WARNING! DO NOT connect or disconnect the MD-CC300-001 Communications Converter Cable from MDrive while power is applied!

MD-CC30x-001: USB to SPI Converter and Parameter Setup Cable

The MD-CC30x-001 USB to SPI Parameter Setup Cable provides a communication connection between the Microstepping MDrives and the USB port on a PC.

IMS SPI Interface Software communicates to the Parameter Setup Cable through the PC's USB port.

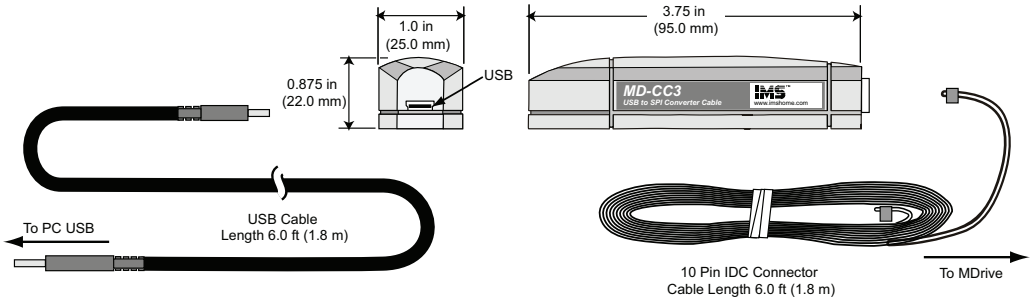
The Parameter Setup Cable interprets SPI commands and sends these commands to the MDrivePlus through the SPI interface.

Supplied Components: MD-CC30 communications converter, Parameter Setup Cable, USB Cable, USB Drivers, IMS SPI Interface Software.

MD-CC300-001

The MD-CC300-001 interfaces to the model MDrivePlus Microstepping with a 10-Pin IDC type connector at location P2.

NEMA 17 Size MDrivePlus Microstepping shown in Figure below. Connection for a NEMA 23 will be identical.



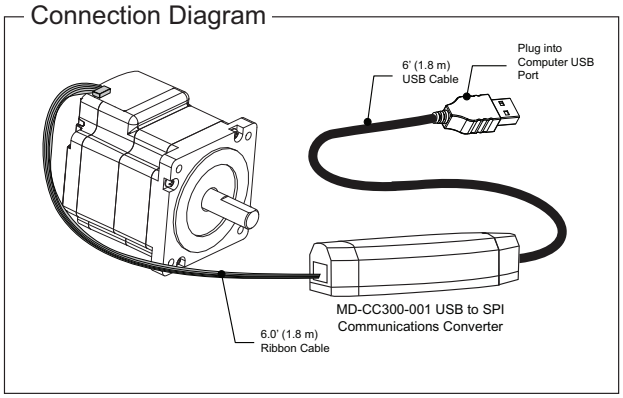


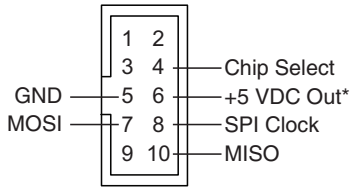
Figure C.1: MD-CC300-001 Mechanical Specifications and Connection

Note: Interactive installation tutorials are available at the IMS Web Site at http://www.imshome.com/tutorials.html

Connector Detail and Mating Connector Kit

Should you choose to create your own interface cable IMS now has mating connector kits available which assist you in creating interface cables in small quantities. These kits come with the connector shells and crimp pins (if applicable) to create five interface cables.

Connector Details



pins not labeled are no connect.

*used to power the MD-CC300-001 only.

Figure C.2: 10-Pin IDC

Mating Connector Kit p/n: CK-01

Description:	5 mating connector shells for making interface cables to MDrive's 10-pin IDC connector. 2-piece connector shell crimps onto a 10 conductor AMP ribbon cable. Ribbon Cable is not included.	
IDC Parts:	Shell:	SAMTEC TCSD-05-01-N
	Ribbon Cable:	AMP 1-57051-9

Installation Procedure for the MD-CC30x-000

These Installation procedures are written for Microsoft Windows XP Service Pack 2 or greater.

The installation of the MD-CC30x-001 requires the installation of two sets of drivers, which may be downloaded from http://www.imshome.com:

- Drivers for the IMS USB to SPI 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) Download dirvers from http://www.imshome.com/cable_drivers.html.
2) Extract the driver files from the *.zip archive, remember the extracted location.
3) Plug the USB Converter Cable into the USB port of the MD-CC30x-001.
4) Plug the other end of the USB cable into an open USB port on your PC.
5) Your PC will recognize the new hardware and open the Hardware Update dialog.
6) 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 C.5).
7) Select “Install from a list or specific location (Advanced)” on the radio buttons in answer to the query

Figure C.5: Hardware Update Wizard

“What do you want the wizard to do?” Click “Next” (Figure C.6).

