

## 3U VPX™ Multi-Channel Serial Communications Board

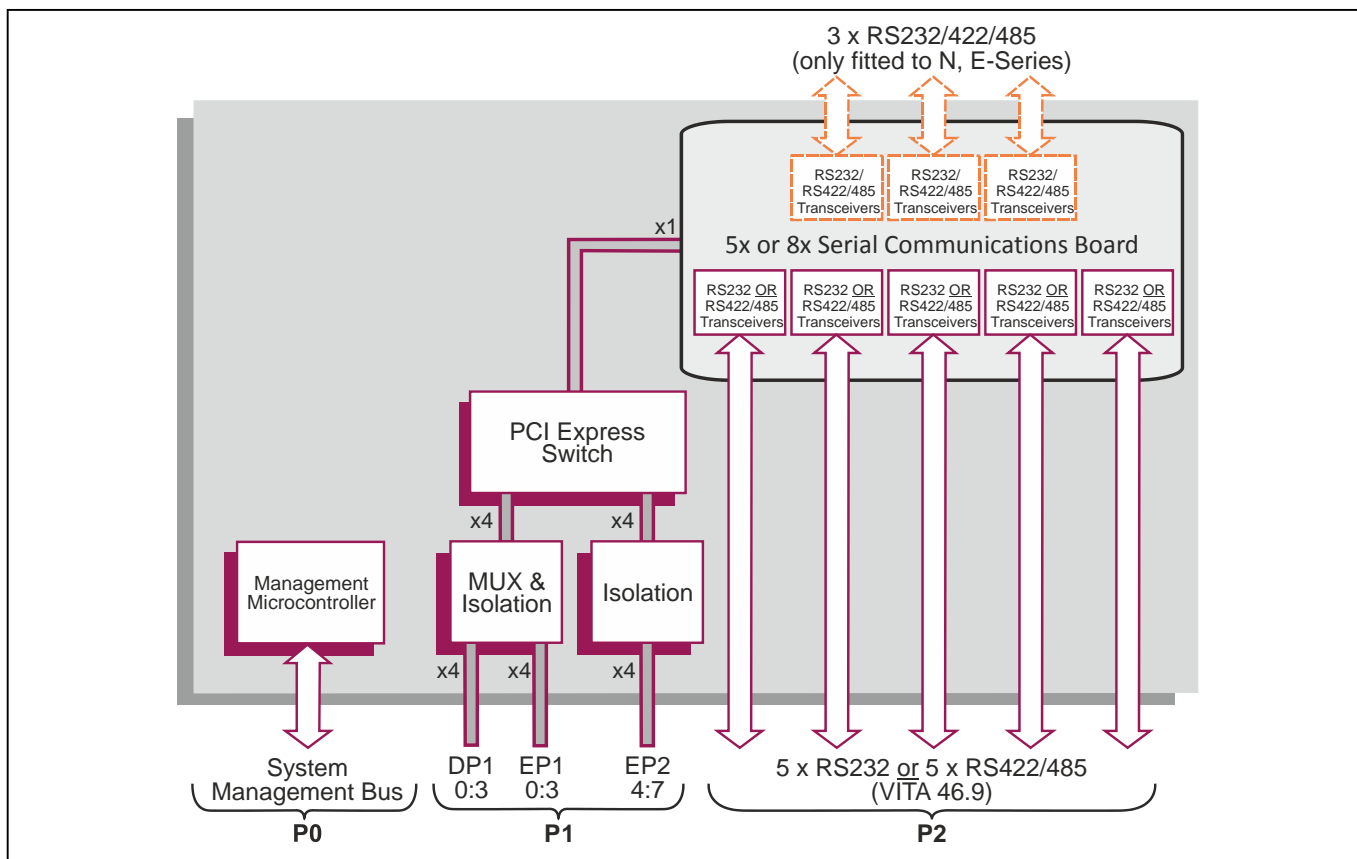
### Key Features

BA 2TR/501 is a 3U VPX™ board supporting up to eight serial communications ports for applications that require multiple serial ports within a single slot.

- Up to 5 x RS232 ports or 5 x RS422/485 ports on VPX connector
- Front panel supports up to 3 x RS232/RS422/485 ports
- PCI Express® connectivity supporting a variety of VPX backplane profiles
- Air-cooled and conduction-cooled variants available



Air-cooled variant: 8 x Serial Communication Ports



## VPX Multi-Channel Serial Coms Board

- 3U VPX™ serial communications board supports up to eight serial channel ports (factory build options), either:
  - 3 x RS232/422/485 ports via front panel
  - 5 x RS232 ports or 5 x RS422/485 ports via P2
- supports I/O map via P2 connector as per VITA 46.9
- optional Rear Transition Module (RTM)
- compatible with OpenVPX™ (VITA 65) profiles:
  - BKP3-CEN06-15.2.2-3
  - SLT3-PAY-1F2F2U
- single VPX slot (VITA 42.0)
- air-cooled or rugged conduction-cooled variants

