

EXC-4500ccVPX

The EXC-4500ccVPX is part of the 4000 family of multiprotocol carrier boards. This conduction cooled VPX interface board has a PCI Express host interface and can support up to four independent modules: three onboard modules and one removable module. The onboard modules include one MIL-STD-1553 interface module, one Serial (RS422/RS485/RS232) interface module and one Discrete interface module. The removable module can be any of the 4000 family modules.

The EXC-4500ccVPX supports Direct Memory Access (DMA), which enables the board to access system memory for reading and writing independently of the computer's CPU. This results in faster data transfer to and from the board, with much less CPU overhead than when not using DMA.

General Features

- ◆ Supported Protocols:
 - ARINC 429/575 (5 or 10 ch.)
 - ARINC 708/453 (2 ch.)
 - MIL-STD-1553 (single function or multifunction)
 - MIL-STD-1760
 - Discrete I/O (20 ch. per module)
 - Serial RS485/RS422/RS232 (2 or 4 ch. per mod.)
 - CAN (2, 4, or 6 ch.)
 - MMSI
- ◆ Meets ANSI/VITA 46.0 VPX baseline specifications with PCI Express host implementation (ANSI/VITA 46.4)
- ◆ Meets ANSI/VITA 48.2 conduction cooled mechanical specifications (Type 1, 1 in. plug-in thickness)
- ◆ 16-bit Count Down Timer
 - 1–65,635 μ s resolution
 - Interrupt or global reset upon count down



IRIG B Time Code Input

- ◆ Carrier wave:
 - 1KHz Amplitude modulated sine wave
- ◆ Rate Designation: 100 peaks per second
- ◆ Modulation ratio: 3:1
- ◆ Input Amplitude: 0.8–3.5 Vpp (3 Vpp Typ)
- ◆ Coded Expressions supported:
 - BCD time-of-year code word
 - Control functions
 - Straight Binary Seconds (SBS) time-of-day
- ◆ Application:
 - Synchronization of Time Tags, display and IRIG B time

Physical Characteristics

- ◆ Dimensions: Standard 3U size (160 mm x 100 mm not including connectors)
- ◆ Weight: 230 g (without removable module)

Operation Environment

- ◆ Temperature: -40° to +85°C
- ◆ Humidity: 5%–90% noncondensing

Host Interface

- ◆ PCI Express compliance: x1 lane PCIe v1.1
- ◆ Memory space occupied:
 - 512 Kbytes (128K per module)
- ◆ Interrupts: INTA# virtual wire
- ◆ Power: Depends on configuration. For more details, see the user's manual.

Software Support

- ◆ C drivers with source code
- ◆ Menu driven software for most of the supported protocols
- ◆ *Exalt Plus*: Excalibur Analysis Laboratory Tools for Windows 32/64-bit (optional)
- ◆ Additional software may be available on our website

Ordering Information

- ◆ **EXC-4500ccVPX/xx**
Multi-protocol conduction cooled interface board for VPX compatible systems

Note: Replace "xx" with the carrier board modules ordered. Use the module code specified in the *Module Ordering Information* on our website, or in the *User's Manual* of the board.

- ◆ Additional Options:
 - 001 With conformal coating



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These specifications are subject to change without notification

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