

IA240 Series

Arm-based DIN-rail industrial computers with 4 serial ports, 2 LAN ports, and 4 DI/DO



Features and Benefits

- MOXA ART 32-bit Arm9 industrial processor
- 64 MB RAM, 16 MB flash onboard
- 4 RS-232/422/485 serial ports
- 4 digital input and 4 digital output channels (TTL signal)
- Dual 10/100 Mbps Ethernet ports
- SD slot for storage expansion
- Ready-to-run Linux kernel 2.6 platform
- Unique patented software encryption lock
- Installation options: DIN-rail, wall-mount (with accessory)
- Robust, fanless design, IP30 protection mechanism
- -40 to 75°C wide-temperature models available

Certifications



Introduction

The IA240 embedded computers are designed for industrial automation applications. The computers feature 4 RS-232/422/485 serial ports, dual Ethernet ports, 4 digital input channels, 4 digital output channels, and an SD slot in a compact, IP30-protected, industrial-strength rugged housing.

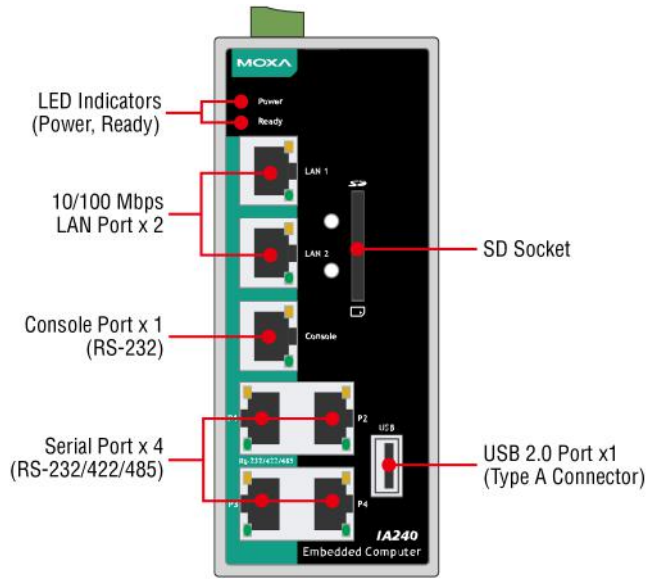
The IA240's vertical DIN-rail form factor makes it easy to install the computers in a small cabinet. This space-saving solution also facilitates easy wiring, making the IA240 a great choice as a front-end embedded controller for industrial applications.

Wide-temperature models of the IA240 are also available. The IA240-T model can operate reliably in a temperature range from -40 to 75°C, making it appropriate for harsh industrial automation environments.

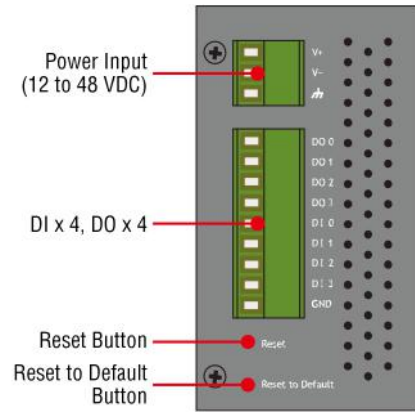
The industrial design of the IA240 provides a robust, reliable computing platform. Due to their Arm-based architecture, the IA240 computers will not generate a lot of heat, making them ideal for industrial automation environments.

Appearance

Front View



Top View



Specifications

Computer

CPU	MOXA ART Arm9, 192 MHz
Storage Slot	SD slots x 1
Supported OS	Linux kernel version 2.6

Memory

Flash	16 MB
SDRAM	64 MB

Computer Interface

Ethernet Ports	Auto-sensing 10/100 Mbps ports (RJ45 connector) x 2
Serial Ports	RS-232/422/485 ports x 4, software selectable (RJ45)
USB 2.0	USB 2.0 hosts x 1, type-A connectors
Digital Input	DIs x 4
Digital Output	DOs x 4

Digital Inputs

Connector	Screw-fastened Euroblock terminal
Voltage	Logic 0: 0-0.8 V Logic 1: 2.0-5.5 V

Digital Outputs

Connector	Screw-fastened Euroblock terminal
Current Rating	24 mA per channel
Voltage	Logic 0: 0-0.55 V Logic 1: 2.5-3.3 V

Ethernet Interface

10/100BaseT(X) Ports (RJ45 connector)	2
Magnetic Isolation Protection	1.5 kV (built-in)

USB Interface

Storage Port	USB Type A
USB Standards	USB 1.1/2.0 compliant

LED Indicators

System	Power x 1 System Ready x 1
LAN	2 per port (10/100/1000 Mbps)
Serial	2 per port (Tx, Rx)

Serial Interface

Baudrate	50 bps to 921.6 kbps (supports non-standard baudrates)
Connector	8-pin RJ45
Console Port	RS-232 (TxD, RxD, GND), 8-pin RJ45 (115200, n, 8, 1)
Data Bits	5, 6, 7, 8
Flow Control	RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)
ESD Protection	4 kV, for all signals
No. of Ports	4
Parity	None, Even, Odd, Space, Mark
RS-485 Data Direction Control	ADDC® (automatic data direction control)
Serial Standards	RS-232/422/485
Stop Bits	1, 1.5, 2

Serial Signals

RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND

Power Parameters

Input Current	300 mA @ 24 VDC
Input Voltage	12 to 48 VDC
No. of Power Inputs	1
Power Connector	3-pin terminal block
Power Consumption	7 W (max.)

