

EXC-1553ExCARD/Px

The EXC-1553ExCARD/Px is an intelligent, single- or dual-channel, memory-mapped MIL-STD-1553 interface card. It complies with the ExpressCard® 2.0 standard. The card's small size and suitability for ExpressCard/54 compatible notebook computers make it a complete solution for developing and testing 1553 interfaces and for performing system simulation of the MIL-STD-1553 bus, both in the lab and in the field. The EXC-1553ExCARD/PxS is a single function version of the card with a single RT and no error injection. The EXC-1553ExCARD/PxM is a monitor-only version of the card.

The EXC-1553ExCARD/Px supports Direct Memory Access (DMA), which enables the card to access system memory for reading and writing independently of the computer's CPU. This results in faster data transfer to and from the card, with much less CPU overhead than when not using DMA.

General Features

- ◆ Up to two independent MIL-STD-1553A/B channels
- ◆ ExpressCard/54 card
- ◆ Real-time operation
- ◆ 32-bit Time Tag
- ◆ Programmable Time Tag resolution (RT & MON)
- ◆ Transformer Bus coupling
- ◆ Programmable Interrupts
- ◆ Time Tag can be read in real-time
- ◆ Ruggedized cable connection with strain relief



Channel Specifications

- ◆ 64K x 8 dual-port RAM
- ◆ Independent MIL-STD-1553 dual-redundant channels
- ◆ 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

- ◆ Dimensions: 82.5mm x 54mm x 5mm ExpressCard/54
- ◆ Weight (/P2, incl. cables): 160g

Operating Environment

- ◆ Temperature: 0° - 70°C
-40° to +85°C ext. temp. (optional)
- ◆ Humidity: 5% - 90% noncondensing

Host Interface

- ◆ ExpressCard compliance : Release 2.0
- ◆ Memory space occupied: 512 KB
- ◆ Interrupts: INTA# virtual wire
- ◆ Power (Maximum for /P2): 3.3V @ 1040mA
1.5V @ 570mA

Software Support

- ◆ C drivers with source code for Windows 32/64-bit, Linux 32/64-bit, VxWorks Pentium
- ◆ MerlinPlus Bus Analyzer for Windows 32-bit
- ◆ *Exalt Plus*: Excalibur Analysis Laboratory Tools for Windows 32/64-bit (optional)
- ◆ LabVIEW and LabVIEW Real-Time VIs, LabWindows CVIs
- ◆ Additional software may be available on our website

Ordering Information

- ◆ **EXC-1553ExCARD/Px**
Multifunction, MIL-STD-1553 ExpressCard
- ◆ **EXC-1553ExCARD/PxS**
Single function, MIL-STD-1553 ExpressCard
- ◆ **EXC-1553ExCARD/PxM**
Monitor-only, MIL-STD-1553 ExpressCard

Note: "x" specifies the number of MIL-STD-1553 channels required (1 or 2)

- ◆ Additional Options:
 - 1760 1760 protocol support
 - E Extended temperature module

These specifications are subject to change without notification



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