PCI-bus Fiber Link Controller Card installation

SYNRAD's new PCI Fiber Link Controller Card is designed for installation in PCI bus slots in IBM-compatible computers. The Fiber Link Controller Card (FLCC) is very sensitive to static electricity discharges. Because it is possible to damage the FLCC or your computer through improper handling, please follow the installation directions carefully.

Caution
possible equipment damage

Static sensitive components on the Fiber Link Controller Card may be damaged if exposed to static electricity discharges. Always wear a static control wrist strap when handling the Fiber Link Controller Card. If a static control wrist strap is not available, ground yourself by maintaining continuous contact with your computer's grounded metal chassis.

Locate the FLCC Device Driver

Note: On Windows NT operating systems, the PCI Driver is loaded during the WinMark Pro software installation. Proceed to *Configure the FLCC* section.

Locate the FLCC's PCI Device Driver before continuing the installation. WinMark Pro's PCI Driver files (Synmarkh.inf and Synmarkh.vxd) may be located on WinMark Pro Installation Disk 2 of 2 or may have been provided separately. If the files are not included on Disk 2, then locate the Driver files and copy them to WinMark Pro Installation Disk 2 of 2.

Configure the FLCC

We recommend that you configure DIP switches before installation. Figure 1 shows factory default DIP switch settings.

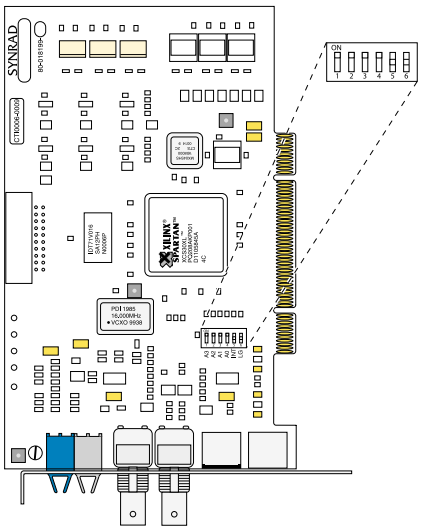

Figure 1 DIP switch settings

Table 1 lists FLCC DIP switch functions.

Table 1 DIP switch functions

DIP SW#	Default Position	Switch Function
6	OFF	Used only with DH Series Marking Heads.
5	OFF	Fast Acting Safety Interlock (FASI) – ON enables the FASI function; OFF disables the Interlock function. When the FASI Interlock is enabled, a high level input must be present on Input # 3 (IN3) for marking to proceed.
4	ON	Card ID# LSB
3	ON	
2	ON	
1	ON	Card ID# MSB

The card ID number, set by the Card ID# DIP switches, is only necessary when more than one PCI card is installed in the system. Because the Windows Plug and Play feature, not the user, assigns the card address, the Card ID# provides a way for the user to ensure the correct card is selected when marking or assigning Input/Output (I/O) properties in multi-card systems.

When SW3–SW6 are set to ON, the Card ID# = 0; when SW3–SW6 are set to OFF the Card ID# = 15. For example, if SW3, SW4, and SW5 = OFF and SW6 = ON, then the Card ID# = 7.

Install the FLCC

To install the PCI-bus FLCC, perform the following steps:

1. Turn off your computer, but leave it plugged into a properly grounded outlet. Leaving the computer plugged in means that the computer chassis will remain grounded, enabling you to discharge harmful static electricity before handling sensitive electronic components.
2. Remove the computer's case or cover to expose the expansion slots. Locate an empty PCI bus slot (the PCI-bus FLCC will not physically fit in an ISA slot).
3. If there is a "space filler" metal bracket covering the PCI slot, then remove the bracket. Save the screw.
4. Make sure you are grounded before handling the FLCC. While grounded, install the FLCC in the PCI slot. The gold contact fingers on the card should slide into the mating PCI bus slot without using excessive force.
5. When the card is properly seated, use the screw removed in step 3 to secure the card to the computer chassis.
6. Reinstall the computer's case or cover.

Connect the Fiber Optic cable

To install the *Fiber Optic* cable, refer to Figure 2 and perform the following steps:

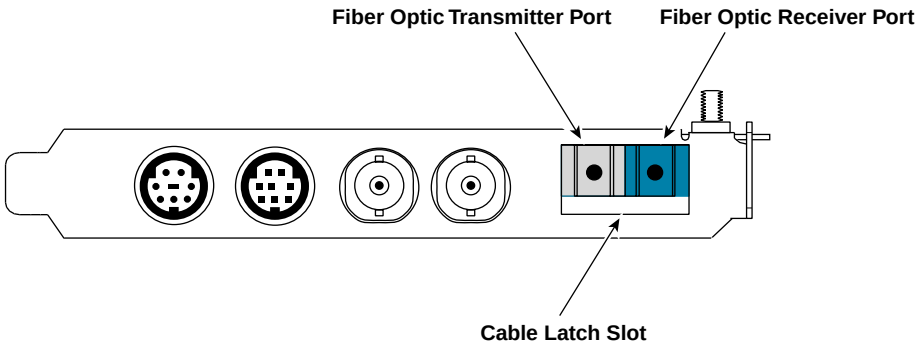

Figure 2 Fiber Link Controller Card connectors

1 With the back of the computer accessible, locate the *Fiber Optic Receiver/Transmitter* port on the FLCC.

2 Remove the rubber dust caps from the fiber optic ports.

3 Locate the *Fiber Optic* cable in the shipping box. The end that attaches to the FLCC terminates into a single duplex connector.