Physical Characteristics

Housing	Metal
Dimensions	60 x 137 x 100 mm (2.36 x 5.39 x 3.94 in)
Weight	430 g (0.96 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	IA240-LX: -10 to 60°C (14 to 140°F) IA240-T-LX: -40 to 75°C (-40 to 167°F)
Storage Temperature (package included)	IA240-LX: -20 to 80°C (-4 to 176°F) IA240-T-LX: -40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/24, EN 61000-3-2 Class A, EN 61000-3-3, EN 61000-6-2/-6-4
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-11 DIPs IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 1 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 10 V/m; Signal: 10 V/m IEC 61000-4-8 PFMF
Safety	EN 60950-1, IEC 60950-1, UL 60950-1
Vibration	IEC 60068-2-6

Declaration

Green Product	RoHS, CRoHS, WEEE
---------------	-------------------

MTBF

Time	425,321 hrs
Standards	Telcordia (Bellcore), GB

Warranty

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

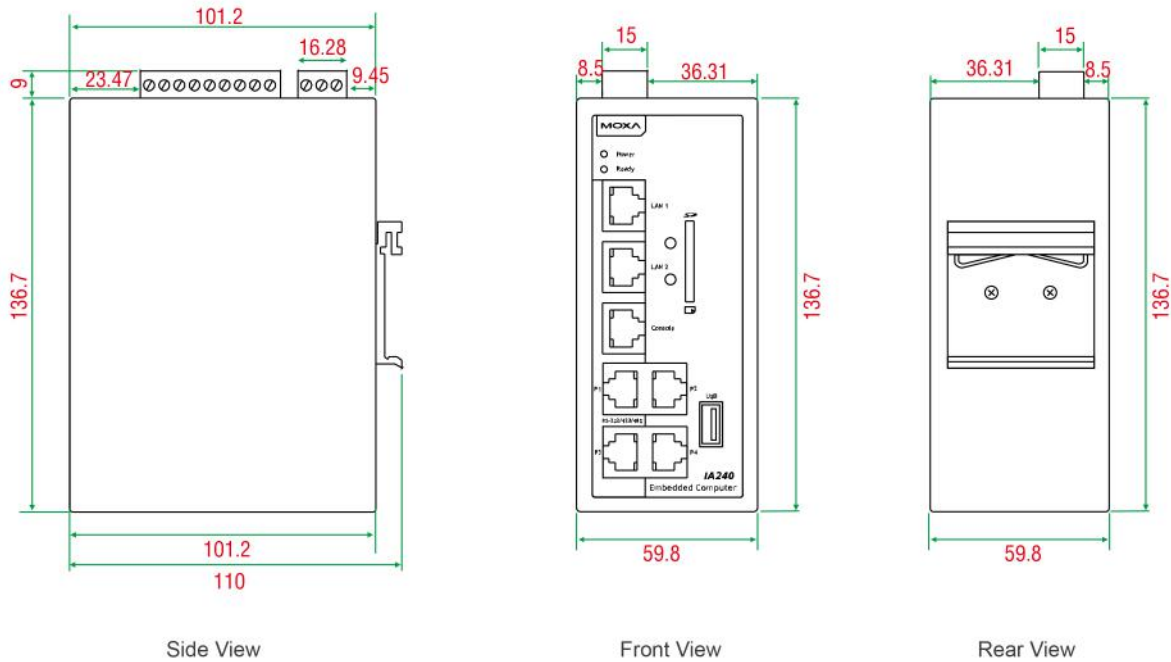
Package Contents

Device	1 x IA240 Series computer
Installation Kit	1 x DIN-rail kit 1 x wall-mounting kit
Cable	1 x DB9 male to RJ45 8-pin 1 x Ethernet, crossover 1 x RJ45-to-DB9 console cable 1 x terminal block to power jack converter

Power Supply	1 x power adapter, universal
Documentation	1 x document and software CD 1 x product certificates of quality inspection, Simplified Chinese 1 x product notice, Simplified Chinese 1 x quick installation guide 1 x warranty card

Dimensions

Unit: mm



Ordering Information

Model Name	Serial Ports	LAN Ports	DI/DO	USB 2.0	Storage Slots	Operating Temp.
IA240-LX	4	2	4/4	1	SD Card	-10 to 60°C
IA240-T-LX	4	2	4/4	1	SD Card	-40 to 75°C

© Moxa Inc. All rights reserved. Updated Nov 12, 2018.

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.