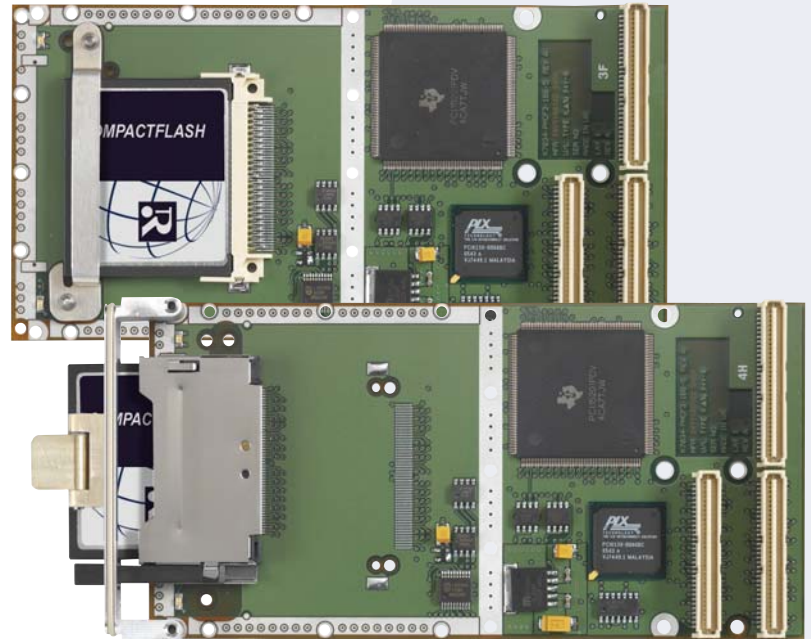# PMCF3

Add-on Solid State Memory for Rugged Applications

- CompactFlash adapter
- Easy add-on memory
- Large capacity, cost effective
- IDE disk-like structure and operation
- PCI 2.3 compliant interface
- Customer upgradeable
- Low power consumption
- Comprehensive software support
- 5 air- & conduction-cooled ruggedization levels
- Supports type-I & type-II CompactFlash cards*

PMCF3 is a member of Radstone's extensive family of COTS IEEE 1386.1 compliant PMCs (PCI Mezzanine Cards), offering a convenient way to add large capacity, non-volatile memory to rugged system solutions. Targeted at the world's defense and aerospace OEM marketplace, this cost effective CompactFlash adapter is ideal for use with Radstone's families of COTS SBCs and PMC carrier cards. PMCF3 can be plugged on to any host with a PMC site * and is available in five ruggedization levels.

Designed for applications which require rugged, solid state, non-volatile memory storage (e.g. for data logging, secure mission data, application code etc.), the transportability of CompactFlash allows key data to be inserted and removed from the system as required. For standard and extended temperature units, the CompactFlash may be ejected through the front panel, whereas for rugged air- and conduction-cooled versions the CompactFlash is securely held with a screw-mounted retaining clip.

PMCF3 is offered either with or without CompactFlash mounted, allowing the customer to choose whether to select a one-stop shop solution, or to source the CompactFlash direct from the manufacturer. The flexibility of CompactFlash allows users to cost-optimize their current system solutions and future-proof the design to cater for system upgrades.

