IA3341
Quick Installation Guide

First Edition, May 2010

1. Overview

The IA3341 is based on the MOXA ART ARM9 industrial processor, and features two RS-232/422/485 serial ports, dual LANs, four digital input channels, and four digital output channels. In addition, the IA3341 computer has two analog input channels and two thermocouple channels to make it the ideal solution for a variety of industrial applications, such as solar power and environmental monitoring.

2. Package Checklist

Before installing the IA3341, verify that the package contains the following items:

- IA3341-LX embedded computer
- Wall mounting kit
- Ethernet cable: RJ45 to RJ45 cross-over cable, 100 cm
- CBL-4PINDB9F-100: 4-pin pin header to DB9 female console port cable, 100 cm
- Terminal block to power jack converter
- Document and Software CD or DVD
- Quick Installation Guide (printed)
- Product Warranty Statement (printed)

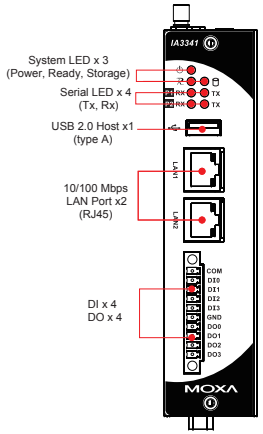
NOTE: Please notify your sales representative if any of the above items are missing or damaged.

3. IA3341 Panel Layout

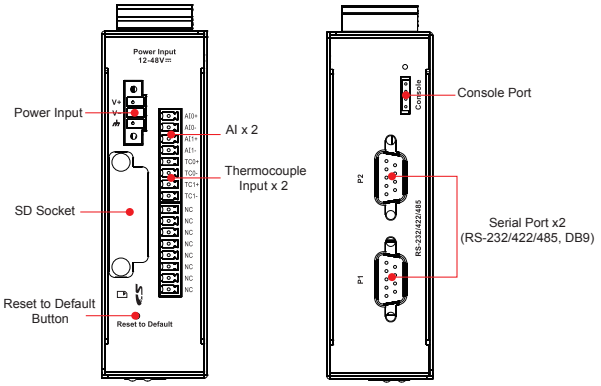
The following figures show the panel layouts of the IA3341.

P/N: 1802033410010

Front View



Top and Bottom Views



LED Indicators

The IA3341 has 11 LED indicators on the front panel. Refer to the following table for information about each LED.

LED Name	Color	Meaning
Power	Green	Power is ON.
	Off	No power is being received, or power error exists.
Ready	Green	OS is ready and functioning normally (after booting up).
	Off	OS is not ready.
Storage	Green	Data is being written to or read from the storage unit.
	Off	Storage unit is idle.
LAN1, LAN2	Orange	10 Mbps Ethernet connection
	Green	100 Mbps Ethernet connection
P1-P2	Green	Serial port is transmitting TX data to the serial device.
(TX)	Off	Serial port is not transmitting TX data to the serial device.
P1-P2 (RX)	Orange	Serial port is receiving RX data from the serial device.
	Off	Serial port is not receiving RX data from the serial device.

4. Installing the IA3341

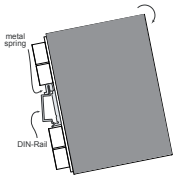
Placement Options

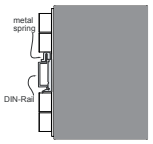
DIN-Rail Mounting

The aluminum DIN-Rail attachment plate is already attached to the product's casing. To attach the IA3341 to the DIN-Rail, make sure the stiff metal spring is facing the top of the IA3341, as shown in the following figures.

STEP 1: Insert the top of the DIN-Rail into the slot just below the stiff metal spring.

STEP 2: The DIN-Rail attachment unit will snap into place as shown.





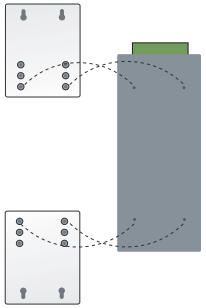
To remove the IA3341 from the DIN-Rail, simply reverse Steps 1 and 2.

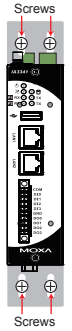
Wall or Cabinet Mounting

The IA3341 comes with two metal plates for attachment to a wall or the inside of a cabinet.

STEP 1: Remove the aluminum DIN-Rail attachment plate from the IA3341's rear panel, and then attach the wall mount plates, as shown in the figure below.

STEP 2: Mounting the IA3341 on the wall requires four screws. Attach the screws on the two plates, as shown below.





