



# V2616 Series Quick Installation Guide

First Edition, August 2011

## Overview

The V2616 Series EN 50155-certified embedded computers use the Intel Core 2 Duo SP9300 x86 processor and feature 2 RS-232/422/485 serial ports, dual LAN ports, and 3 USB 2.0 hosts.

In addition, the V2616 computers provide VGA and DVI-D outputs, and are EN 50155 certified, making them robust enough for railway and industrial applications.

## Package Checklist

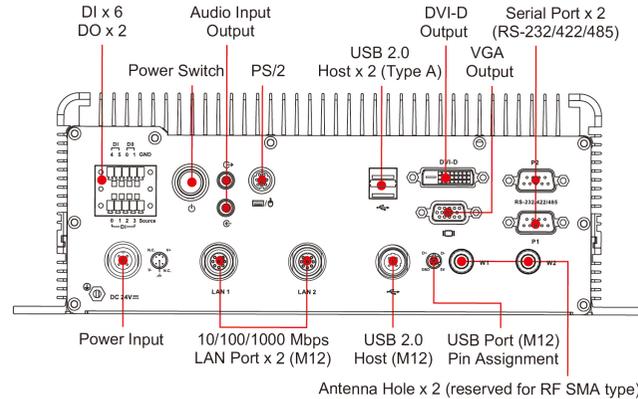
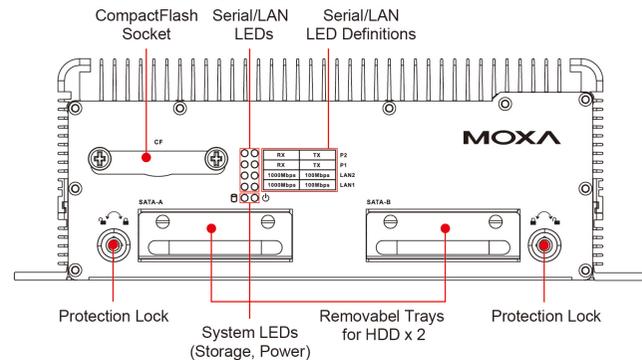
Before installing the computers, verify that the package contains the following items:

- V2616 embedded computer.
- Wall mounting kit
- PS2 to KB/MS Y-type cable
- Documentation 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.*

## V2616 Panel Layout

### V2616 Front & Rear Views



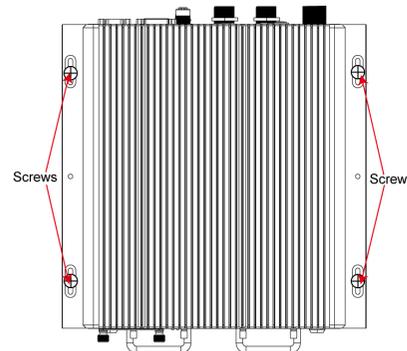
## LED Indicators

The following table describes the LED indicators located on the front and rear panels of the V2616.

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
	Off	10 Mbps or no activity
LAN (1, 2)	Green	100 Mbps Ethernet mode
	Yellow	1000 Mbps Ethernet mode
	Off	10 Mbps or no activity
Tx (P1-P2)	Green	Serial ports P1-P2 transmitting data
	Off	Serial ports P1-P2 not transmitting data
Rx (P1-P2)	Yellow	Serial ports P1-P2 receiving data
	Off	Serial ports P1-P2 not receiving data

## Installing the V2616

The V2616 comes with two wall-mounting brackets. Use two screws on each side to attach the V2616 to a wall or cabinet.



## Connector Description

### Power Connector

Connect the 24 VDC power line with M12 connectors to the V2616 computer. If the power is supplied properly, the Power LED will light up. The OS is ready when the Ready LED glows a solid green.

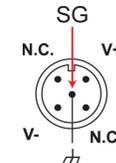
### Grounding the V2616

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.



## 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 central pin of the power input connector. Connect the SG wire to an appropriate grounded metal surface.

### VGA and DVI Outputs

The V2616 comes with a D-Sub 15-pin female connector for a VGA monitor; it also comes with a DVI-D connector for the DVI display. These output interfaces are all located on the front panel. Use the proper cable when connecting devices to the V2616.