4 Insert the duplex connector into the *Fiber Optic Receiver/Transmitter* port on the FLCC. When properly connected, the latch on the connector should clip into the cable latch slot. You should not be able to remove the *Fiber Optic* cable without depressing the latch.

Note: The fiber optic connection is the only connection necessary to control Fenix or FH Series Marking Heads; no other connections are made to the FLCC.

5 Connect the other end of the *Fiber Optic* cable to your Marking Head.

Start your computer

Note: On Windows NT operating systems, the PCI Driver is loaded during the WinMark Pro software installation. Proceed to *Verify the FLCC's functionality* section.

Turn on your computer. During start-up, the Windows *New Hardware* wizard will guide you through the necessary steps to install the PCI card's Device Driver.

Note: Dialog boxes may differ slightly depending on whether you are using Windows 95/98 or NT.

1 Windows will display a ***New Hardware Found*** dialog box. Wait until the ***Building Information Database*** progress bar completes its task.

2 The ***Add New Hardware Wizard*** dialog box appears. The wizard searches for new drivers for the PCI card labeled "PCI Co-processor CPU". Click the ***Next*** button.

3 Click the radio button next to “Search for the best driver for your device” and then click ***Next***.

4 Windows will search for new drivers on your hard drive and in any of the locations you select. Check “Floppy disk drives” and uncheck all other choices. See Figure 3.

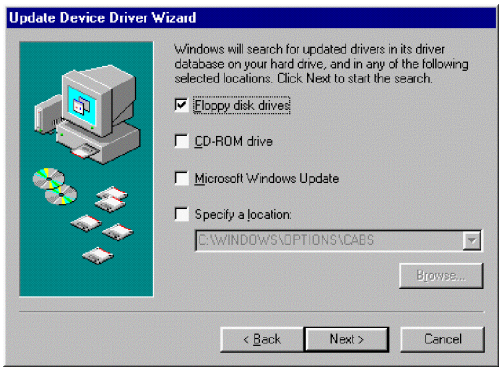

Figure 3 Device Driver Wizard dialog box

5 Insert the FLCC’s Device Driver disk (WinMark Pro Installation Disk 2 of 2) into drive A and click ***Next***.

6 Windows’ driver search should locate the file labeled “Fenix/FH Laser Marking Device”. Click ***Next*** to continue.

7 Windows will notify you that it finished installing the software that your new hardware requires. Click ***Finish***.

8 Allow your computer to complete the start-up process.

Verify the FLCC’s functionality

Follow the steps below to verify that the PCI card is functioning properly.

1 Install WinMark Pro if you have not already done so.

2 Restart your computer (even if WinMark Pro was already installed). This forces Windows to load the newly installed PCI Device Driver.

3 Double-click the Shortcut to WinMark Pro icon on your desktop.

4 When WinMark Pro opens, click ***Tools*** on the *Menu* bar and then click General Settings…. On the *Application Settings* tab, locate the DA Card Selection property and verify that the PCI card is properly identified. See Figure 4. If an older ISA-bus FLCC is also installed in your computer, you may need to select the PCI card from the drop-down list.

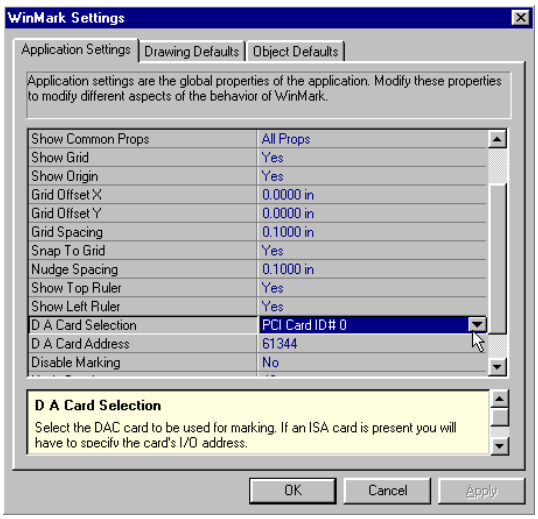

Figure 4 Application Settings tab

5 Create a new drawing, or open an existing file, and mark the drawing.

This completes the installation of your PCI-bus Fiber Link Controller Card.