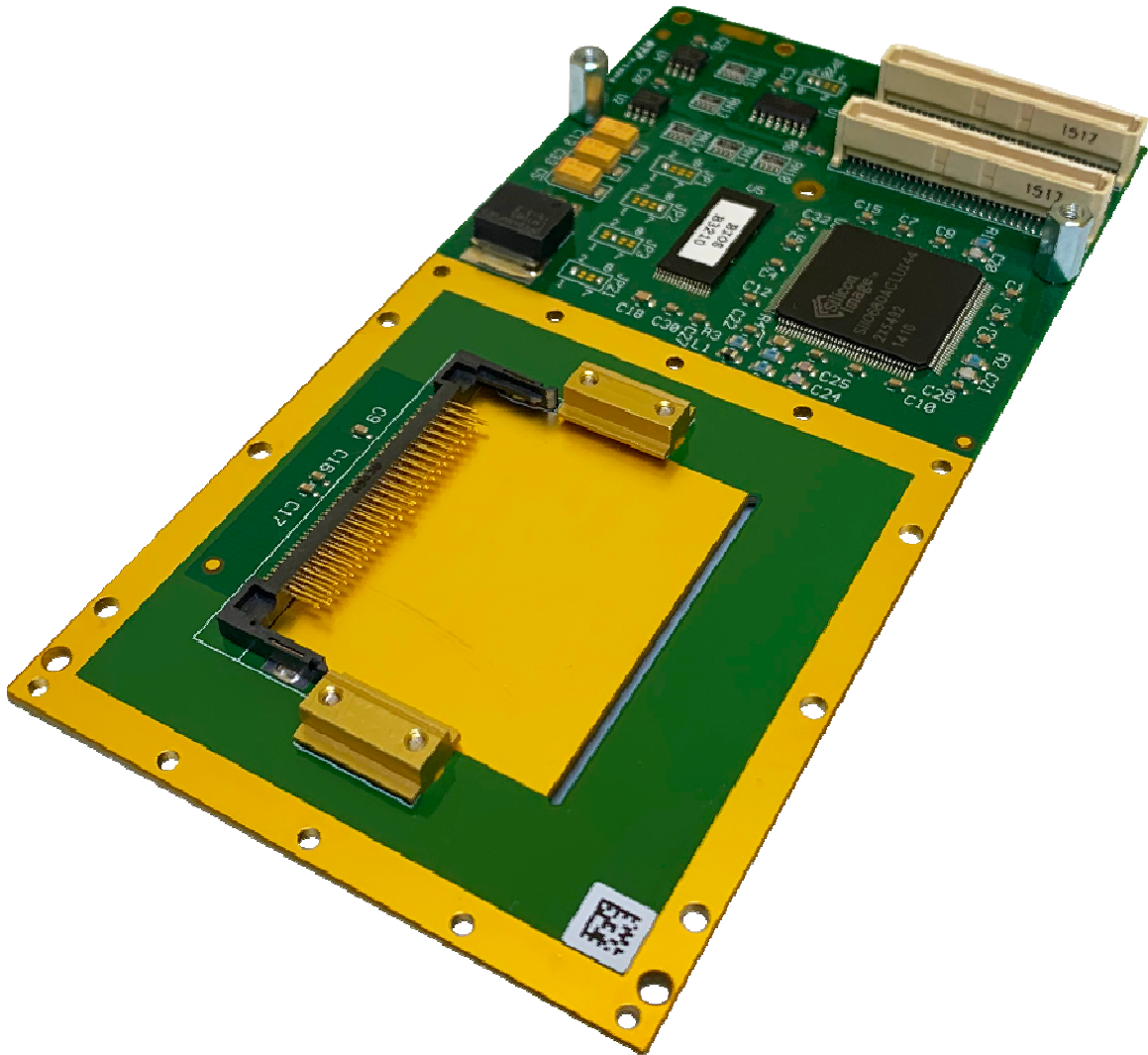


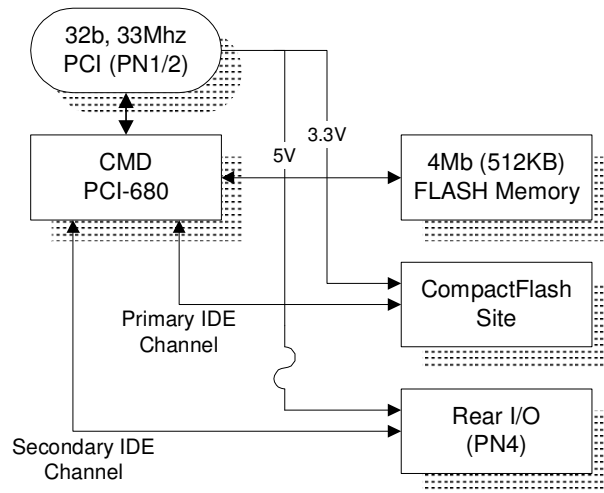
# Thermally Enhanced Compact Flash Adapter PMC

(5V powered version)

P/N 4638 Datasheet



## Introduction



**Figure 1 - Block Diagram**

The Thermally Enhanced (CCPMC) Compact Flash (CF) controller PMC provides a Silicon Image (formerly CMD) PCI-680 IDE controller interfacing to a single Compact Flash site located on the body of the PMC. The board supports Type I (3mm) and Type II (5mm) CF devices.

The primary IDE channel services the on-board Compact Flash site as the Master. For rear I/O operation to external IDE devices, the secondary IDE channel is presented on the PMC PN4 connector. External drives can be either Master or Slave depending on the jumper setting within the drive.

This board has been designed for operation on Conduction Cooled host platforms per the VITA 20 specification. Both "primary" heat conduction areas, located at the center and front of the board, as well as "secondary" conduction areas, located at the upper and lower edge of the board, are provided.

The Compact Flash device is securely held in place by two screw-down clips at each edge of the CF site. The bottom surface of the CF device directly contacts a solid copper plane thermally connected to the primary and secondary thermal sinks.

Except for the CMD-680 controller, this board is designed with all Industrial Temperature Range components (-40 to +85 degrees operating). Although datasheets for the CMD-680 controller suggest it is also capable of Industrial Temperature Range operation, discussions with the manufacturer suggests this is not the case. Consequently, users must evaluate/screen this board for operation for extended temperature applications.

The board is powered by +3.3V provided from the host carrier card through the PMC connectors. Also, a fused version of +5V is directed out the PN4 connector to support 44-pin IDE drives via Rear I/O (PN4) connection. The CF device on the PMC is powered by +3.3V.

A 128K-bit (32-Kbyte) FLASH memory provides storage for BIOS code. The board comes pre-programmed with a BIOS for Intel platforms. For non-Intel platforms (e.g., Power PC), the BIOS may be in-circuit re-programmed by the user (via PC DOS) to install the appropriate BIOS code.

A CF device is not shipped with the board, allowing for user choice. Note that all CF devices may not be compatible with the PCI-680 controller and associated O/S driver. The user is advised to test the intended CF device with this board operating in the target O/S prior to purchasing any production quantity.

Drivers are not provided with this board for any particular operating system. The user is advised to contact the O/S supplier for driver support for the PCI-680 chip. Also, drivers for some O/Ss may be directly available at [www.siliconimage.com](http://www.siliconimage.com), or be provided on the O/S distribution disk.

For complete packaged solutions, including drivers, system integration, application development, thermal testing, conformal coating, vibration testing, Compact Flash device selection and installation, and other ruggedization/qualification testing, this board is available from a third party who specializes in such areas. Please contact Technobox for more information.