



V2401/2402

Quick Installation Guide

Second Edition, March 2011

Overview

The V2401/2402 Series embedded computers are based on the Intel Atom N270 x86 processor, and feature four RS-232/422/485 serial ports, eight RS-232 serial ports, dual Gigabit LAN ports, six USB 2.0 hosts, and a CompactFlash socket. The V2401 computer provides VGA, DVI, and LVDS outputs, and the V2402 computer provides both VGA and DVI outputs, making them particularly well-suited for industrial applications such as SCADA and manufacturing automation.

Package Checklist

Before installing the V2401/2402, verify that the package contains the following items:

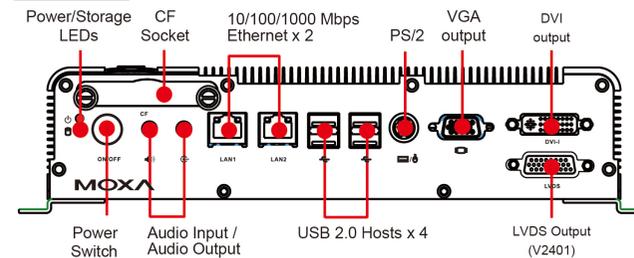
- V2401/2402 embedded computer
- Terminal block to power jack converter
- Wall mounting kit
- Quick installation guide
- Documentation and software CD

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

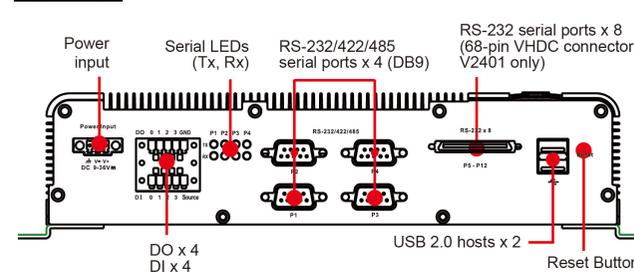
V2401/2402 Panel Layout

The following figures show the panel layouts of the V2401/2402.

Front View



Rear View



LED Indicators

The following table describes the LED indicators located on the front panel of the V2401/2402.

LED Name	LED Color	LED Function
Power	Green	Power is on and functioning normally
	Off	Power is off or power error exists
Storage	Yellow	CF/HDD card is detected
	Off	CF/HDD card is not detected
LAN	Green	100 Mbps Ethernet mode
	Yellow	1000 Mbps (Gigabit) Ethernet mode
	Off	No activity or 10 Mbps Ethernet mode
Tx, Tx (P1-P4)	Green	Serial ports P1-P4 transmitting data
	Off	Serial ports P1-P4 not transmitting data
Rx, Rx (P1-P4)	Yellow	Serial ports P1-P4 receiving data
	Off	Serial ports P1-P4 not receiving data

Installing the V2401/2402

The V2401/2402 can be DIN-rail mounted, wall mounted and VESA mounted. Some mounting kits may need to be purchased separately. Refer to the Hardware User's Manual for detailed installation instructions.

Connector Description

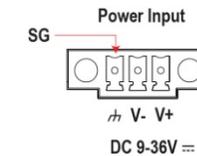
Power Connector

Connect the 9 to 36 VDC LPS or Class 2 power line to the V2401/2402's terminal block. If the power is supplied properly, the Power LED will light up. The OS is ready when the Ready LED glows a solid green.

Grounding the V2401/2402

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

NOTE 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 right most 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.

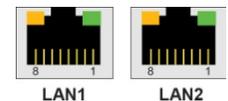
VGA, DVI and LVDS Outputs

The V2401/2402 comes with a D-Sub 15-pin female connector for a VGA monitor; it also comes with a DVI-I connector for the DVI display. The V2401 has even an LVDS interface to connect an LVDS display. These output interfaces are all located at the front panel. Use the proper cable to connect.

Ethernet Ports

The 10/100/1000 Mbps Ethernet ports use RJ45 connectors.

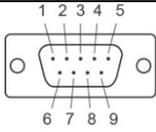
Pin	10/100 Mbps	1000 Mbps
1	ETx+	TRD(0)+
2	ETx-	TRD(0)-
3	ERx+	TRD(1)+
4	-	TRD(2)+
5	-	TRD(2)-
6	ERx-	TRD(1)-
7	-	TRD(3)+
8	-	TRD(3)-



Serial Ports

The serial ports use DB9 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	-	-	-



The V2401 includes a serial connector on the front panel; it can connect eight serial devices with a 68-pin VHDC connector and transmit the data with the RS-232 interface.

CompactFlash Slot

The V2401/2402 has an internal CompactFlash slot for storage expansion. It supports CF Type-I/II with DMA mode. To install a CompactFlash card, remove the outer cover, and then insert the CF card in the socket. When finished, push the cover into the socket and fasten the screws.

USB Hosts

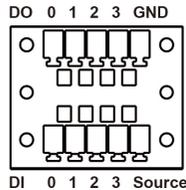
The V2401/2402 has four USB 2.0 hosts on the front panel and two USB 2.0 hosts on the rear panel. Users may use these USB ports to connect flash disks for storing large amounts of data.

Audio Interface

The V2401/2402 comes with an audio input and an audio output, allowing users to connect a speaker or an earphone.

DI/DO

The V2401/2402 comes with 4-ch digital input and 4-ch digital output in the terminal block connectors.



Reset Button

Press the "Reset Button" on the rear panel of the V2401/2402, the system will reboot automatically. The Ready LED will blink on and off for the first 5 seconds, and then maintain a steady glow once the system has rebooted.

Real-time Clock

The V2401/2402'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.

Powering on the V2401/2402

To power on the V2401/2402, connect the "terminal block to power jack converter" to the V2401/2402's DC terminal block (located on the side panel), and then connect the power adaptor. Press the Power Button to turn on the computer. Note that the Shielded Ground wire should be connected to the top pin of the terminal block. It takes about 30 seconds for the system to boot up. Once the system is ready, the Power LED will light up.

Connecting the V2401/2402 to a PC

Power on the V2401/2402 computer after connecting a monitor, keyboard, and mouse, and verifying that the power source is ready. Once the operating system boots up, the first step is to configure the Ethernet interface. The factory default settings for the V2401/2402's LANs are show below. (XPE models uses DHCP)

	Default IP Address	Netmask
LAN 1	192.168.3.127	255.255.255.0
LAN 2	192.168.4.127	255.255.255.0

Configuring the Ethernet Interface

Linux users should follow these steps:

If you use the console cable to configure Network settings for the first time, use the following commands to edit the interfaces file:

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

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

```
#sync; ifup -a
```

WinCE 6.0 users should follow these steps:

1. Go to **[Start]** → **[Settings]** → **[Network and Dial-Up Connections]**. You will see two network interfaces.
2. Right click the LAN interface to be configured and click **[property]**. A configuration window will pop-up.
3. Click **OK** after inputting the proper IP address and netmask.

WinXPE users should follow these steps:

1. Go to **[Start]** → **[Network Connections]**.
2. Right-click **Network Connections**, click **Properties**, select **Internet Protocol (TCP/IP)**, and then click **Properties**.
3. Click **OK** after inputting the proper IP address and netmask.

NOTE: Refer to the User's Manual for other configuration information.

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