



DataFire[®] DSP PTE cPCI Series

DataFire DSP 24 PT1 cPCI
DataFire DSP 48 PT2 cPCI

DataFire DSP 30 PE1 cPCI
DataFire DSP 60 PE2 cPCI

Hardware Installation

Introduction

The DataFire DSP PTE cPCI Series adapters provide one or two PRI/T1/E1 interfaces in a single CompactPCI (cPCI) chassis slot.

Using DSP (Digital Signal Processor) technology, the DataFire DSP adapter supports digital or analog connections on T1/E1 circuits or ISDN PRI circuits. The adapter supports up to 24 (T1) or 30 (E1) channels on each line.

Note that both Line 1 and Line 2 connectors are present on all PTE adapters, but only Line 1 is active on PT1/PE1 adapters. A PT1/PE1 adapter can be field-upgraded to two-line operation by adding a daughter card.

Note: Hardware conformance testing has verified this cPCI adapter as Hot Swap ready. As operating system support for Hot Swap features becomes available, Digi International will continue to verify the Hot Swap implementation of our cPCI products.

Installing the DataFire Adapter

Caution! Do not attempt to perform Hot Swap procedures unless your system meets the following criteria:

- The chassis must be certified "Hot Swap Compliant" by the vendor, meeting the required electrical and physical design criteria for cPCI Hot Swap (powered) insertion and extraction. Otherwise, Hot Swap extraction or insertion could result in electrical damage to the chassis.
- The operating system and device driver combination must support Hot Swap procedures. Otherwise, Hot Swap extraction or insertion could result in application software and operating system failure (system crash).

Perform these steps to install the adapter:

1. To perform a Hot Swap insertion, proceed to Step 2. If your system does not support Hot Swap, turn off the chassis power supply. If possible, unplug the power cable or turn off the circuit breaker supplying power to the system. For safety, the chassis should be isolated from any power source and attached to a known electrical ground point.
 2. Put on the wrist strap (included with the adapter) and attach it to a known ground point on the chassis exterior. Keep the wrist strap for future use to ensure safe handling of the adapter.
- Caution!** For ESD protection, do not remove the DataFire adapter from its protective packaging until you have grounded yourself to the system chassis.
3. Remove the DataFire adapter from its ESD protective packaging. Keep the ESD packaging for future use to ensure safe handling of the adapter. **Do not** remove the Hot Swap protective cover that is attached to the adapter circuit board.
 4. Record the adapter serial number in the space provided below. For a PT2 or PE2 unit, also record the serial number of the attached daughter card.

Serial Number: _____



Figure 1. Ejector Handle in Unlocked Position

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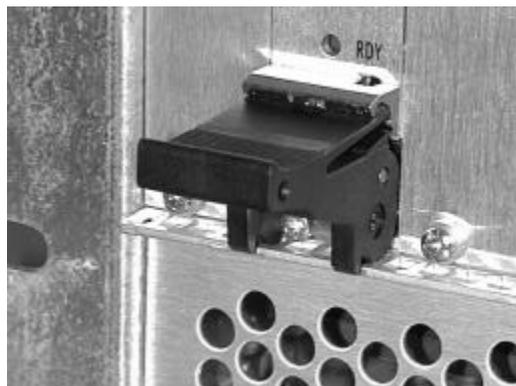


Figure 2. Ejector Handle in Locked Position

5. Install the adapter into any open cPCI slot:
 - a. Grasp the card by the top and bottom ejector handles. The ejector handles should be unlocked, as shown in Figure 1.
 - b. Insert the back edge of the card into the top and bottom rails of the empty slot. Be sure the top and bottom card edges slide freely in the rails without binding.
 - c. Slide the card into the slot until the ejector handles can engage the holes on the chassis front plate. Be sure that the rear edge connectors align properly with the backplane connectors. If this is a Hot Swap insertion, when you complete this step the blue ready light (labeled RDY) should be on, indicating that the adapter is ready to be locked into place for full electrical contact with the backplane.
 - d. Press the card into the backplane by rotating the ejector handles inward (toward each other) and locking them, as shown in Figure 2. If this is a Hot Swap insertion, wait for the blue RDY light to turn off before proceeding with the next step. When the ejector handles are properly locked, the card cannot be moved without unlocking them. The ejector handles also contain screws that you can tighten to secure the card to the chassis.
6. Connect the T1/E1 or PRI line(s) to the adapter. If the adapter is a PT1 or PE1, only Line 1 (the bottom connector) is active. If the adapter is a PT2 or PE2, both connectors are active.

Important! To remain in compliance with FCC regulations, use only the Digi cables provided with the DataFire adapter.

Diagnostic LEDs

Each of the RJ-45 connectors on the adapter front panel has two embedded LEDs, one green and one yellow. These LEDs change state as described below.

Board Insertion Indicators

If the yellow LEDs flash alternately after you initially power the chassis or reset the backplane, this indicates that the adapter is inserted but the ejector handles are not yet locked into place. The adapter cannot perform its Power On Self Test (POST) until the ejector handles are locked.

Power On Self Test

The yellow LEDs remain on for about thirty seconds after you lock the ejector handles and apply power to the adapter. If they begin flashing after this period, a hardware error condition exists. Contact Digi Technical Support.

After Power On Self Test

This diagnostic test is valid only after you connect the lines to the adapter, install and configure the DataFire software, and your system is in a normal operating state. The green LED for each active port will flash at regular intervals to indicate that the adapter is functioning. The yellow LED should be off. If it is on or flashing, an alarm condition exists. This could mean that the adapter is not connected to a T1/E1 or PRI line, or that the line is not functioning properly. See the Troubleshooting topic in the Digi Access Resource CD-ROM on-line documentation for help.

What Next?

Install the software. Instructions are provided on the Digi Access Resource CD-ROM.

You must configure the software according to your T1/E1 or PRI line provisioning. Information about characteristics of your specific lines will be required during the software installation.

Return the warranty card to register this product, or register on-line at

www.digi.com

Removing the DataFire Adapter

Perform these steps to remove the adapter:

1. To perform a Hot Swap extraction, proceed to Step 2. If your system does not support Hot Swap, perform the normal system shutdown procedure and turn off the chassis power supply. If possible, unplug the power cable or turn off the circuit breaker supplying power to the system. For safety, the chassis should be isolated from any power source and attached to a known electrical ground point.
2. Put on the wrist strap (included with the adapter) and attach it to a known ground point on the chassis exterior.

Caution! For ESD protection, do not remove the DataFire adapter until you have grounded yourself to the system chassis.

3. For a Hot Swap extraction from a powered chassis, unlock the ejector handles, leave the adapter inserted into the backplane, and wait for the blue RDY light to turn on before proceeding. If the chassis is not powered, unlock the ejector handles and proceed to Step 4.

Caution! For a Hot Swap extraction, you **must** wait for the blue RDY light to turn on before you extract the adapter. If it does not turn on within about 30 seconds, this indicates a problem that precludes a successful Hot Swap extraction. In this case, perform the normal system shutdown procedure and turn off the chassis power supply. **Never** remove a card from a powered chassis if the RDY light is off. Chassis damage could result.

4. Slide the adapter out of the chassis slot and return it to the ESD protective packaging.