MOXA®

V460 Series Embedded Computers Quick Installation Guide

Third Edition, April 2009

1. Overview

The V460 series of industrial, ready-to-run embedded computers support VGA and audio, and come with dual or quad LAN ports, 4 serial ports, a CompactFlash slot with cap, and four USB 2.0 ports. To fit the needs of different applications and vertical markets, the V460 computers provide a rich choice of I/O combinations: The V462 is suitable for basic applications, the V464 emphasizes expansion by providing an additional PCMCIA port and quad LANs, the V466 provides greater possibilities for data acquisition and transmission by providing 8 switching ports, and the V468 has 8 DIs and 8 DOs with 3 KV isolation to focus on device control and signal communication between connected equipment, field hosts, and the V468.

2. Package Checklist

All V460 series computers are shipped with the following items:

- 1 V460 Series Embedded Computer
- Quick Installation Guide
- Document and Software CD
- Ethernet cable: RJ45 to RJ45 cross-over cable, 100 cm
- PS2 to KB/MS Y-type Cable
- Din-Rail Kit
- Product Warranty Statement
- Switching Power Adaptor:
  60W, 24 VDC output, 100 to 240 VAC input (NOTE: Power cords must be ordered separately)
- Power Cords (must be purchased separately):
  Power cord with Australia Plug
  Power Cord with UK Plug
  Power Cord with Euro Plug
  Power Cord with US Straight Plug

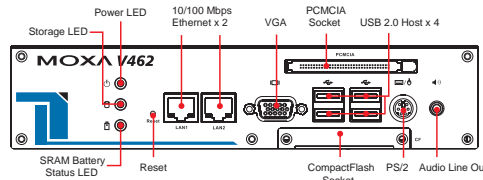*NOTE: Please notify your sales representative if any of the above items are missing or damaged.*

3. V460 Series Panel Layout

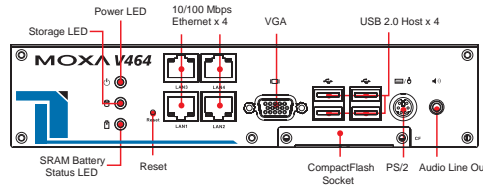The following figures show the panel layouts of the V460 series.
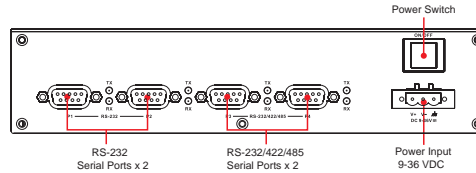
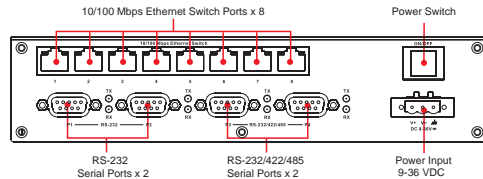## Front Views of the V460 Series Computers

V462

V464/466/468

Rear View of the V460 Series Computers
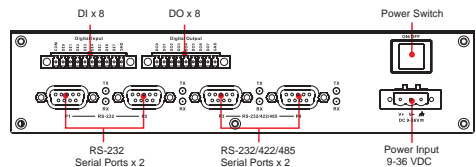
V462/464

V466

V468

LED Indicators

The following table describes the LED indicators located on the front panel of the V460 Series.

LED Name	LED Color	LED Function
Power	Green	Power is on
	Off	No power input or other power error exists
Battery	Red	Battery is dead or battery malfunction
	Off	Battery is operating normally
Storage	Yellow / Blinking	Data is being read from or written to storage device
	Off	Storage device is idle
LAN	Green	Lit when 10 Mbps Ethernet link is active (Off when inactive).
	Green	Lit when 100 Mbps Ethernet link is active (Off when inactive).
	Orange	Lit when data is transmitting

NOTE: The V462 has 2 RJ45 connectors; the V464, V466, and V468 have 4 RJ45 connectors.

4. Installing the V460 Series Computers

Wall or Cabinet

The V460 series computers have wall-mount ears for attaching the computers to a wall or the inside of a cabinet.

DIN-Rail Mounting

An aluminum DIN-Rail Mounting Kit is included with each V460 series computer. Note that the V460 computers can be DIN-rail mounted either vertically or horizontally by changing the direction of the Mounting Kit.

5. Connector Description

Power Connector

Connect the "live-wire" end of the 9-36 VDC power adaptor to the embedded computer's terminal block. When the power is properly supplied, the "Power" LED will glow a solid green color.

Grounding the V460 series

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Before connecting devices, run a ground wire from the ground screw to the grounding surface.

ATTENTION

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

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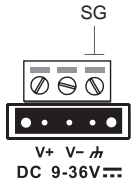
The Shielded Ground (sometimes called Protected Ground) contact is the right most contact of the 3-pin power terminal block connector when viewed from the angle shown here. Connect the SG wire to an appropriate grounded metal surface.

