datasheet

I/O **VITA**

6U VME64/VME64x

Carrier for One or Two PMC/PrPMCs

The Ti4400 is a 6U form factor PMC/PrPMC carrier for VMEbus systems and forms the basis of a flexible I/O system. It offers the user a means of integrating two single PMC modules or one double-wide PMC module. The current version of the Ti4400 supports PMC modules and ProcessorPMC modules. The VME-to-PCI bridge is implemented in an FPGA for flexible VME-to-PCI mapping and to enable future updates and upgrades.

The base address of the Ti4400 is configurable by DIP switches. The Ti4400 VME-to-PCI bridge is mapped in short I/O (A16) space of the VMEbus pinout. Each PMC site has its own software configurable base address in standard (A24) or extended (A32) address space. The DIP switches are easily accessible for configuration even when both modules are mounted on the carrier.

The Ti4400 features flexible rear I/O in accordance with ANSI/VITA 35-2000. All 64 rear I/O signals from PMC site 1 are routed to VME P2. When using optional 5-row VMEbus connectors, 46 rear I/O signals from PMC site 2 are routed to the VME P2. Using the optional VME64x P0 connector all 64 rear I/O signals from PMC site 2 are available.

The interrupt controller on the Ti4400 has an interrupt vector for each PMC module. If a module is able to generate its own vector, the Ti4000 simply passes the interrupt request to the VMEbus. Interrupts for each PMC site can be masked separately. The level on which an interrupt is issued to the VMEbus is software selectable.

The Ti4400 provides system controller functions like arbiter, bus timer and SYSCLK to be used in slot 1 and/or with a PrPMC. On the front of the Ti4400 is a 7-segment display indicating the boot status during FPGA boot sequence. After booting, it displays status information.

As an option the Ti4400 provides conduction-cooling ribs compliant to ANSI/VITA 20-2001.

Features

- VMEbus-to-PCI-bus interface implemented in FPGA
- Selectable standard VMEbus addressing (A24)
- Even/odd or word data transfers (D08(E/O)/D16/D32)
- Features 2 single or 1 double PMC
- 32-bit/33MHz PCI interface to PMC modules
- 3.3 V PCI signaling on PMCs
- Support for one ANSI/VITA 32-2003 compliant ProcessorPMC
- Rear I/O on P2 or optional P0 connector
- Available in 3-row and 5-row VME with optional P0
- Software-selectable interrupt level
- Thermal sensor for each PMC site
- Front panel status display
- Option for conduction-cooled version

VME Compliance

- Master and slave interface
- A32/A24/A16, D32/D16/D08(EO)
- Selectable base address via coding switch
- Auto slot 1 detection for system controller functions
- Internal arbiter when board is system controller
- Programmable D08(O) interrupt vector (vector unique per module)
- ANSI/VITA 35 compliant rear I/O routing on P2 connector, 64 signals for PMC module1, 46 signals for PMC module 2 (with optional 160-pin VMEbus connectors)
- ANSI/VITA 35 compliant rear I/O routing on optional P0 connector, 64 signals for PMC module 2
- Occupies only one VMEbus slot

datasheet

ELMA
Your Solution Partner

I/O VITA
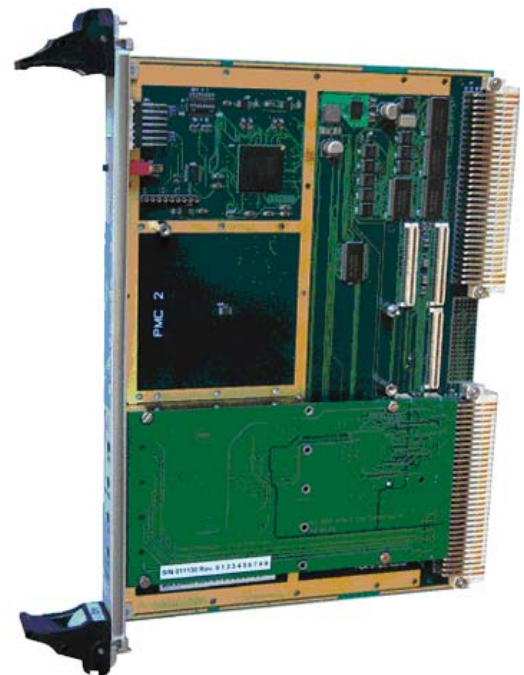
Carrier for One or Two PMC/PrPMCs

Connections
- P1 and P2 to VMEbus
- 96-pin VMEbus P2 to PMC site 1 P4 for user I/O
- 160-pin VMEbus P2 to PMC site 1 P4 plus PMC site 2 P4 for user I/O
- VMEbus P0 to PMC site 2 P4 for user I/O (optional)
- PMC site P1 and P2 for PCI interface

General Product Characteristics
- Standard double-height board 160mm by 233.35mm
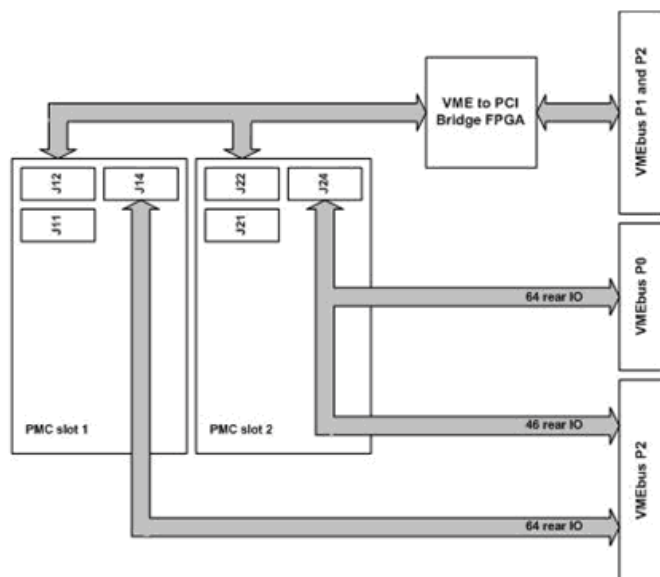- Status display
- Reset switch
- Operating temperature -40° C to +85° C

PMC Compliance
- Two single or one double PMC module
- 32-bit/33MHz PCI V3.0 compatible interface
- INTA/INTB/INTC/INTD supported
- Software programmable interrupt/disable per PMC module
- P4 connector for rear I/O
- Optional ANSI/VITA 20 compliant conduction-cooling ribs
- 3.3 V PCI signaling

Software Support
- APIS platform support for OS-9
- Support for other operating systems on request

Block Diagram

Ordering Information