

# EXC-8000PCIe104

The EXC-8000PCIe104 is part of Excalibur's 8000 family of multiprotocol carrier boards. This PCI/104-Express interface board is suitable for embedded and testing applications and supports up to four removable modules and 10 onboard Discrete channels. Each removable module can be any of the 8000 family modules.

The EXC-8000PCIe104 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 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 ports per module)
  - H009 (1 ch. per double-sized module)
  - A/D and D/A (5 differential ch. per module)
- ◆ PCI/104-Express Stackable up/down Bus Structure
- ◆ Includes a stackthrough PC/104-Plus connector
- ◆ 16-bit Count Down Timer
  - 1–65,635  $\mu$ s resolution
  - Interrupt or global reset upon count down
- ◆ Ruggedized and extended temperature options

## IRIG B Time Code Input

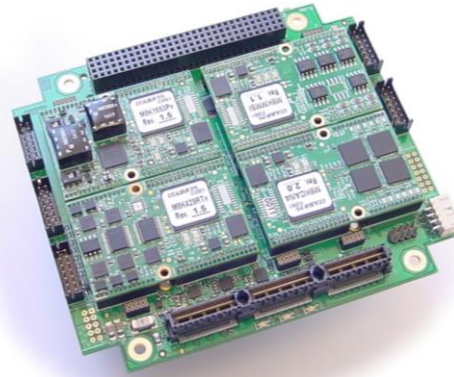
- ◆ Standard IRIG B120 Serial Time Code
- ◆ Carrier wave:
  - 1KHz Amplitude modulated sine wave
- ◆ Rate Designation: 100 peaks per second
- ◆ Modulation ratio: 3:1
- ◆ Input Amplitude: 0.8–3.5 Vpp (3 Vpp Typ)
- ◆ Coded Expressions supported:
  - BCD time-of-year code word
  - Control functions
  - Straight Binary Seconds (SBS)
  - time-of-day
- ◆ Application:
  - Synchronization of Time Tags, display and IRIG B time

## Physical Characteristics

- ◆ Dimensions: 110.5mm x 95.88mm
- ◆ Weight: 95 g (without removable modules)

## Operating Environment

- ◆ Temperature: 0°–70°C standard temperature  
-40° to +85°C extended temperature (optional)
- ◆ Humidity: 5%–90% noncondensing
- ◆ MTBF: 204,500 hours at 25°C, G<sub>F</sub>, S217F



## Host Interface

- ◆ PCI Express compliance: x1 Lane PCIe v1.1
- ◆ Memory space occupied: 64 MB
- ◆ Interrupts: INTA# virtual wire
- ◆ Power: Depends on configuration. For more details, see the user's manual.

## Software Support

- ◆ *Excalibur Carrier Board Family 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-8000PCIe104/xx**  
Multi-protocol interface board for PCI/104-Express compatible systems

**Note:** Replace "xx" with module codes. See **Ordering Information** in the board's user's manual.

- ◆ Additional Options:
  - E Extended temperature option
  - R Ruggedized option
  - 001 With conformal coating

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These specifications are subject to change without notification