

(VXI top shield included, but not shown in picture)

VX407C Intelligent PXI/cPCI Carrier

The VX407C is an intelligent VXI carrier that allows PXI and cPCI modules to be used in VXI systems. The carrier supports two 3U PXI or cPCI modules or one 6U PXI or cPCI module. It has an on-board PowerPC processor that can perform command translation, data analysis, and many other data processing or process control functions.

Overview:

The VX407C is powered by a highly integrated PowerPC® 8245 micro-processor with a PowerPC 603e core, a built-in peripheral interface interconnect (PCI) interface, and an advanced memory controller. Dual-ported shared memory and a complete register and interrupt-based interface allows fast VXI communication with the PowerPC application software.

The carrier supports both VXI register-based and word serial modes of operation. Attached cPCI/PXI modules can be directly accessed from VXI and the PowerPC.

The electrical and mechanical interface allows cPCI or PXI modules to be easily integrated into a VXI system. Modules mount with front panels flush with other VXI modules in the system. Single, double, and triple wide cPCI/PXI modules are supported.

In addition to cPCI/PXI support, the carrier provides one PMC position that allows additional functionality to be added, such as mass storage or communication interfaces. A mating connector is provided for I/O access. For a complete listing of available PMC modules, see www.mezzanines.org.

Relay driver logic allows special control hardware to be easily added to the overall integrated system.

Ordering Information

Part Number	
Single-wide	11028560-0001
Double-wide	11028560-0002
Triple-wide	11028560-0003

Additional Information

User Manuals for C&H carriers and this module can be found on our website at www.chtech.com.

VXibus Compliance

Complies with ANSI/IEEE Std. 1014-1987, IEC821, and VXibus Rev. 1.4 for C-Size VXI Modules

Addressing	A16/24/32
Data	D16/32, slave
Block Transfers	supported
Interrupts	ROAK, prog. levels
TTL Triggers	SYNC protocol

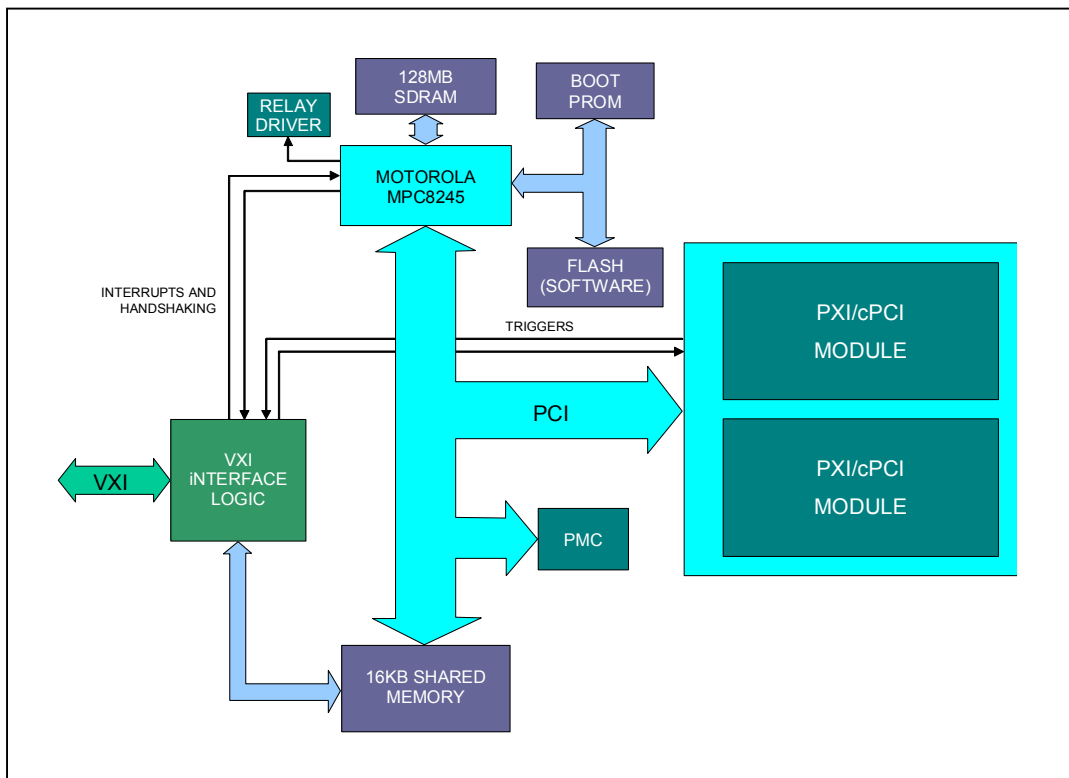
cPCI/PXibus Compliance

Complies with PCI Spec. 2.2 and PXI Spec. 2.0 for cPCI and PXI 3U or 6U modules

Data	32-bit
Speed	33 MHz
Voltage	5V
PXI Triggers	supported

Applications

- Legacy Instrument Replacement
- Data Acquisition and Analysis
- Control Processing



Specifications:

Processor:

- Motorola 300MHz MPC8245
- MPC603e core
- 16KB/16KB L1 Integrated Cache

Local PCI Bus:

- 33MHz 32-bit

Main Memory:

- 128MB SDRAM
- 8MB Flash, VXI programmable
- 64KB Boot ROM, socketed

Shared Memory:

- 16 KB Dual-ported SRAM
- Four 32 deep 32-bit FIFO's
- DMA/Burst support
- Internal arbitration
- Fully accessible by both VXI and PowerPC

cPCI/PXI Interface:

- Support for two 3U modules or one 6U module
- 33MHz 32-bit
- PXI triggers map to VXI TTL triggers
- cPCI/PXI interrupt to PowerPC supported
- On-board PXI CLK10 source

PMC Interface:

- Support for one PMC module
- IEEE P1386.1 32-bit compliant
- 33MHz 32-bit
- PMC I/O connected to 64-pin header

External Relay Control:

- Darlington relay driver, 8-channels
- Controlled by PowerPC
- 50V 500mA (single channel)
- 16-pin header

Interrupts:

- PCI to PowerPC interrupt support
- PowerPC to VXI interrupt level 1-7 (programmable)
- VXI Host to PowerPC interrupt support

Temperature:

Operating:	0°C to 50°C
Storage:	-40°C to 70°C

Software:

Direct Access:

- Direct VXI access of cPCI/PXI modules
- Up to 8K of local PCI address space can be directly mapped to VXI A24 or A32 space

Debugging Interface:

- Common On-Chip Processor (COP)/JTAG
- Standard COP header
- Third-party development tools supported

On-Board System Utilities:

- Boot-up and initialization
- VXI word serial protocol support
- Firmware download to Flash memory via VXI
- PCI bus enumeration

RTOS Support:

Architecture supports common real-time operating systems, such as VxWorks, OS-9, Linux, and others.