1p for Class of Service IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3x for flow control ITU-T G.991.2 for Single-pair high-speed digital subscriber line (G.SHDSL) transceivers

Ethernet Software Features

Management	SNMPv1/v2c/v3 Modbus TCP Back Pressure Flow Control DHCP Client HTTP LLDP Syslog Telnet TFTP
MIB	MIB-II
Time Management	SNTP

Switch Properties

MAC Table Size	1 K
Packet Buffer Size	512 kbits

LED Interface

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

Serial Interface

Console Port	RS-232 (TxD, RxD, GND), 10-pin RJ45 (115200, n, 8, 1)
--------------	---

DIP Switch Configuration

Ethernet Interface	CO/CPE SNR/SPEED ANNEX B/ANNEX A STD/TURBO
--------------------	---

Power Parameters

Power Connector	2 removable 2-contact terminal block(s)
Input Voltage	12/24/48 VDC 9.6 to 60 VDC
Input Current	0.388 A @ 12 VDC 0.196 A @ 24 VDC 0.097 A @ 48 VDC
Overload Current Protection	Supported
Reverse Polarity Protection	Supported

Physical Characteristics

Housing	Metal
IP Rating	IP30
Dimensions	35 x 130 x 105 mm (1.38 x 5.12 x 4.13 in)
Weight	290 g (0.64 lb)
Installation	DIN-rail mounting Rack mounting (with optional kit)

Environmental Limits

Altitude	2000 m ¹
Operating Temperature	Standard Models: -10 to 60°C (14 to 140°F)

1. Please contact Moxa if you require products guaranteed to function properly at higher altitudes.

	Wide Temp. Models: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

Safety	UL 508
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV IEC 61000-4-5 Surge: Power: 2 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 10 V/m; Signal: 10 V/m IEC 61000-4-8 PFMF
Railway	EN 50121-4
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

MTBF

Time	1,311,455 hrs
Standards	Telcordia (Bellcore), GB

Warranty

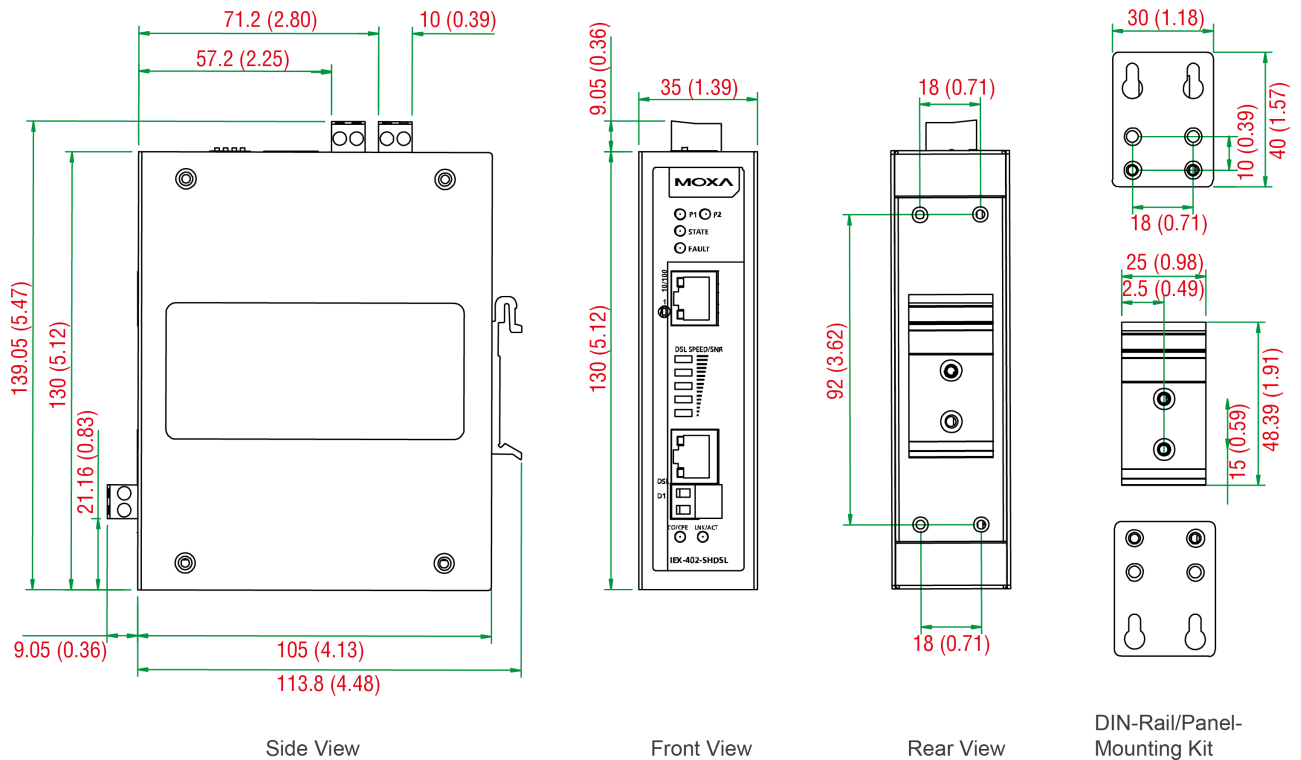
Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x IEX-402 Series switch
Cable	1 x RJ45-to-DB9 console cable
Documentation	1 x document and software CD 1 x quick installation guide 1 x warranty card 1 x product certificates of quality inspection, Simplified Chinese 1 x product notice, Simplified Chinese