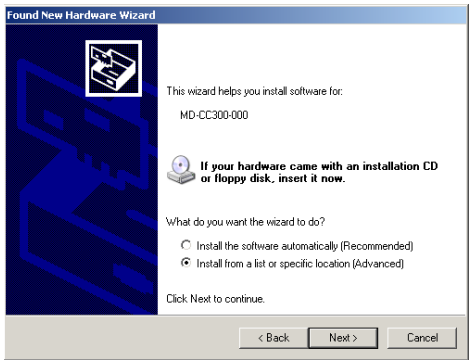


Figure C.6: Hardware Update Wizard Screen 2

86) Select “Search for the best driver in these locations.”
(a) Check “Include this location in the search.”
(b) Browse to the location where you extracted the files in Step #2.
(c) Click Next (Figure C.7).

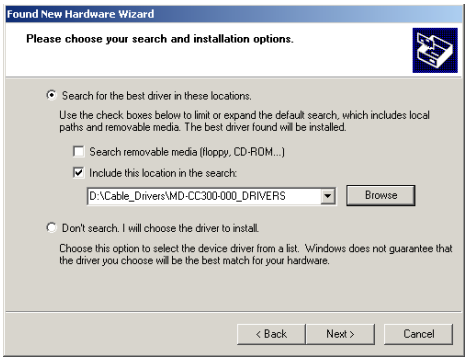


Figure C.7: Hardware Update Wizard Screen 3

9) The drivers will begin to copy.

10) On the Dialog for Windows Logo Compatibility Testing, click “Continue Anyway” (Figure C.8).

11) The Driver Installation will proceed. When the Completing the Found New Hardware Wizard dialog

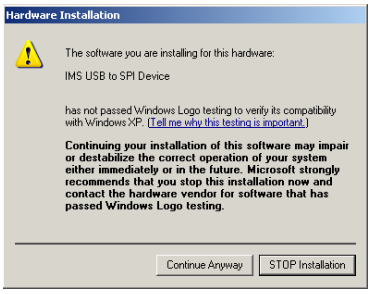


Figure C.8: Windows Logo Compatibility Testing

appears, Click “Finish” (Figure C.9).

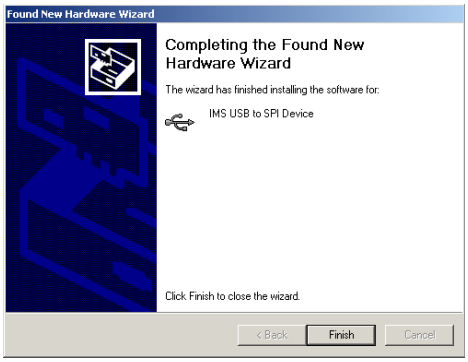


Figure C.9: Hardware Update Wizard Finish Installation

12) Upon finish, the Welcome to the Hardware Update Wizard will reappear to guide you through the second part of the install process. Repeat steps 3 through 11 above to complete the cable installation.

11) Your IMS MD-CC30x-001 is now ready to use.

Determining the Virtual COM Port (VCP)

The MD-CC30x-001 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-CC30x-001 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 D.9), Click the Button labeled “Device Manager”.
3) Look in the heading “Ports (COM & LPT)” IMS USB to SPI Converter Cable (COMx) will be listed (Figure D.10). The COM # will be the Virtual COM Port connected. You will enter this number into your IMS SPI Motor Interface Configuration.

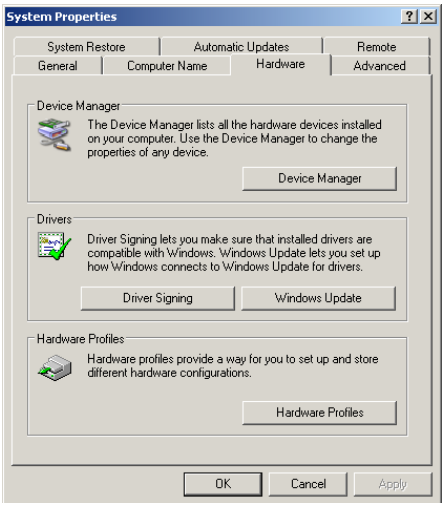


Figure C.10: Hardware Properties

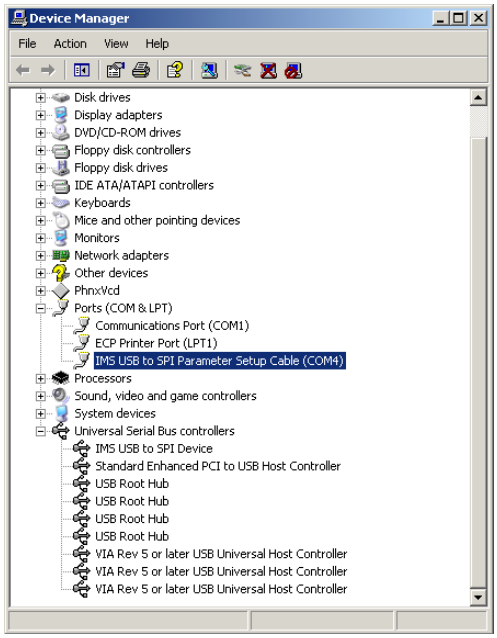


Figure C.11: Windows Device Manager