

Frame Relay Port Card Development Kit

OVERVIEW

The Frame Relay Port Card Reference Design is a self contained hardware and software reference design tool, designed to operate in a compactPCI chassis running VxWorks.

The PM2355 kit provides a platform to develop and integrate software with a channelised OC-3 design.

HARDWARE

The kit is supplied with a Frame Relay Port Card Reference Design board that has been developed to fit into a 6U compactPCI chassis.

The board consists of the following parts:

- 1 PM7384 FREEDM™-84P672 device
- 3 PM8315 TEMUX devices
- 2 PM5342 SPECTRA-155 devices
- 1 PM4314 QDSX device
- 1 on board MC68340 microprocessor
- 1 on board user configurable FPGA
- Interface circuitry
- Clock distribution circuitry
- Various configuration headers

The board is configured and powered through the compactPCI chassis.

A separate PC is used for status monitoring, and to download configuration scripts.

SOFTWARE

The kit contains an interactive program, complete with a Graphical User Interface, which is used to monitor and configure the Frame Relay Port Card.

The software, installed from the kit's CD-ROM, provides a visual interface to control and monitor the operation of the board.

Direct access is provided to all the devices on the board via the compactPCI bus, or the on board microprocessor.

HARDWARE FEATURES

- Supports a compactPCI interface to the FREEDM™-84P672, and a serial interface (via on board microprocessor) to the TEMUX and SPECTRA-155 devices.
- Provides a demonstration platform for a High Density T1/E1 Frame Relay Port Card.
- Provides a dual OC-3/STM-1 optical interface.
- Provides a T1/E1 clock and data interface to the TEMUX via the QDSX.
- Provides Automatic Protection Switching at the optical interface.
- Provides front panel status LEDs for board status monitoring.

- Dual compatible compactPCI bus interface allows the card to work in +3.3 V \66 MHz or +5 V \33 MHz signaling environments.
- On board hot swap controller ensures correct power sequencing for the +3.3 V and +2.5 V supply.
- On board FPGA allows the user to optionally pass fractional DS-3 traffic between the TEMUX and FREEDM™-84P672 via the FPGA rather than the SBI bus.

SOFTWARE FEATURES

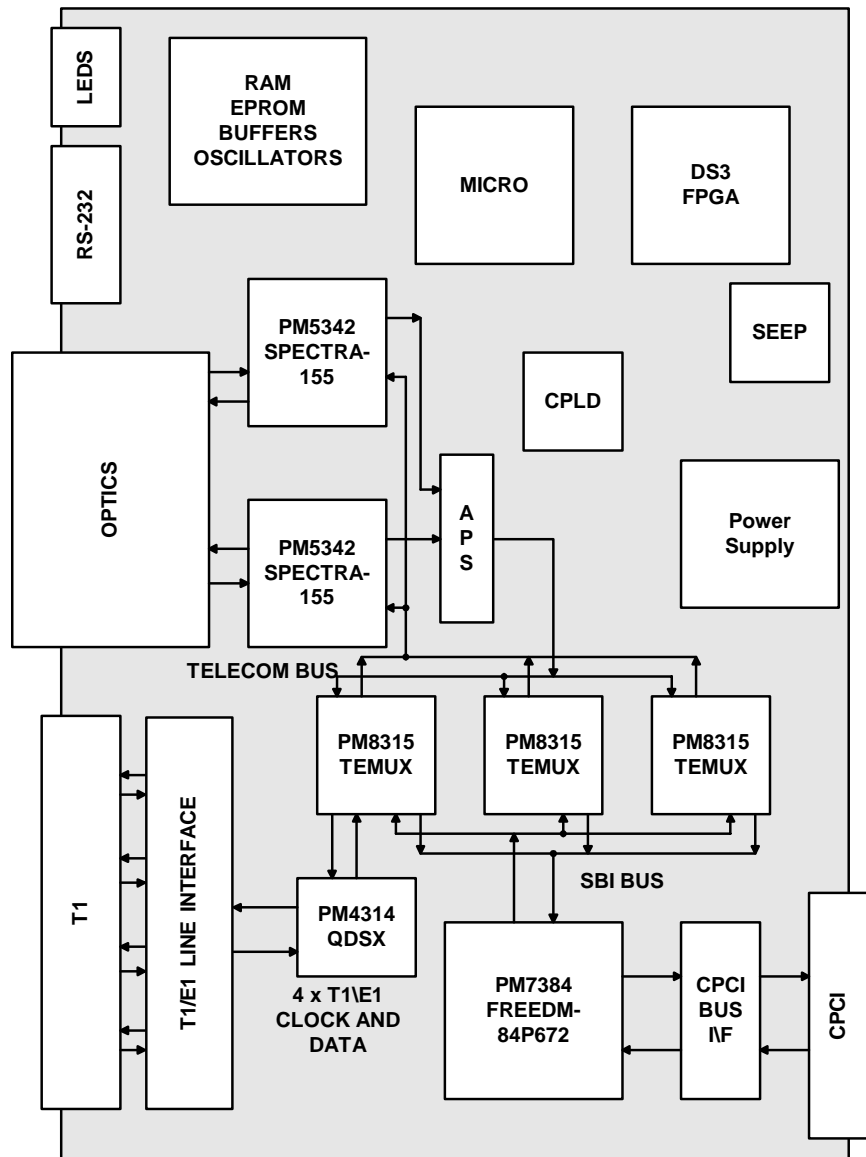
- Windows 95, 98, and NT compatible.
- Graphical User Interface allows quick point and click access to all devices.
- Provides per link and per channel statistics-gathering facilities.
- Allows continuous monitoring of device registers.
- Includes a board self-test routine.
- Allows users to interactively receive and transmit packets.
- Provides a block loading utility, allowing device configuration to be performed quickly and easily.
- Includes device configuration blocks for both T1 and E1 modes of operation.
- Allows users to modify or create their own configuration blocks.

FRAME RELAY PORT CARD DEVELOPMENT KIT PHOTO



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BLOCK DIAGRAM



PM2355-KIT CONTENTS

- Installation CD-ROM
 - target software binaries
 - source code
 - documentation
- Frame Relay Port Card Development Kit Card

NOTE:

The following items are not supplied by PMC-Sierra, and are the responsibility of the user:

- Personal computer
- Tornado 2 IDE for i86 platform (VxWorks development environment)
- cPCI system

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