### PS/2 Port

The V2616 embedded computer comes with a PS/2 mini-DIN connector to connect to a PS/2 keyboard and PS/2 mouse. Use the Y-type cable to convert the mini-DIN connector into two 6-pin mini-DIN connectors to connect both a PS/2 keyboard and PS/2 mouse at the same time. You may also use the USB ports to connect your USB-based keyboard and mouse. Note that without a Y-type cable, the PS/2 connector on the V2616 can only work with a PS/2 keyboard. A PS/2 mouse will not function when directly connected to the PS/2 connector on the V2616 embedded computer.

### CompactFlash Slot

The V2616 has a CompactFlash slot located on the front panel for storing the operating system. 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.

Note that the operating system (Linux or Windows XP Embedded) has already been stored on the CompactFlash card. If you change the CompactFlash card, you will need to re-install the V2616's

P/N: 1802026160010

operating system. Refer to the System Recovery Section in the Software User's Manual for details.

### USB Hosts

The V2616 has one USB port with an M12 connector, and two USB ports with type A connectors. All of the USB ports are located on the rear panel. These USB ports can be used to connect flash disks for storing large amounts of data.

### Ethernet Ports

Two 10/100/1000 Mbps Ethernet ports using M12 connectors are located on the front panel. The pin assignments are shown in the following table.

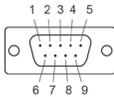


	10/100 Mbps	1000 Mbps
1	-	TRD3+
2	-	TRD4+
3	-	TRD4-
4	ERx-	TRD1-
5	ETx+	TRD2+
6	ERx+	TRD1+
7	-	TRD3-
8	ETx-	TRD2-

### 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	-	-	-

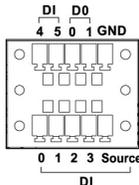


### Audio Interface

The V2616 comes with an audio input and an audio output, allowing users to connect a speaker or an earphone.

### DI/DO

The V2616 comes with a 6-ch digital input and 2-ch digital output in the terminal block connectors.



### Removable Storage Trays

The V2616 computers come with 2 removable slots for inserting additional storage media. To insert the hard disk, simply remove the screws from the tray disk, fasten the hard disk with the screws, and then place the tray back in the slot. Protection keys are also provided to protect the disk tray from being removed. Refer to the Hardware User's Manual for detailed storage installation instructions.

### Real-time Clock

The V2616'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 one of incorrect type.

### Powering on the V2616

To power on the V2616, connect the power cable to the V2616's M12 power connector located at the rear panel. Press the power button to turn on the computer. Note that the Shielded Ground wire should be connected to the central pin of the connector. It takes about 30 seconds for the system to boot up. Once the system is ready, the Power LED will light up.

### Configuring the Ethernet Interface

Power on the V2616 computer after connecting a monitor, keyboard, and mouse, and verify 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 V2616 LANs are shown below. (Note that Windows models use DHCP settings.)

	Default IP Address	Netmask
LAN1	192.168.3.127	255.255.255.0
LAN2	192.168.4.127	255.255.255.0

### Instructions for Linux Users:

If you are using the console cable for first-time configuration of the network settings, enter the following commands to edit the interfaces file:

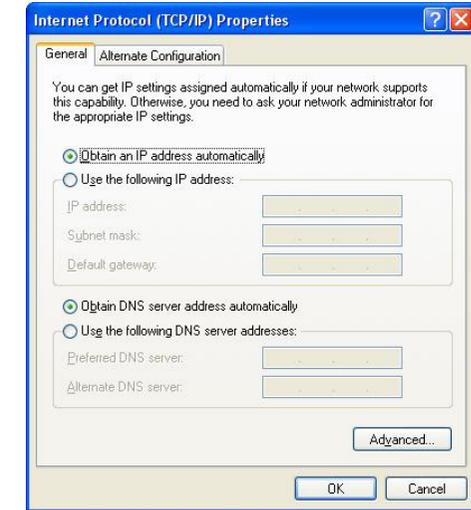
```
#ifdown -a
//Disable LAN1/LAN2 interface first, before
you reconfigure the LAN settings. LAN 1 = eth0, LAN
2= eth1,
#vi /etc/network/interfaces
//check the LAN interface first//
```

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

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

### Instructions for Windows Users:

1. Go to [Start] → [Network Connections].
2. Right-click **Network Connections** and click **Properties**. Next, 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 additional configuration information.**

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