RADSTONE
DIGITAL PROCESSING

32-bit PCI bus

32-bit 66 MHz PCI

PLX PCI 50 Isolation BRIDGE

TI PCI1520

Memory Bus

Removable CompactFlash Module
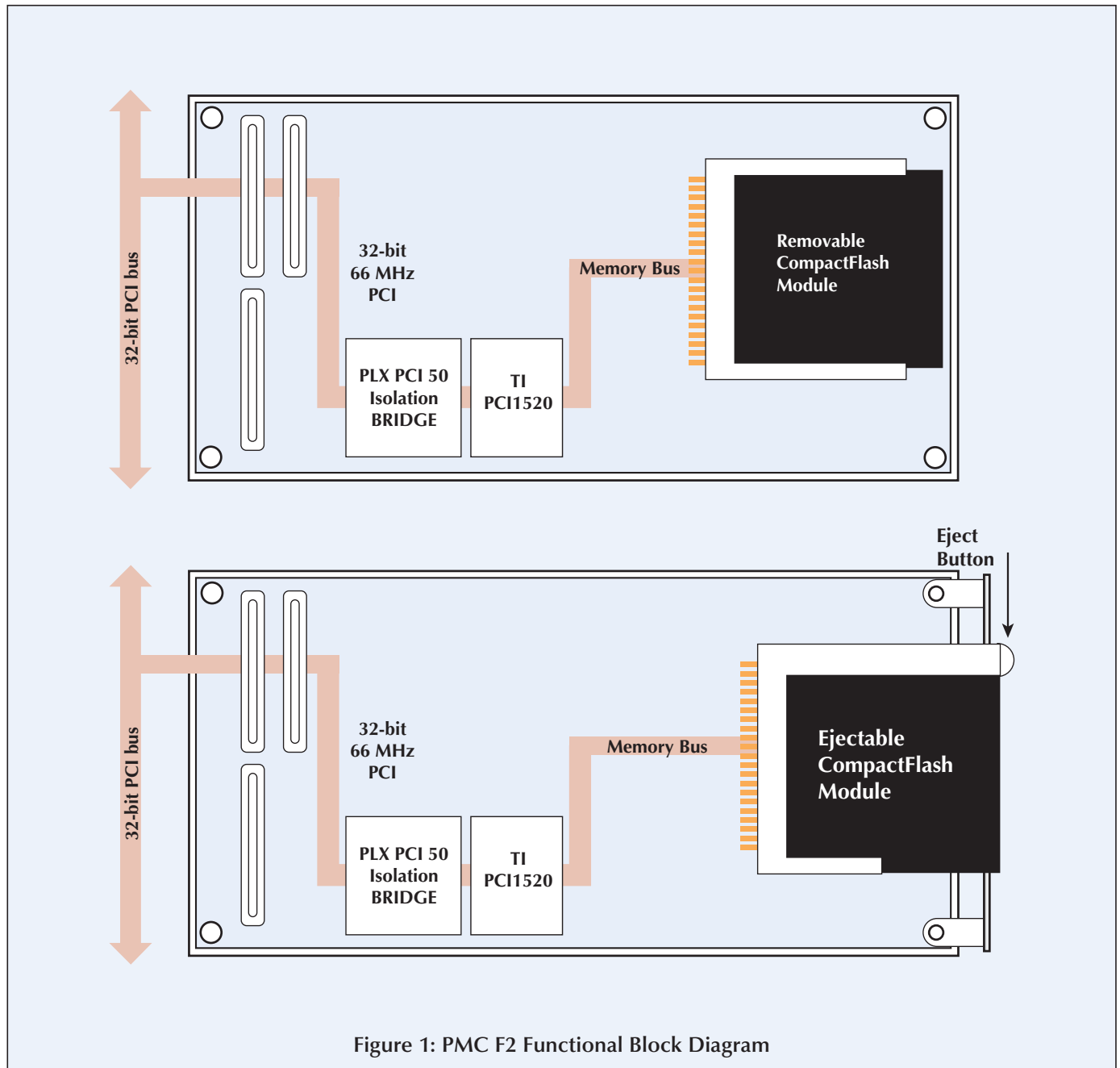
Eject Button

Ejectable CompactFlash Module

Figure 1: PMC F2 Functional Block Diagram

FEATURES

- PMCF3 is available with or without CompactFlash fitted

- Up to 6 GBytes of CompactFlash currently available from Radstone – other capacities available direct from manufacturer

- Extra storage expansion achievable by fitting multiple PMCF3 modules to Radstone's integrated family of rugged PMC carrier cards

- Asynchronous 32-bit isolation bridge provides a 32-bit 66 MHz capable PCI interface

- Front panel ejectable CompactFlash (available on ruggedization levels 1-3)

- Onboard, mechanically retained CompactFlash (available on ruggedization levels 1-5)

- Sustained transfer rates of up to 3.5 MBytes/sec write and 2.8 MBytes/sec read are achievable, depending on CompactFlash card

- Software support:
  WindRiver's VxWorks; LynuxWorks' LynxOS;
  Green Hills INTEGRITY

Standard Ordering Information

Sales code – Level 1	Description
PMCF3-130	Air-cooled PMC card with ejectable type-I and type-II compatible CompactFlash site
PMCF3-131	Air-cooled PMC card with removable type-I CompactFlash site
PMCF3-132	Air-cooled PMC card with removable type-II CompactFlash site*
Sales code – Level 2	
PMCF3-230	Air-cooled level 2 with conformal coating and ejectable type-I and type-II compatible CompactFlash site
PMCF3-231	Air-cooled level 2 with conformal coating and removable type-I CompactFlash site
PMCF3-232	Air-cooled level 2 with conformal coating and removable type-II CompactFlash site*
Sales code – Level 3	
PMCF3-331	Air-cooled level 3 with conformal coating and removable type-I CompactFlash site
PMCF3-332	Air-cooled level 3 with conformal coating and removable type-II CompactFlash site*
Sales code – Level 4	
PMCF3-431	Air-cooled level 4 with conformal coating and removable type-I CompactFlash site
PMCF3-432	Air-cooled level 4 with conformal coating and removable type-II CompactFlash site*
Sales code – Level 5	
PMCF3-531	Air-cooled level 5 with conformal coating and removable type-I CompactFlash site
PMCF3-532	Air-cooled level 5 with conformal coating and removable type-II CompactFlash site*
CompactFlash options	
PMCF3-x2x	As above with 32 MBytes type-I CompactFlash device fitted
PMCF3-x6x	As above with 512 MBytes type-I CompactFlash device fitted
PMCF3-x7x	As above with 1 GByte type-I CompactFlash device fitted
PMCF3-x9x	As above with 4 GBytes type-I CompactFlash device fitted
PMCF3-xAx	As above with 6 GBytes type-II CompactFlash device fitted

Note on Type-II Compatibility:

When fitting type-II CompactFlash to removable variants of the PMCF3, the overall height of the module is approximately 5.6mm, which violates the PMC specification (IEEE 1386:2001) maximum height parameter by approximately 0.9mm. As a result, the PMCF3 may not be compatible with certain host cards. Please check with your Radstone representative for more information.

Ejectable variants fitted with type-II CompactFlash, and both variants fitted with type-I CompactFlash are fully compliant with IEEE 1386:2001.

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