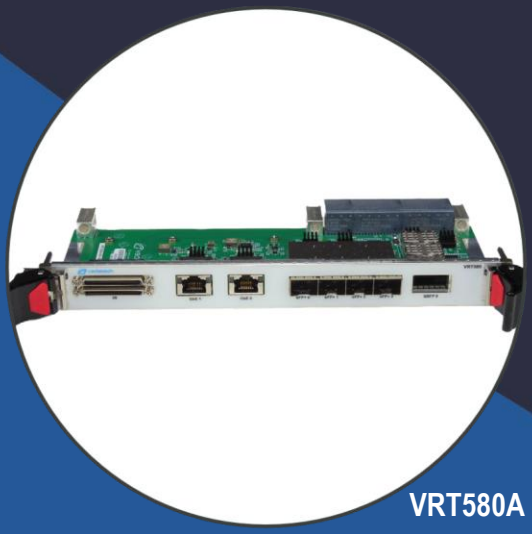
# VRT580A

## Rear I/O for VPX580, VPX RTM



VRT580A

## Key Features

- 6U RTM per VITA 46 for I/O Expansion
- QSFP+
- Quad SFP+ ports
- Dual GbE
- 16 LVDS and 21 single ended

## Benefits

- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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# VRT580A

The VRT580A is a 6U VPX Rear Transition Module providing I/O expansion for use with the VadaTech VPX580 6U VPX FPGA FMC Carrier.

VRT580A routes 16 LVDS input/output to a High-Density Connector (HDC), each I/O can be configured as input or output. In addition, 21 singled-ended (SE) I/O are routed to the HDC.

The Module provide dual GbE via RJ-45, a single QSFP+ port and quad SFP+.

