

# EXC-8000ccVPX

The EXC-8000ccVPX is part of Excalibur's 8000 family of multiprotocol carrier boards. This conduction cooled VPX interface board has a PCI Express host interface and can support up to four removable modules and an onboard Discrete module. Each removable module can be any of the 8000 family modules.

The EXC-8000ccVPX 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 modules that support DMA, with much less CPU overhead than when not using DMA.

## General Features

- ◆ Supported protocols (up to 4 removable modules):
  - ARINC 429/575 (5 ch. per module)
  - ARINC 708/453 (2 ch. per module)
  - MIL-STD-1553 (1 ch. per module, single or multifunction)
  - MIL-STD-1760 (1 ch. per module, single or multifunction)
  - Discrete I/O (10 ch. per module)
  - Serial RS-232/485/422 (2 ch. per module)
  - ARINC 825 (CAN) (5 ch. per module)
  - ARINC 717 (2 ch. per module)
  - MMSI/AS5652 (5 ch. per module)
  - H009 (1 ch. per double-sized module)
  - A/D and D/A (5 differential ch. per module)
- ◆ Meets ANSI/VITA 65.0/46.0 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 with 1–65,635  $\mu$ s resolution and Interrupt or global reset upon count down
- ◆ Ruggedized option

## IRIG B Time Code Input

- ◆ Standard IRIG B120 Serial Time Code
- ◆ 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: 232 g (without modules)

## Operating Environment

- ◆ Operating Temperature: -40°C to +85°C
- ◆ Storage Temperature: -50°C to +125°C
- ◆ Humidity: 5%–90% noncondensing
- ◆ MTBF: 178,600 hours at 25°C, G<sub>F</sub>, S217F



## Host Interface

- ◆ PCI Express compliance: x1 lane PCIe v1.1
  - ◆ Compatible with VITA 65 Peripheral Slot profile: SLT3 PER-1U-14.3.3 (x1 PCIe)
  - ◆ Also compatible with:
    - SLT3-PER-1F-14.3.2 (x4 PCIe)
    - SLT3-PER-2F-14.3.1 (x8 PCIe)
    - SLT3-PER-1Q-14.3.4 (x16 PCIe)
  - ◆ Memory space occupied: 64 MB
  - ◆ Power: +12V @ 150mA (without modules)
- Note:** There is an option for legacy power (+5V/+3V supply).

## Software Support

- ◆ *Excalibur Carrier Board Software Tools:*
  - Intuitive and flexible API with source code
  - Compatible with 32/64-bit Windows 7/8/10/11 & Linux kernel 3.x/4.x/5.x
  - Includes application interface for NI LabView & CVI
- ◆ *Exalt Plus:* Excalibur Analysis Laboratory Tools for Windows (optional)
- ◆ GUI driven software for many of our supported protocols

## Ordering Information

- ◆ **EXC-8000ccVPX/xx** Multi-protocol interface board for VPX systems. Replace "xx" with module codes. See **Ordering Information** in the board's user's manual.
- ◆ Additional Options:
  - 001 With conformal coating
  - R Ruggedized option (bonded components)

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These specifications are subject to change without notification