## Front I/O Option: 3 x RS232/422/485 Ports

- 3 x RS232/422/485 ports via three 9-way micro D-type connectors on the front panel supports:
  - TXD, RXD, CTS, RTS, DCD, DSR, DTR and RI (RS232 mode)
  - TXD and RXD (RS422/485 mode)
  - an on-board user switch selects between the RS232 and the RS422/485 transceivers
- only available with air-cooled variants:
  - with choice of P2 Rear I/O Option 1 or Option 2

## P2 Rear I/O Option 1: 5 x RS232 Ports

- build option for 5 x RS232 ports via P2, supporting:
  - TXD, RXD, CTS, RTS, DCD, DSR, DTR
- available with air or conduction-cooled variants:

## P2 Rear I/O Option 2: 5 x RS422/485 Ports

- build option for 5 x RS422/485 ports via P2, supporting:
  - TXD, RXD, CTS, RTS, DCD, DSR, DTR
- RS485 mode supports:
  - simplex or duplex bus
  - selectable RXD resistor termination
  - master/slave selection accessible via software
  - channel flow control selectable by DTR or RTS
- available with air or conduction-cooled variants:

## VPX Backplane Interface

- P0, P1 and P2 support OpenVPX configuration
- configurable PCI Express fabric interface supports:
  - x4 PCIe port to either Data Plane 1 (DP1) or Expansion Plane 1 (EP1) (also called Data Plane 2 on some profiles)
  - x4 PCIe port to Expansion Plane 2 (EP2)
  - PCIe Gen 1, Gen 2 and Gen 3
  - port isolation from PCIe Switch
  - upstream or downstream ports
- for advanced PCIe configurations use VPX PCIe Switch Configuration software (SW VSC/001)

## Electrical Specification

- typical current consumption:
  - +5V VS3 @ 0.8A, voltage +5% / -2.5%
  - +3.3V VS2 @ 0.4A, voltage +5% / -2%
  - +3.3V AUX @ 0.12A, voltage +5% / -5%
- 5 x serial communication interfaces adds a maximum of 0.3A @ +5V VPWR, voltage +5% / -5%

## N, E-Series Environmental Specification

- air-cooled board variants
- operating temperatures:
  - VITA 47 Class AC1, 0°C to +55°C (N-Series)
  - -25°C to +70°C (E-Series)
- non-operating temperature:
  - VITA 47 Class C1, -40°C to +85°C
- operating altitude:
  - 0 to 15,000 feet (0 to 4,572 meters)
- relative humidity:
  - 5% to 95%, non-condensing

## RCx-Series Environmental Specification

- conduction-cooled board variants (VITA 48.2)
- conformally coated
- operating temperature at card edge:
  - VITA 47 Class CC4, -40°C to +85°C
- non-operating temperature:
  - VITA 47 Class C4, -55°C to +105°C
- operating altitude:
  - -1,000 to 50,000 feet (-305 to 15,240 meters)
- relative humidity:
  - 5% to 95%, non-condensing

## VPX Mechanical Specification

- 3U VPX form-factor (VITA 46.0, VITA 48.0)
- 3.9 inches x 6.3 inches (100mm x 160mm)
- connectors to VITA 46.0 for P0, P1 and P2

## N, E-Series Mechanical Specification

- air-cooled slot width 1.0-inch:
- IEEE 1101.10 as per VITA 46.0
- operating mechanical:
  - shock - VITA 47 Class OS1, 20g
  - random vibration - 0.002g<sup>2</sup>/Hz

## RCx-Series Mechanical Specification

- conduction-cooled slot widths (VITA 48.0):
  - 0.8 inches VPX-REDI Type 2, RCT-Series
  - 0.85 inches VPX-REDI Type 1, RCS-Series, Type 1 Two Level Maintenance (VITA 48.2)
- operating mechanical:
  - shock - VITA 47 Class OS2, 40g
  - random vibration - VITA 47 Class V3, 0.1g<sup>2</sup>/Hz

## Software

- support for Linux®, VxWorks® and Windows®

## System Management

- Tier 2 IPMC via SM0-1 and SM2-3:
  - board temperature and voltage monitor accessed via system management

## Safety

- PCB (PWB) manufactured with flammability rating of UL94V-0

## Compatible VPX System Processor Board

- 3U VPX Intel® processor based board examples:
  - TR C4x/msd board (System on Chip based on Intel® Xeon® Processor D-1500)
  - TR G4x/msd board (System on Chip based on Intel® Xeon® Processor D-1500)
  - TR E5x/msd board (6<sup>th</sup> generation Intel® Core™ Processor)
- contact your local sales office for the latest range of boards supported
- supported operating systems depend on the processor board used

