

M8K1553MCH

The M8K1553MCH is a dual-redundant, single function double-sized MIL-STD-1553 interface module for Excalibur's 8000 family of multiprotocol carrier boards. The M8K1553MCH provides a complete solution for developing and testing 1553 interfaces and performing system simulation of the MIL-STD-1553 bus both in the lab and the field. The module supports both standard variations of the MIL-STD-1553 protocol (A/B).

The M8K1553MCH contains 32K x 16 of dual-port RAM for Data blocks, Control registers, and Look-up tables. All Data blocks and Control registers are memory mapped and may be accessed in real-time. The M8K1553MCH module may be programmed to operate in one of four modes of operation: Bus Controller, Remote Terminal, RT/Concurrent-Bus Monitor, and Bus Monitor. The M8K1553MCH comes complete with Windows software, and a C driver software library including source code.

General Features

- ◆ Single function, independent, dual-redundant double-sized module
- ◆ Ruggedized, extended temperature range available (-40° to +85°C)
- ◆ Operates as BC, RT, BM or RT/Concurrent-BM
- ◆ Supports MIL-STD-1553A/B
- ◆ Autonomous operation in all modes
- ◆ 32K x 16 dual-port RAM
- ◆ 32 Control registers
- ◆ Polling or interrupt driven
- ◆ Real-time operation
- ◆ Built-in Test capability
- ◆ Direct or Transformer bus coupling modes
- ◆ 16-bit 64 µsec Time Tag
- ◆ Extended temperature option



Bus Controller Mode

- ◆ Advanced message control features
- ◆ Major/Minor frames
- ◆ Programmable intermessage gap
- ◆ Programmable automatic retry

Remote Terminal Mode

- ◆ Single RT simulation
- ◆ Double buffering of data
- ◆ Circular buffer mode
- ◆ Message illegalization
- ◆ Programmable broadcast mode

Bus Monitor Mode

- ◆ Filtering per RT
- ◆ Interrupt history list
- ◆ Programmable monitor block count

Physical Characteristics

- ◆ Dimensions: 46mm x 60.5mm
- ◆ Weight: 32g

Operating Environment

- ◆ Temperature: 0°-70°C standard
-40° - 85°C extended temp.
(optional)
- ◆ Humidity: 5% - 90% noncondensing
- ◆ MTBF: 426,730 hours at 25°C, G_F, S217F

Host Interface

- ◆ EXC-8000 family of carrier boards
- ◆ Power: 5V @ 260mA (0% duty cycle)
5V @ 860mA (87% duty cycle)

Software Support

- ◆ *1553MCH 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
- ◆ *Merlin MCH Bus Analyzer* for Windows

Ordering Information

- ◆ **M8K1553MCH** MIL-STD-1553, single function, double-sized module
- ◆ Additional Options:
 - E Extended temperature option
 - R Ruggedized option
 - 001 With conformal coating

Note: When ordering this module with a carrier board, use the module code specified in the user's manual of the carrier board.

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These specifications are subject to change without notification

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