*Figure 1: VRT580A*

## Front Panel

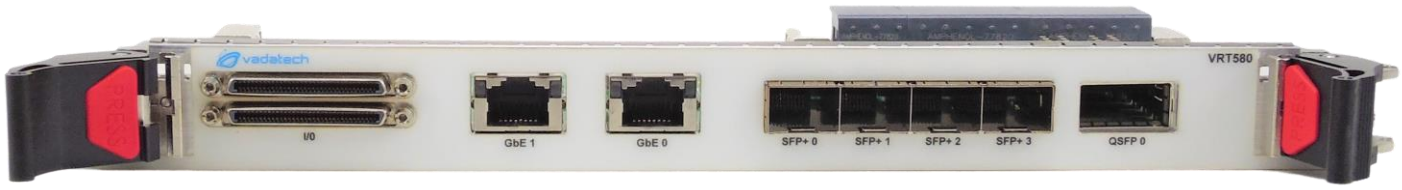


*Figure 2: VRT580A Front Panel View*

# Block Diagram

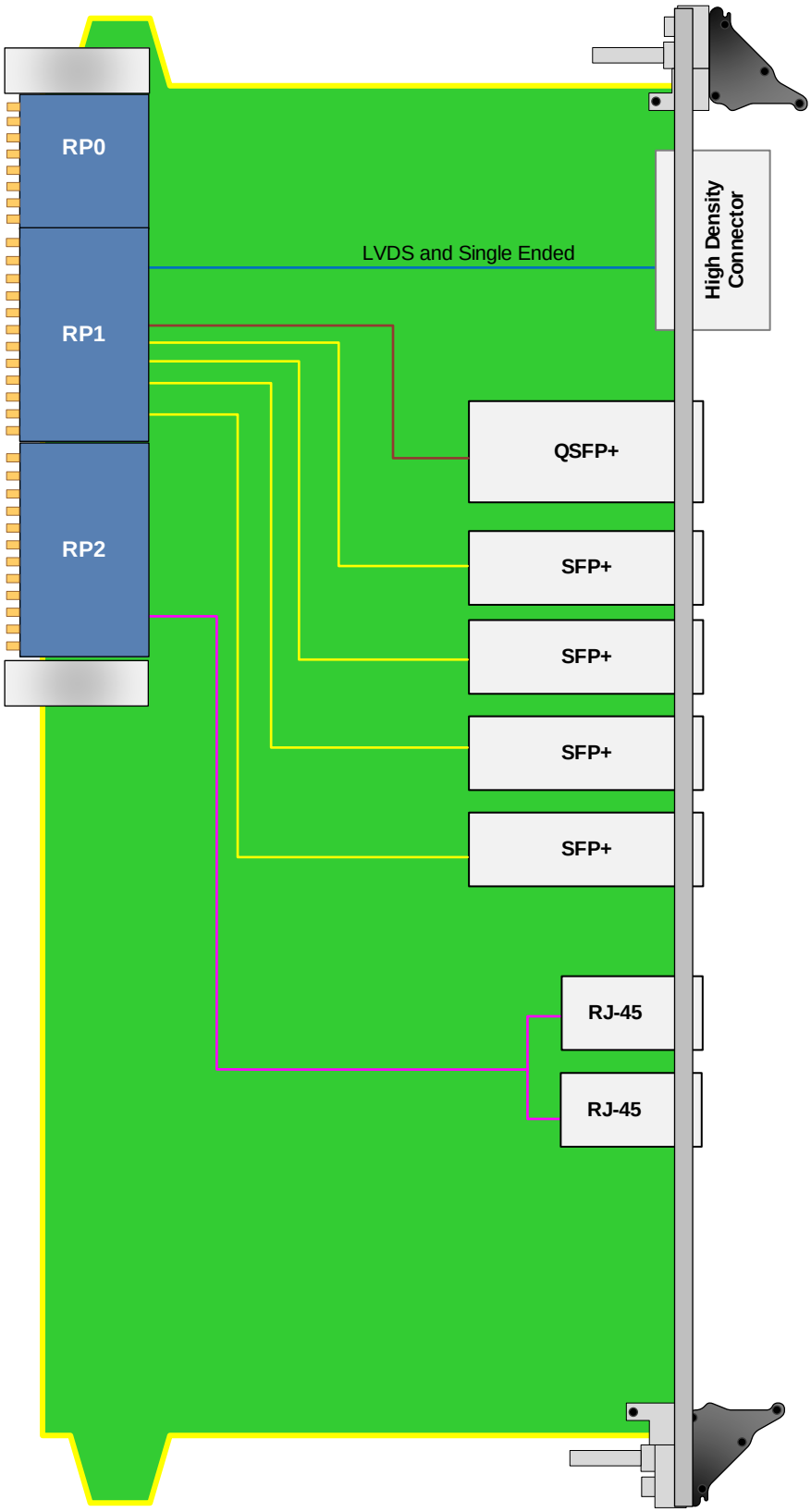


*Figure 3: VRT580A Functional Block Diagram*

# Specifications

| | | |
|---|---|---|
| **Architecture** | | |
| **Physical** | **Dimensions** | 6U RTM, 1” pitch |
| **Configuration** | | |
| **Power** | **VRT580A** | 6W |
| **Rear Panel** | **Connectors** | Single QSFP+ and Quad SFP+ ports |
| | | RJ-45 for 1000BASE-TX |
| | | LVDS and Singled Ended via HDC |
| **VPX Interfaces** | **Slot Profiles** | See Ordering Options |
| | **Backplane** | RP0: Power |
| | | RP1: QSFP+ and SFP+ ports |
| | | RP1: LVDS and single ended I/O |
| | | RP2: I/O |
| | | RP2: GbE |
| **Other** | | |
| **MTBF** | MIL Hand book 217-F@ TBD hrs | |
| **Certifications** | Designed to meet FCC, CE and UL certifications, where applicable | |
| **Standards** | VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards | |
| **Warranty** | Two (2) years, see VadaTech Terms and Conditions | |

**INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS**

VadaTech has a full ecosystem of OpenVPX, ATCA and MTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTMs), Power Modules, and more. The company also offers integration services as well as pre-configured Application-Ready Platforms. Please contact VadaTech Sales for more information.

# Ordering Options

## VRT580A – AB0-000-GHJ

| A = QSFP+ Transceiver | G = Applicable Slot Profiles |
|---|---|
| 0 = None<br>1 = 40G-SR<br>2 = 40G-LR<br>3 = 40G WDM (SR)<br>4 = Reserved | 0 = 5 HP |
| **B = SFP+ Transceivers *** | **H = Environmental** |
| 0 = None<br>1 = 10Base-SR<br>2 = 10Base-LR<br>3 = 10GBase Copper | See Environmental Specification |
| | **J = Conformal Coating** |
| | 0 = No coating<br>1 = Humiseal 1A33 Polyurethane<br>2 = Humiseal 1B31 Acrylic |

*Quantity four is shipped

## Environmental Specification

| | Air Cooled | | Conduction Cooled | | |
|---|---|---|---|---|---|
| **Option H** | **H = 0** | **H = 1** | **H = 2** | **H = 3** | **H = 4** |
| **Operating Temperature** | AC1* (0°C to +55°C) | AC3* (-40°C to +70°C) | CC1* (0°C to +55°C) | CC3* (-40°C to +70°C) | CC4* (-40°C to +85°C) |
| **Storage Temperature** | C1* (-40°C to +85°C) | C3* (-50°C to +100°C) | C1* (-40°C to +85°C) | C3* (-50°C to +100°C) | C3* (-50°C to +100°C) |
| **Operating Vibration** | V2* (0.04 g2/Hz max) | V2* (0.04 g2/Hz max) | V3* (0.1 g2/Hz max) | V3* (0.1 g2/Hz max) | V3 (0.1 g2/Hz max) |
| **Storage Vibration** | OS1* (20g) | OS1* (20g) | OS2* (40g) | OS2* (40g) | OS2* (40g) |
| **Humidity** | 95% non-condensing | 95% non-condensing | 95% non-condensing | 95% non-condensing | 95% non-condensing |

Notes: *Nomenclature per ANSI/VITA 47. Contact local sales office for conduction cooled (H = 2, 3, 4)

# Related Products

VPX580

- Xilinx UltraScale+ XCZU15EG FPGA
- 8 GB of 64-bit wide DDR4 Memory (single bank) with ECC
- MPSoC with block RAM and UltraRAM

VPX599

- Xilinx Kintex UltraScale™ XCKU115 FPGA
- Dual ADC 12-bit @ 6.4 GSPS
- Dual DAC 16-bit @ 12 GSPS (AD9162 or AD9164)

VTX870

- Open VPX benchtop development platform
- Dedicated Switch/management slot
- Up to five 3U VPX payload slots

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