V+ V− ⏚
DC 9-36V ⎓

VGA Connector

The V460 series comes with a D-Sub 15-pin female connector to connect a VGA CRT monitor.

PS/2 Connector

The V460 series comes with a PS/2 connector to connect a PS/2 keyboard or PS/2 mouse.
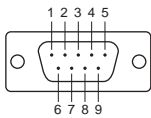
Ethernet and Switch Ports

The 10/100 Mbps Ethernet and switch ports (V466 only) use RJ45 connectors.

Serial Ports

The serial ports use DB9 connectors. Ports 3 and 4 can be configured by software for RS-232, RS-422, or RS-485, and ports 1 and 2 support RS-232 only. The pin assignments for the ports are shown in the following table:

DB9 Male Port   **RS-232/422/485 Pinouts**

1 2 3 4 5
6 7 8 9

| 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	---	---	---

PCMCIA (V462 only)

The PCMCIA slot supports the CardBus (Card-32) Card standard and 16-bit (PCMCIA 2.1/JEIDA 4.2) Card standard. It supports +3.3V, +5V, and +12V at a working voltage of 120 mA.
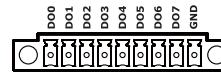
8+8 Digital I/O (V468 only)

The V468 has an 8-ch digital input and 8-ch digital output, both of which support 3 KV optical isolation protection.

Digital Input Channel
(10-pin Terminal Block)

COM D10 D11 D12 D13 D14 D15 D16 D17 GND
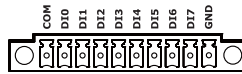
Digital Output Channel
(9-pin Terminal Block)

DO0 DO1 DO2 DO3 DO4 DO5 DO6 DO7 GND

SO-DIMM Socket for Memory Module

The V460-CE computers come with a 256 MB DDR SDRAM module pre-installed, and the V460-XPE computers have a 512 MB DDR RAM installed. You may also replace the module with your own (128 MB to 1 GB) DDR SDRAM memory module. To replace the module, first remove the bottom cover of the V460 series computer to expose the SO-DIMM socket.

CompactFlash Socket

The V460 computers come with a CompactFlash socket located inside the computer. Installing a CompactFlash memory card will not affect the operating system. Remove the protective cap on the front panel to install the CompactFlash card.

USB Hosts

The V460 computers supports four USB 2.0 hosts. All hosts can be used to connect any USB device, and support system boot up (activated by changing BIOS settings).

Audio Interface

The V460 computers have a speaker interface that follows the AC97 standard to enable voice output.

Power On/Off Button

The power on/off button is located above the power input terminal block. The button supports the ATX power on/off function. By default, the button is set for "instant off." You may also configure the button for "delay 4 seconds" to guard against shutting down the power unintentionally. In this case, you must press the power button continuously for at least 4 seconds to shut off the power.

Reset Button

The reset button is designed to warm reboot the V460 series. You should only press the Reset Button if the software is not working properly.

Real-time Clock

The embedded computer's real-time clock is powered by a lithium battery. We strongly recommend that you do NOT replace the lithium battery yourself. If the battery needs to be changed, please contact the Moxa RMA service team.

ATTENTION

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

6. Powering on the V460 Series Computers

To power on a V460 series computer, connect the "terminal block to power jack converter" to the computer's DC terminal block (located on the left rear panel), and then connect the power adaptor. Note that the Shielded Ground wire should be connected to the right-most pin of the terminal block.

7. Powering on the V460 Series Computers

Power on the V460 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 V460's LANs are shown below. (CE version only, XPE version's default value is DHCP)

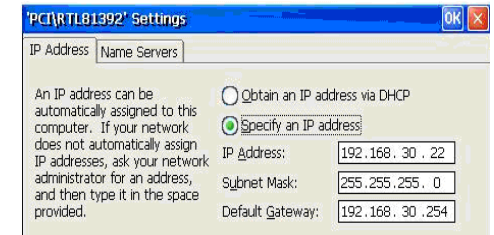|	Default IP Address	Netmask
LAN 1	192.168.3.127	255.255.255.0
LAN 2	192.168.4.127	255.255.255.0
LAN 3	192.168.5.127	255.255.255.0
LAN 4	192.168.6.127	255.255.255.0

8. Configuring the Ethernet Interface

Follow these steps to configure the Ethernet interface:

Step 1: Go to **[Start]** → **[Settings]** → **[Network and Dial-Up Connections]**. You will see two network interfaces.

Step 2: Right-Click the LAN interface (e.g., PCI\E100CE1) to configure, and then click property. A configuration window will pop up.

Step 3: After inputting the proper IP address and netmask, click OK.