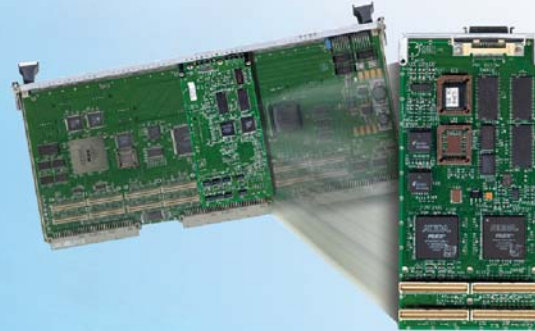


VME MEZZANINE CARRIER WITH ARBITER

ZCA596



The multifunction VME Mezzanine Carrier with Arbitrer (ZCA596) accommodates up to four industry-standard PCI Mezzanine Cards (PMCs) and can perform arbitration for the PMCs. The Carrier dramatically increases the functional density of the System 550 or Avalon System chassis. Now, using 4 PMCs and the onboard arbiter, up to five (5) diverse functions fit the space previously occupied by only one.

KEY FEATURES

- Accepts one to four PMC Modules
- Occupies only a single VME system bus slot, yet accommodates up to 5 diverse functions
- Sustains full onboard PCI bandwidth
- Bridges data between the PMCs and the real-time system bus at full data rates
- Electronically controlled patch panel moves signal streams between PMCs
- Arbitrates between modules and chassis
- Compatible with Base 550 System Chassis (PRO550A, PRO550B) and Avalon System Chassis (AVALON-R)
- Can use in conjunction with 1 or more VME Mezzanine Carrier (ZCM596)

Now, the arbitration function, previously handled on a separate card, has been integrated onto the mezzanine carrier card, reducing the overhead card count by one, allowing greater I/O density in high channel count systems.

PMC modules are defined by the IEEE 1386.1 standard to follow the same electronic design as PCI cards, but in a mezzanine card form factor. One to four 2.9-inch by 5.9-inch (75mm by 150mm) cards attach to the Carrier motherboard as daughter cards and occupy a single 9U VMEbus/MUXbus backplane slot.

The Carrier functions as a bridge between the standard PCI bus, connecting the PMCs to the real-time MUXbus and the VMEbus at full rates. Data can also move between PMCs on the Carrier at full PCI bus rates or with an onboard "electronic patch panel" to move serial data between PMCs.

The VME Mezzanine Carrier also transfers data between the VMEbus and the MUXbus.

Excellence You Can Measure



VME MEZZANINE CARRIER WITH ARBITER

ZCA596 SPECIFICATIONS

Inputs See individual PMC data sheets

Outputs See individual PMC data sheets

PMC Carrier

| | |
|------------------------------|---|
| Mechanical I/F Spec | IEEE1386.1 |
| Electrical Spec | IEEE1386 (PCI) |
| Address/Data | A32/D32/D64, PMC PN1, PN2, PN3, PN4 connectors |
| PCI Bus Clock | 33 MHz |
| Signaling | 5V |
| Power | +3.3V, +5V, ±12V, 7.5 W max. per PMC |
| Quantity | 1, 2, 3, or 4 PMC modules |
| PMC Slot Module Types | Single-wide or double-wide |
| Inter-PMC Link | .8 programmable serial lines to route outputs from one PMC to another |
| Maximum Aggregate Throughput | .8 million samples per second (sustained) |

Program Setup and Control

PMCsSee individual data sheets

General Requirements

| | |
|------------------------------|--|
| System 550 or Avalon Chassis | .1 9U slot |
| Mezzanines | .1 to 4 PMCs |
| Maximum per Chassis | .1 |
| Maximum per System | Virtually unlimited |
| Rear Panel | .0 slots; see individual PMC module data sheets for requirements |
| Power | .5V @ 3.0 A for Carrier card; see individual PMC module data sheets for requirements |
| Environment | .See Base 550 System Chassis (PRO550A, PRO550B) and Avalon System Chassis (AVALON-R) data sheets |
| Temperature Monitoring | .Onboard 10-bit probe* |
| Dimensions | .365mm (9U) x 160mm (Eurocard std.) |
| Status Display | .8-character display |

MUXbus Arbiter

| | |
|--------------|--|
| Functions | .Arbitrates for MUXbus between requesters; controls MUXbus transactions; generates Hardware Update cycles on request; generates MUXbus clocks |
| Speed | .16 MHz |
| Position | .1 Arbiter card slot in System 550 or Avalon chassis |
| Max. Latency | .1.1 µsec from request to access |
| Inputs | .16 single cycle requests, 1 per slot; 16 multiple cycle requests, 1 per slot; 1 Hardware Update cycle request |
| Outputs | .16 MUXbus output enables, 1 per slot; 1 MUXbus input clock, 16 MHz (MXCLK); 1 16-MHz general-purpose clock; 1 32-MHz general-purpose clock; 1 MUXbus Data Valid clock (MXDAV); 1 Hardware Update Enable (MXDIS); 1 Hardware Update clock (MXWR) |

MUXbus Analyzer Function

| | |
|----------------|---|
| Buffer | .4 k deep x 72 bits; 32 bits of data; 16 bits of tag; 14 bits of time; 4 bits of source; 1 bit of trigger event; 1 bit of FIFO Empty Flag; 1 bit of FIFO Full Flag; bits unused |
| Speed | .16-MHz capture rate |
| Trigger Events | .One, several, or all tags; one or more contiguous data word matches |
| Trigger Point | .Location 1 to 1024 in buffer |
| Capture Events | .One, several, or all tags |

Compatibility

Base 550 System Chassis (PRO550A, PRO550B)
Avalon System Chassis (AVALON-R)
SWA500 Applications Software
VISTA Software

Ordering Information

ZCA596VME Mezzanine Carrier with Arbiter (4 PMC Slots)

**Factory Quote*

Telemetry-West

9020 Balboa Avenue
San Diego, CA 92123-3507
858.694.7500 800.351.8483
Fax: 858.279.0693
www.L-3Com.com/TW



Telemetry & RF Products