MOXA®

MC-4510-C23
Quick Installation Guide

First Edition, March 2010

1. Overview

The MC-4510 computer is based on the Intel Core 2 Duo mobile processor and comes with two RS-232/422/485 serial ports with optical isolation, two Gigabit Ethernet ports, six USB 2.0 hosts, and a CompactFlash socket to offer high performance and versatile peripheral connectivity for industrial applications such as marine, railway and power.

2. Package Checklist

Before installing the MC-4510-C23, verify that the package contains the following items:
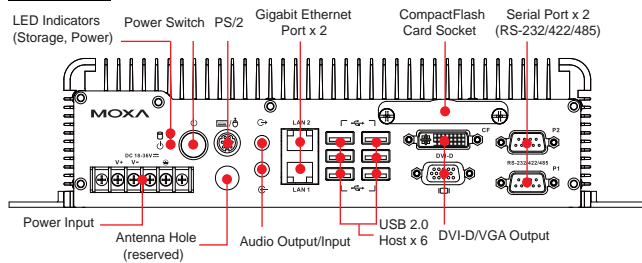
- 1 MC-4510 embedded computer
- PS/2 to KB/MS Y-type cable
- 2 sets of hard disk drive cables
- Hard disk drive ground sticker
- Documentation & Driver CD
- Quick Installation Guide (printed)
- Product Warranty Statement (printed)

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

3. MC-4510-C23 Panel Layout

The following figures show the panel layouts of the MC-4510-C23.
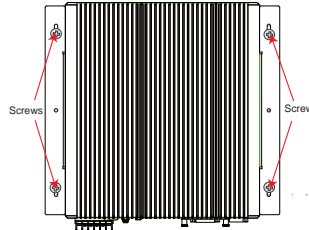
Front View

LED Indicators (Storage, Power) Power Switch PS/2 Gigabit Ethernet Port x 2 CompactFlash Card Socket Serial Port x 2 (RS-232/422/485)

Power Input Antenna Hole (reserved) Audio Output/Input USB 2.0 Host x 6 DVI-D/VGA Output

P/N: 1802045100010

LED Indicators

The following table describes the LED indicators located on the front panel of the MC-4510-C23.

LED Name	LED Color	LED Function
Power	Green	Power is on and functioning normally
	Off	Power is off or power error exists
Storage	Yellow (on)	CF card is inserted and detected
	Yellow (blinking)	CF card or HDD is reading/writing
	Off	No activity
LAN	Green	100 Mbps Ethernet mode
	Yellow	1000 Mbps (Gigabit) Ethernet mode
	Off	No activity or 10 Mbps Ethernet mode

4. Installing the MC-4510-C23

Wall or Cabinet Mounting

The MC-4510-C23 has been pre-installed with two brackets on both ends of the computer. Use two screws per side to attach the MC-4510-C23 to a wall or cabinet.

Screws   Screws

5. Connector Description

Power Connector

The MC-4510-C23 offers 18 to 36 VDC power input with the terminal block. If power is supplied properly, the Power LED will light up. The OS is ready when the Ready LED lights up to a solid green.
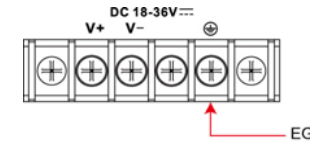
Grounding the MC-4510-C23

Grounding and write routing help to 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.

Earth Ground: Refer to the following figure for the location of the Earth Ground on the terminal block power connector. Connect the EG wire to an appropriate grounded metal surface.
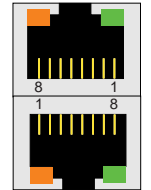

VGA and DVI-D Outputs

The MC-4510-C23 comes with a D-Sub 15-pin female connector on the front panel to connect a VGA CRT monitor. It also comes with a DVI-D connector on the front panel to connect a panel with a DVI-D cable.

Ethernet Ports

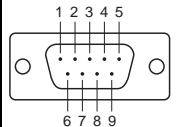The 10/100/1000 Mbps Ethernet ports use RJ45 connectors.

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	---	---	---

CF Card Slot

The MC-4510-C23 computer comes with a CompactFlash socket located on the front panel. Remove the protective cap on the front panel to install the CompactFlash card.

USB Hosts

The MC-4510-C23 has six USB 2.0 full speed hosts that use 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.

Audio Interface

The MC-4510-C23 comes with an audio input and an audio output, allowing users to connect a speaker or an earphone.

Reset Button

Press the "Reset Button" on the front panel of the MC-4510-C23, and 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 MC-4510-C23'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 with an incorrect type of battery.

6. Powering on the MC-4510-C23

To power on the MC-4510-C23, connect the "terminal block to power jack converter" to the MC-4510-C23's DC terminal block (located on the side panel), and then connect the power adaptor. Press the Power Switch button to turn on the computer. Note that the Earth 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.

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