

APPENDIX E

Optional Cables and Cordsets



WARNING! DO NOT connect or disconnect the MD-CC401-000 Communications Converter Cable from MDrive while power is applied!

Communications Converter Cable USB to 5-Pin M12 (MD-CC401-000)

The MD-CC401-000 is an in-line USB to RS-422 converter with integrated cable. This product is used to communicate to a single MDriveAC Plus² Motion Control device. The included components will allow you to connect the USB port of a PC directly to sealed versions of the MDriveAC Plus² Motion Control.



Figure E.1: MD-CC401-000

The MD-CC401-000 communications converter cable is designed to be used with all MDriveAC Plus²-65 utilizing an M12 5-pin connector interface.

Supplied Components: MD-CC401-000 Communications Converter Cable, USB Cable, USB Drivers, IMS Terminal Interface Software.

Electrical Specifications

MD-CC401-000 Specifications	
BAUD Rate	Up to 115 kbps
Connectors:	
USB	
RS-422 Side	5 Pin M12
Cable Length	6 feet (1.8 meters)
Power Requirement	Power from USB

Table E.1: MD-CC401-000 Electrical Specifications

Mechanical Specifications

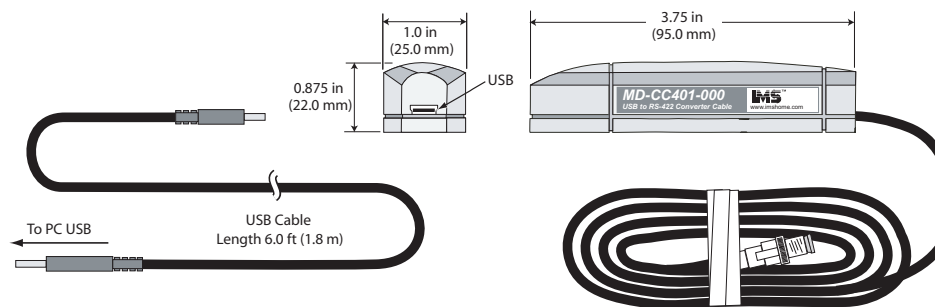


Figure E.2: MD-CC401-000 Mechanical Specifications

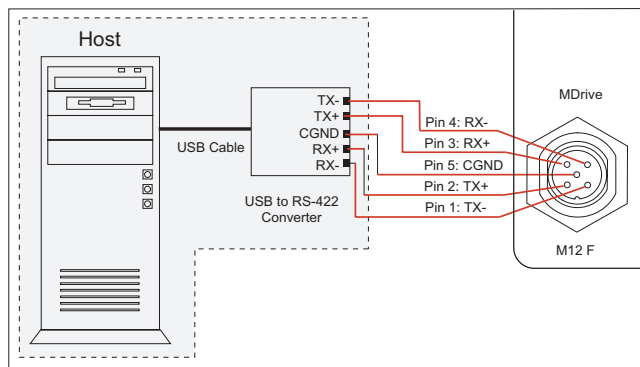


Figure E.3: Typical Communications Interface

Installation Procedure for the MX-CC401-000

These Installation procedures are written for Microsoft Windows XP Service Pack 2. Users with earlier versions of Windows please see the alternate installation instructions at the IMS web site (<http://www.imshome.com>).

The installation of the MD-CC401-000 requires the installation of two sets of drivers:

- Drivers for the IMS USB to RS-422 Converter Hardware.
- Drivers for the Virtual Communications Port (VCP) used to communicate to your IMS Product.

Therefore the Hardware Update wizard will run twice during the installation process.

The full installation procedure will be a two-part process: Installing the Cable/VCP drivers and Determining the Virtual COM Port used.

Installing the Cable/VCP Drivers

- 1) Plug the USB Converter Cable into the USB port of the MD-CC401-000.
- 2) Plug the other end of the USB cable into an open USB port on your PC.
- 3) Your PC will recognize the new hardware and open the Hardware Update dialog.
- 4) Select “No, not this time” on the radio buttons in answer to the query “Can Windows Connect to Windows Update to search for software?” Click “Next” (Figure E.4).
- 5) Select “Install from a list or specific location (Advanced)” on the radio buttons in answer to the



Figure E.4: Hardware Update Wizard

- 6) query “What do you want the wizard to do?” Click “Next” (Figure E.5).
- 6) Select “Search for the best driver in these locations.”

