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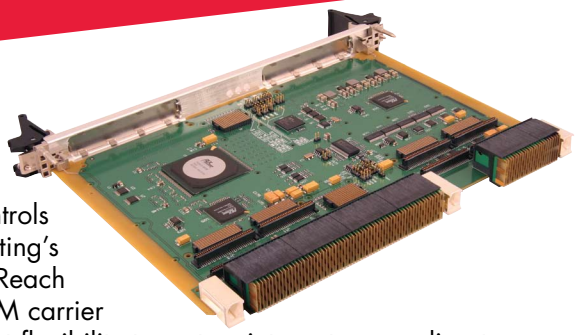
Find the *Curtiss-Wright VPX6-215-A01A000* at our website: *Click HERE*



Fact Sheet

VPX6-215

6U VPX/VPX-REDI ExpressReach PMC/XMC & IPM Carrier Card



- Provides flexible PMC, XMC, and Interface Personality Modules (IPMs) expansion capability
- PCI Express® (PCIe) backplane interface to VPX host processor cards such as Curtiss-Wright Controls' VPX6-185 and CHAMP-AV6
- Provides two PMC/XMC sites and one IPM site
- Each PMC/XMC site provides 8-lane PCIe link on Pn5 connector
- Each PMC/XMC site provides parallel PCI-X on traditional PMC connectors
- Each PMC/XMC site provides 64 I/O lines on Pn4 connector and 24 I/O lines on Pn6
- IPM site supports IPM PCI features (i.e., MIL-STD-1553, Serial ATA, SCSI…,)
- Four PCIe links to backplane on VPX P1 core fabric connector
- User-selectable choice of active backplane PCIe link
- 6U VPX (.8" pitch) and VPX-REDI (.85" pitch) formats
- Line Replaceable Module (LRM) capable

Curtiss-Wright Controls Embedded Computing's VPX6-215 ExpressReach PMC/XMC and IPM carrier card provides great flexibility to system integrators needing to expand their VPX-based systems' I/O complement via standard PMC modules and/or XMC modules. A direct PCIe connection over the VPX backplane allows host processors access to a high-performance, low latency native PCIe interface to the VPX6-215 carrier card. To a host processor, PMC and XMC modules on the VPX6-215 appear as if they were on the host processor. A standard 4-lane PCIe interface provides a nominal data rate of 1GB in each direction.

The PMC/XMC sites of the VPX6-215 provide tremendous flexibility in the range of modules supported – from the latest generation high-performance XMC utilizing 8-lane PCIe links to older generation standard PMCs - including those that use 5V signaling.

The Interface Personality Module (IPM) site of the VPX6-215 further extends the I/O expansion capability of the VPX6-215. Any of the IPM functions provided by PCI devices can be supported on the VPX6-215. This includes dual MIL-STD-1553 channels, Serial ATA (SATA), and SCSI options.

The VPX6-215 is offered in a range of ruggedization levels including air-cooled and conduction-cooled on a .8" pitch and a .85" pitch LRM capable version with top and bottom covers.

Learn More
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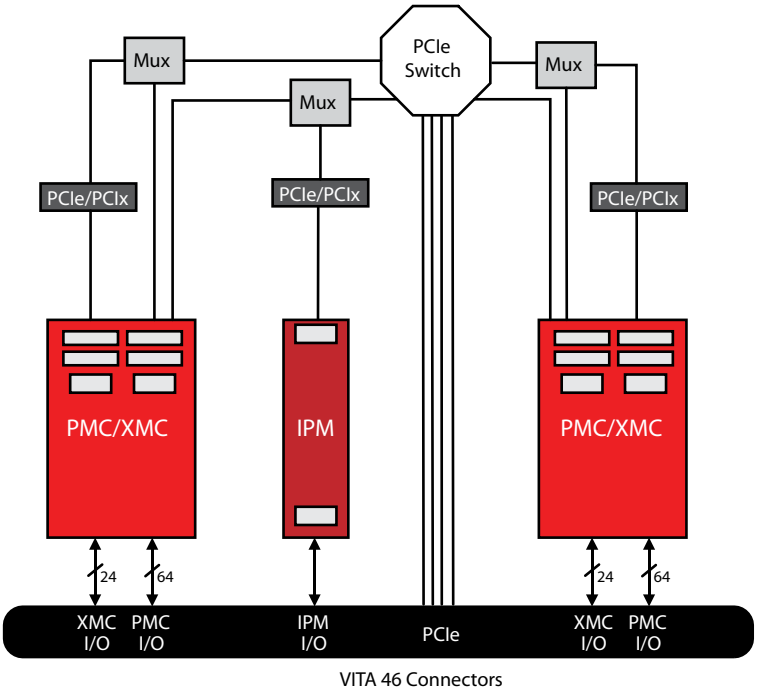
Fact Sheet

