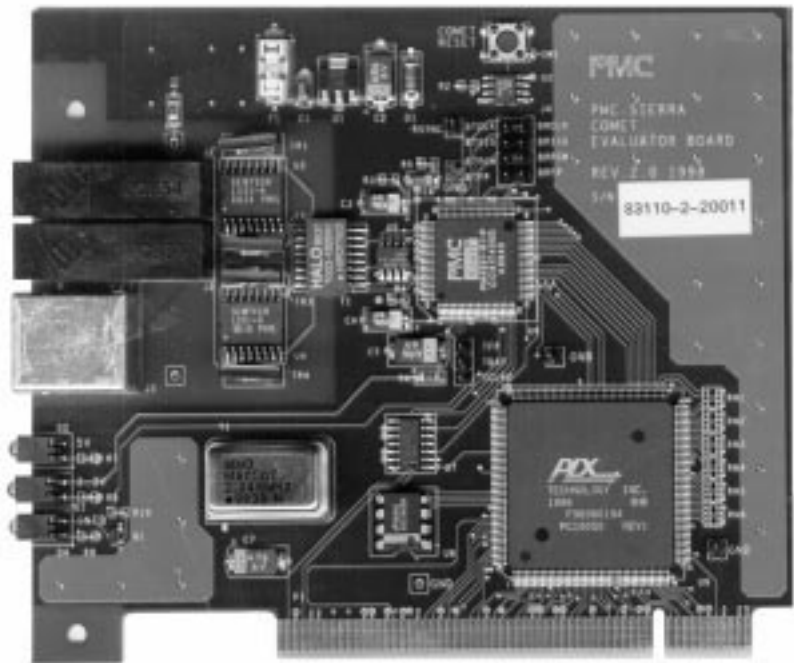**PMC** *PMC-Sierra, Inc.*

Preliminary
PM4351-KIT

COMET
Evaluator Kit

A flexible development tool that provides a comprehensive platform for the evaluation and demonstration of PMC-Sierra's PM4351 COMET device.
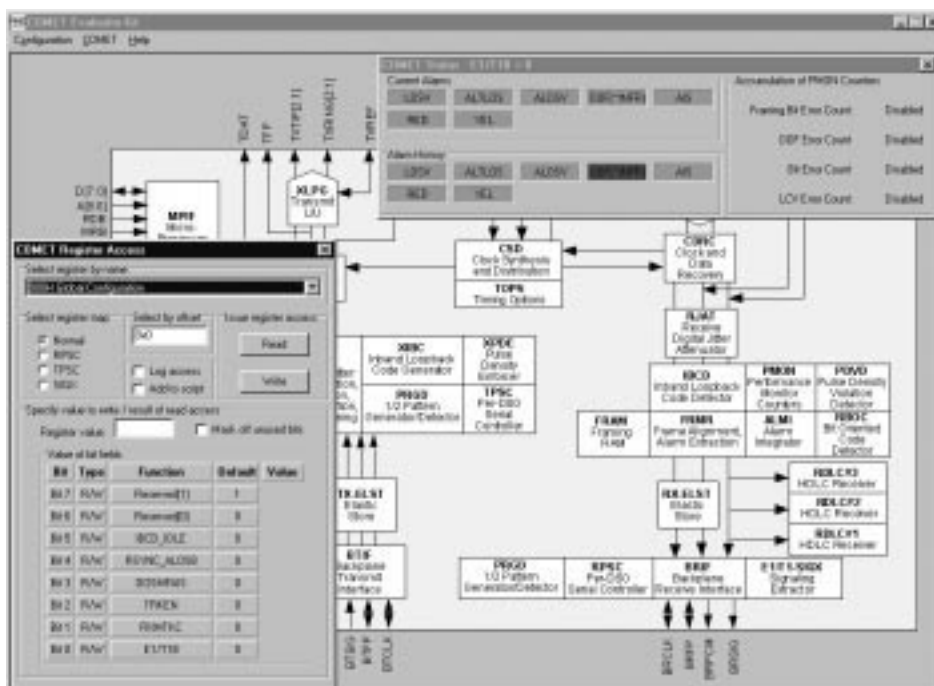
Overview

The COMET Evaluator Kit is a self-contained hardware and software reference design tool, designed to operate on a Pentium-based PC running Windows 95/98. The kit provides a platform to develop and integrate software with a state-of-the-art T1/E1/J1 design.

Hardware

The kit is supplied with a single channel COMET Evaluator Board that has been developed to fit into a PCI-based desktop computer. This board consists of a PM4351 COMET device, the necessary interface circuitry, magnetics and line protection for long-haul and short-haul operation in either T1 or E1 mode. The board is configured, monitored, and powered through the PC's motherboard.

Software

The kit contains an interactive program, complete with a graphical user interface (GUI), and a set of scripts to configure the COMET device. The software, installed from the kit's CD-ROM, provides a visual interface to control and monitor the COMET functions. Direct access to the COMET device is provided to:

- Read or write any of the COMET registers
- Perform a hardware reset of the COMET
- Observe the status of the hardware interrupt pin of the COMET

The program also provides access to the COMET datasheet in Windows Help format.

PM4351-KIT
COMET Evaluator Kit

Hardware Features

- Supports a PCI Interface, providing microprocessor access to the COMET via the host PC
- Provides a demonstration platform of the COMET functions and performance
- Provides software-selectable E1, T1, J1 rate selection

T1 Mode

- Interfaces to short-haul and long-haul T1 lines
- Frames to D4, ESF, SF and SLC®96 format
- Supports the Facilities Data Link with an integral HDLC controller
- Provides per-channel payload loop-back
- Accommodates cable lengths from 0 to 6000 feet using Automatic Gain Control
- Provides programmable Line Build-outs of DSX-1, as well as CSU of -7.5dB, -15dB and -22dB
- Contains an integral line interface to generate G.703 wave shapes for 100Ω T1 lines
- Provides a programmable PRBS test pattern generator, receiver and analyzer

E1 Mode

- Frames to FAS, CAS and CRC-4 formats
- Supports the Facilities Data Link with an integral HDLC controller
- Provides per-channel payload loop-back
- Accommodates cable lengths from 0 to 2 km using Automatic Gain Control
- Contains an integral line interface to generate G.703 wave shapes for both 75Ω and 120Ω E1 lines
- Provides a programmable PRBS test pattern generator, receiver and analyzer

Software Features

Interactive

- Runs under Windows 95 or 98
- Provides a clickable COMET block diagram to bring up descriptions of the COMET or its register fields
- Provides a clickable register map to view and modify the settings of any COMET register
- Provides a status display of current and historical T1 and E1 alarms
- Provides an interrupt display where each interrupt can be enabled or disabled
- Provides a historical status display of each interrupt and the ability to clear the interrupt history
- Provides extensive help on software operation
- Provides the COMET datasheet in Windows Help format

Scriptable

- Runs pre-defined command scripts to configure the COMET
- Provides a command text editor to create, save and run user-defined scripts
- Provides a log window to display the results of script execution

COMET Evaluator Board Block Diagram