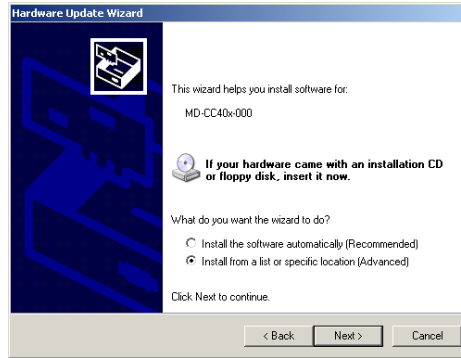


Figure E.5: Hardware Update Wizard Screen 2

- (a) Check “Include this location in the search.”
 - (b) Browse to the MDrive CD [Drive Letter]:\ Cable_Drivers\MD CC40x000_DRIVERS.
 - (c) Click Next (Figure E.6).
- 7) The drivers will begin to copy.

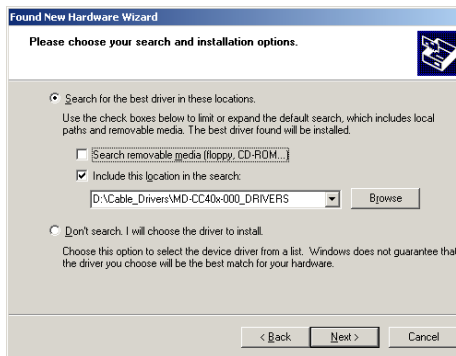


Figure E.6: Hardware Update Wizard Screen 3

- 8) On the Dialog for Windows Logo Compatibility Testing, click “Continue Anyway” (Figure E.7).
- 9) The Driver Installation will proceed. When the Completing the Found New Hardware Wizard dialog appears, Click “Finish” (Figure E.8).
- 10) Upon finish, the Welcome to the Hardware Update Wizard will reappear to guide you through the second part of the install process. Repeat steps 1 through 9 above to complete the cable installation.
- 11) Your IMS MD-CC401-000 is now ready to use.

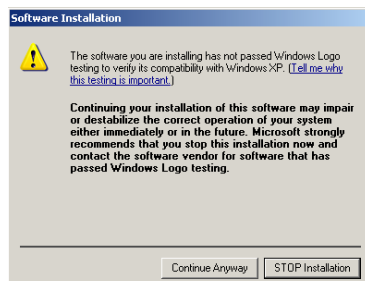


Figure E.7: Windows Logo Compatibility Testing



Figure E.8: Hardware Update Wizard Finish Installation

Determining the Virtual COM Port (VCP)

The MD-CC401-000 uses a Virtual COM Port to communicate through the USB port to the MDrive. A VCP is a software driven serial port which emulates a hardware port in Windows.

The drivers for the MD-CC401-000 will automatically assign a VCP to the device during installation. The VCP port number will be needed when IMS Terminal is set up in order that IMS Terminal will know where to find and communicate with your IMS Product.

To locate the Virtual COM Port.

- 1) Right-Click the “My Computer” Icon and select “Properties”.
- 2) Browse to the Hardware Tab (Figure 6), Click the Button labeled “Device Manager”.
- 3) Look in the heading “Ports (COM & LPT)” IMS USB to RS422 Converter Cable (COMx) will be listed. The COM # will be the Virtual COM Port connected. You will enter this number into your IMS Terminal Configuration.

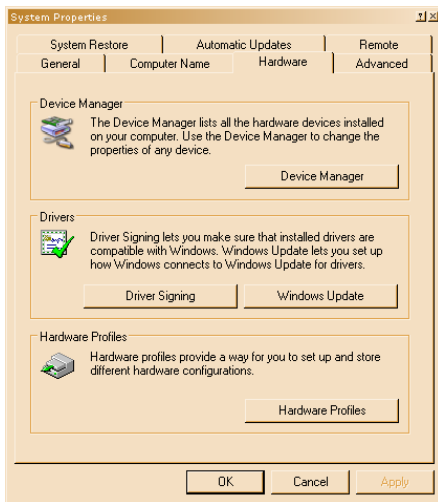


Figure E.9: Hardware Properties

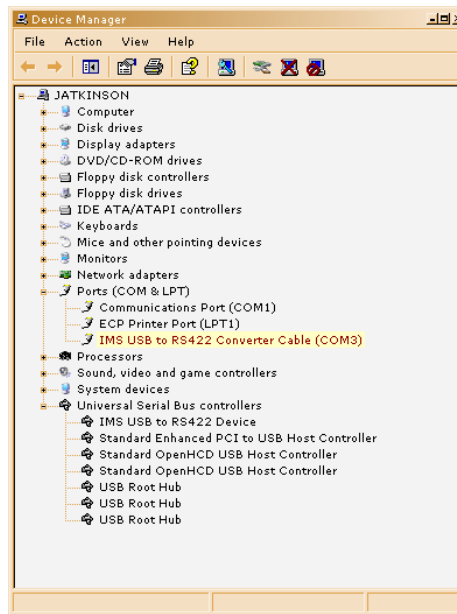


Figure E.10: Windows Device Manager