M8K1760Px

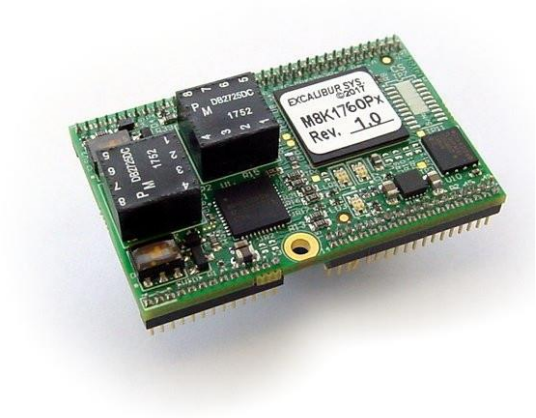
AVIONICS COMMUNICATION MODULE

The M8K1760Px is an intelligent, MIL-STD-1760 interface module for Excalibur's 8000 family of multiprotocol carrier boards. The M8K1760Px provides a complete solution for developing and testing 1760 interfaces and performing system simulation of the MIL-STD-1760 bus. The module handles all standard variations of the MIL-STD-1760 protocol. Each module of the M8K1760Px contains 64K bytes 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 M8K1760Px module can be programmed to operate in one of three modes of operation: Remote Terminal, Bus Controller/Concurrent-RT, and Bus Monitor. In addition, the module simultaneously performs as an Internal Concurrent Monitor in Remote Terminal and Bus Controller/Concurrent-RT modes.

M8K1760PxS is a single function version for embedded applications for a single RT. It has a fixed voltage output and no error injection.

General Features

- Independent MIL-STD-1760 dual-redundant channel
- 64 KB x 8 true dual-port RAM
- Module setup modifiable in real-time
- 32-bit 4 µsec Time Tag or 64-bit IRIG B Time Tag
  - Programmable resolution (RT & MON)
  - Can be read in real-time
- IRIG B input (standard IRIG B120 Serial Time Code)
- Direct or Transformer Bus coupling mode
- Extensive interrupt features
- Variable Amplitude (Px only)
- Loopback Mode for module and cable testing
- Ruggedized and extended temperature options



Mode Related Features

- Operates as RT, BC/Concurrent-RT or Triggerable Bus Monitor
- Internal Concurrent Monitor in RT and BC/RT modes
- Multiple-RT simulation (up to 32 Remote Terminals)
- Minor and Major frames in BC mode
- Multi-mode Bus Monitor (SEQ, LL, LUT)
- Real-time operation
- Multiple protocol capability (i.e. 1760A/B)
- Programmable broadcast mode
- Service Request Processing
- Error injection capabilities:
  - Word Count (+/-3 words)
  - Bit Count (+/-3 bits)
  - Incorrect sync
  - Incorrect RT address
  - Incorrect parity
  - Non-contiguous data
- External Trigger Start option
- MIL-STD-1760 Option:
  - Checksum error detection
  - Checksum error injection
  - Header Words

Physical Characteristics

- Dimensions: 46mm x 30mm
- Weight: 12g

Operating Environment

- Temperature: 0°–70°C standard temperature
-40° to +85°C extended temperature (optional)
- Humidity: 5%–90% noncondensing
- MTBF: 360,350 hours at 25°C, G_F, S217F

Host Interface

- EXC-8000 family of carrier boards
- Power (Px): 5V @ 670mA (100% duty cycle)

Software Support

- *1553Px 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
- *MerlinPlus MIL-STD-1553 Bus Analyzer* for Windows
- *Exalt Plus*: Excalibur Analysis Laboratory Tools (optional)

Ordering Information

- **M8K1760Px** Multifunction MIL-STD-1760 module
- **M8K1760PxM** Monitor-only MIL-STD-1760 module
- **M8K1760PxS** Single function MIL-STD-1760 module
- **M8K1760PxSM** Single function monitor only MIL-STD-1760 module
- Additional Options:
  - **-E** Extended temperature option
  - **-001** With conformal coating
  - **-LB** Onboard loopback option (Px only)
  - **-R** Ruggedized option

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

May 2022, A-2

These specifications are subject to change without notification

311 Meacham Ave ♦ Elmont NY 11003
Tel [516] 327-0000 / Fax: [516] 327-4645
e-mail: excalibur@mil-1553.com
website: www.mil-1553.com

ISO 9001 CERTIFIED COMPANY

AS 9100 CERTIFIED COMPANY

CE

EXCALIBUR SYSTEMS