Note

Before tightening the screws into the wall, make sure the screw head and shank size are suitable by inserting the screw into one of the keyhole-shaped apertures of the wall mounting plates.

5. Connector Description

Power Connector

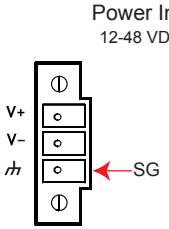
Connect the 12 to 48 VDC LPS or Class 2 power line to the IA3341's terminal block. If the power is properly supplied, the Power LED will light up. The OS is ready when the Ready LED glows a solid green.

Grounding the IA3341

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EM). Run the ground connection from the ground screw to the grounding surface prior to connecting the power.

ATTENTION

This product is intended to be mounted to a well-grounded mounting surface, such as a metal panel.

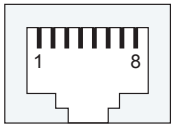


SG: The Shielded Ground (sometimes called Protected Ground) contact is the bottom contact of the 3-pin power terminal block connector when viewed from the angle shown here. Connect the SG wire to an appropriate grounded metal surface.

Ethernet Ports

The two 10/100 Mbps Ethernet ports (LAN 1 and LAN 2) use RJ45 connectors.

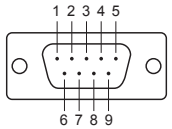
Pin	Signal
1	ETx+
2	ETx-
3	ERx+
6	ERx-



Serial Ports

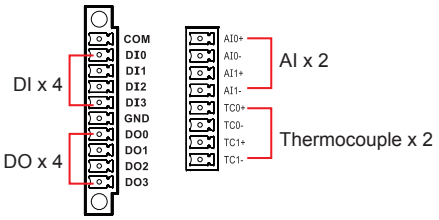
The IA3341's serial ports use DB9 male connectors. Each port can be configured by software for RS-232, RS-422, or RS-485. The pin assignments for the ports are shown in the following table:

Pin	RS-232	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	DCD	TxDA(-)	TxDA(-)	---
2	RxD	TxDB(+)	TxDB(+)	---
3	TxD	RxDB(+)	RxDB(+)	DataB(+)
4	DTR	RxDA(-)	RxDA(-)	DataA(-)
5	GND	GND	GND	GND
6	DSR	---	---	---
7	RTS	---	---	---
8	CTS	---	---	---



DI/DO/AI/Thermocouple Channels

The IA3341 has four digital input channels and four digital output channels located on the front panel. Two analog input channels and two thermocouple channels are also provided on the top panel. See the figures below for the pinout description.



SD Card Socket

The IA3341 comes with an SD card socket for storage expansion, but CompactFlash hot swap and PnP are not supported. This means that you must disconnect the power source before inserting or removing the SD card.

Console Port

The IA3341's console port is a 4-pin pin-header RS-232 port. It is designed for serial console terminals, which are useful for identifying the boot up message, or for debugging when the system cannot be booted up.

Reset to Default Button

The IA3341 has one Reset to Default button located on the top panel of the housing. Depress the button for 5 seconds until the Ready LED blinks five times. The system will boot up and run the Reset to Default procedure.

USB

The IA3341 has one USB 2.0 full speed host (OHCI) that uses a type A connector. The port supports keyboard and mouse, and can also be used to connect a FlashDisk for storing large amounts of data.

Real Time Clock

The IA3341's real time clock is powered by a lithium battery. We strongly recommend that you do not replace the lithium battery without help from a qualified Moxa support engineer. If you need to change the battery, contact the Moxa RMA service team.

ATTENTION

There is a risk of explosion if the battery is replaced by an incorrect type of battery.

6. Powering on the IA3341

To power on the IA3341, connect the power source to the terminal block located on the top panel. Note that the Shielded Ground wire should be connected to the right most pin of the terminal block. It takes about 30 seconds for the system to boot up. Once the system is ready, the Ready LED will light up.

The IA3341 computer comes with two network interfaces. The default IP addresses and netmasks of the network interfaces are as follows:

	Default IP Address	Netmask
LAN 1	DHCP	DHCP
LAN 2	192.168.4.127	255.255.255.0

7. Configuring the Ethernet Interface

If you use the console cable for first-time configuration of the Network settings, use the following commands to edit the interface file:

Step 1:

#ifdown –a
//Disable LAN1/LAN2 interface first, before you reconfigure the LAN settings. LAN 1 = eth0, LAN 2= eth1//
#vi /etc/network/interfaces
//check the LAN interface first//

Step 2:

After the boot setting of the LAN interface has been modified, use the following command to activate the LAN settings immediately:

#sync; ifup –a

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