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	ITU G.993.2 for very high speed digital subscriber line transceivers	ITU-T G.991.2 for single-pair high-speed digital subscriber line (G.SHDSL) transceivers	10/100BaseT(X) Ports RJ45 Connector	Combo Port, RJ-11 (RJ45 connector) or detachable 2-contact terminal	Operating Temp.
IEX-402-SHDSL	-	✓	1	1	-10 to 60°C
IEX-402-SHDSL-T	-	✓	1	1	-40 to 75°C

Accessories (sold separately)

Storage Kits

ABC-01	Configuration backup and restoration tool for managed Ethernet switches and AWK Series wireless APs/bridges/clients, 0 to 60°C operating temperature
--------	--

Power Supplies

DR-120-24	120W/2.5A DIN-rail 24 VDC power supply with universal 88 to 132 VAC or 176 to 264 VAC input by switch, or 248 to 370 VDC input, -10 to 60°C operating temperature
DR-4524	45W/2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 50°C operating temperature
DR-75-24	75W/3.2A DIN-rail 24 VDC power supply with universal 85 to 264 VAC or 120 to 370 VDC input, -10 to 60°C operating temperature
MDR-40-24	DIN-rail 24 VDC power supply with 40W/1.7A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature
MDR-60-24	DIN-rail 24 VDC power supply with 60W/2.5A, 85 to 264 VAC, or 120 to 370 VDC input, -20 to 70°C operating temperature

Software

MXview-50	Industrial network management software with a license for 50 nodes (by IP address)
-----------	--

MXview-100	Industrial network management software with a license for 100 nodes (by IP address)
MXview-250	Industrial network management software with a license for 250 nodes (by IP address)
MXview-500	Industrial network management software with a license for 500 nodes (by IP address)
MXview-1000	Industrial network management software with a license for 1000 nodes (by IP address)
MXview-2000	Industrial network management software with a license for 2000 nodes (by IP address)
MXview Upgrade-50	License expansion of MXview industrial network management software by 50 nodes (by IP address)

Wall-Mounting Kits

WK-30	Wall-mounting kit, 2 plates, 4 screws, 30 x 66.8 x 2 mm Wall-mounting kit, 2 plates, 4 screws, 30 x 66.8 x 2 mm
RK-4U	19-inch rack-mounting kit 19-inch rack-mounting kit

© Moxa Inc. All rights reserved. Updated Apr 18, 2023.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.