VPX6-215

Features

- Backplane Fabric Interface
  - Four 4-lane PCIe links to the VITA 46 P1 connector (A, B, C, D)
  - Choice of which backplane PCIe port is the upstream port is user selectable
  - User can select backplane ports A and B to function as a single 8-lane PCIe upstream port
  - User can select backplane ports C and D to function as a single 8-lane PCIe upstream port (note – there can be only one active upstream port)
- XMC/PMC site #1:
  - Supports PCI-X at 66MHz and PCI at 33MHz, 64-bit
  - 8-lane PCIe interface to P15
  - 5V tolerant with respect to PMC connectors
  - Supports 64-bits of PMC I/O including differential routing to backplane per pattern "P64s" of VITA 46.9
  - Supports 24-bits (12 pairs) of XMC I/O to backplane per pattern "X12d" of VITA 46.9
  - PCI-X interface is served by a 4-lane PCIe port on the central PCIe switch through a PCIe-to-PCI bridge
  - Only one of the PCIe and PCI-X interfaces can be active at any one time – the active interface is determined automatically depending on whether an XMC or PMC is installed
- XMC/PMC site #2:
  - Supports PCI-X at 66 or 133MHz, and PCI at 33MHz, 64-bit
  - 8-lane PCIe interface to P25
  - NOT 5V tolerant with respect to the PMC connectors
  - Supports 64-bits of PMC I/O including differential routing to backplane per pattern "P64s" of VITA 46.9
  - Supports 12 pairs of XMC I/O to backplane per pattern "X12d" of VITA 46.9
  - PCI-X interface is served by a 4-lane PCIe port on the central PCIe switch through a PCIe-to-PCI bridge
  - Only one of the PCIe and PCI-X interfaces can be active at any one time – the active interface is determined automatically depending on whether an XMC or PMC is installed
- IPM Site
  - Supports PCI-based functionality of the SCSI, 1553, and SATA IPM (i.e., no discretes or IPM serial ports)
  - Backplane I/O mapping for the features supported is the same as the VPX6-185
  - When an IPM is installed, the maximum PCIe link width for XMC #1 is 4-lanes
- Utility Features
  - The VPX6-215 drives the MRSTI# signal to each XMC for duration greater than 10msec from the time on-board power is stabilized in accordance with the VITA 42.0 specification
  - User selectable option to drive the VITA 46 SYSRESET* signal for a minimum of 10msec in response to an XMC reset from either XMC or a local VPX6-215 power-on reset
- Front Panel Indicator Provisions
  - A red Fail LED is provided that can be set by the I2C bus, the default state is OFF
  - A green LED is provided that goes on when all onboard power supplies are within specification
- Power Requirements
  - The VPX6-215 itself requires only 5V and 3.3Vaux
  - +12aux and -12aux are routed to the PMC/XMC sites
  - A user-configurable jumper option is provided to route either backplane 5V or 12V to the XMC VPWR power input pins for system design flexibility
- Mechanical Format Options
  - 6U VPX (VITA 46), .8" pitch, air-cooled, temperature range 0 (0 to 50°C) – with 1" pitch front panel for compatibility with common VITA 46/48 development chassis
  - +6U VPX (VITA 46), .8" pitch, air-cooled, temperature range 1 (-40 to 71°C)
  - 6U VPX (VITA 46), .8" pitch, conduction-cooled, temperature range 2 (-40 to 85°C)
  - 6U VPX-REDI (VITA 48), .85" pitch, conduction-cooled with covers to support LRM use, compatible with either .85" or 1" slot pitch, temperature range 2 (-40 to 85°C)
- Supporting Items
  - The VPX6-215 uses the same Rear Transition Module and cabling items as the VPX6-185 SBC
  - Separately saleable .8" and 1.0" front panel kits available
- Other features
  - Circuit card assembly is done to class 3 standards of IPC-A-610C, Acceptability of Electronic Assemblies
  - Standard conformal coating is acrylic
  - PWB meets UL 94 V-0 flammability rating

Figure 1: VPX6-215 Block Diagram



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