EXC-1553mPCIe/P1

The EXC-1553mPCIe/P1 is an intelligent, single-channel, memory-mapped MIL-STD-1553 interface card. It complies with the PCI Express™ Mini Card standard. The card's small size and suitability for Mini Card compatible computers make it a complete solution for developing, testing, integrating 1553 interfaces and for performing system simulation of the MIL-STD-1553 bus, both in the lab and in the field.
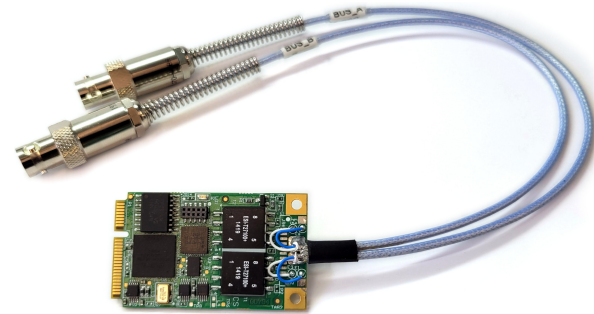
The EXC-1553MPCIe/P1S is a single function version of the card with a single RT and no error injection.

General Features

♦ Dual redundant MIL-STD-1553A/B channel
♦ MIL-STD-1760 Option
♦ Real-time operation
♦ 32-bit Time Tag
♦ Programmable Time Tag resolution (RT & MON)
♦ Transformer or Direct Bus Coupling
♦ Programmable Interrupts
♦ Time Tag can be read in real-time
♦ 10 pin 1.27mm pitch connector with crimp type mating connector
♦ Hard-wired cable connection

Channel Specifications

♦ 64K x 8 dual-port RAM
♦ Independent MIL-STD-1553 dual-redundant channel
♦ Operates as RT, BC/Concurrent-RT or Triggerable Bus Monitor
♦ Internal Concurrent Monitor (RT and BC/RT modes)
♦ Both 1553A and 1553B protocol capability
♦ Multiple-RT simulation (up to 32 RTs)
♦ Multibuffering of data (RT)
♦ Major/Minor frames (BC)
♦ Asynchronous frames (BC)
♦ Automatic retry (BC)
♦ Programmable broadcast mode
♦ Multi-mode triggerable Monitor
♦ Extensive interrupt features
♦ Service Request Processing
♦ Loopback mode (Bus A to Bus B) enables complete built-in test; plus cable testing
♦ Error injection capabilities:
    Word Count
    Bit Count
    Incorrect sync
    Incorrect RT address
    Incorrect parity
    Non-contiguous data
    Manchester
♦ MIL-STD-1760 Option:
    Checksum error detection
    Checksum error injection
    Header Words

Physical Characteristics

♦ PCI Express Mini Card Electromechanical Specification Rev 1.2
♦ Dimensions: 50.95mm x 30.00mm x 4.85mm
♦ Weight: 7.6g

Operating Environment

♦ Temperature: 0° - 70°C
    -40° to +85°C ext. temp. (optional)
♦ Humidity: 5% to 90% noncondensing
♦ MTBF: 490,200 hours at 25°C, G_F, S217F

Host Interface

♦ PCI Express compliance: x1 lane PCIe
♦ Memory space occupied: 512 KB
♦ Interrupts: INTA# virtual wire
♦ Power (maximum): 3.3V @ 720mA

Software Support

♦ *1553Px Software Tools:* Advanced API with C source code.
  ♦ Compatible with 32/64-bit Windows 7/8/10 & Linux kernel 3.x/4.x/5.x
  ♦ Includes application interface for NI LabView & CVI
♦ *Exalt Plus:* Excalibur Analysis Laboratory Tools for Windows (optional)
♦ Merlin+ Bus Analyzer for Windows

Ordering Information

♦ **EXC-1553mPCIe/P1-R**
    Multifunction, MIL-STD-1553 Mini PCIe Card
♦ **EXC-1553mPCIe/P1S-R**
    Single function, MIL-STD-1553 Mini PCIe Card
♦ **EXC-1553mPCIe/P1M-R**
    Monitor-only, MIL-STD-1553 Mini PCIe Card
♦ Additional Options:
    -1760 1760 protocol option
    -001 With conformal coating
    -E Extended temperature card
    -B Ruggedized design with bonded components
    -D Direct Bus Coupling

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These specifications are subject to change without notification

EXCALIBUR SYSTEMS