

# M8KH009

The M8KH009 is an intelligent, double-sized, H009 interface module for Excalibur's 8000 family of multiprotocol carrier boards. The M8KH009 provides a complete solution for developing and testing H009 interfaces and performing system simulation of the H009 bus, according to the standard H009 protocol. Each module of the M8KH009 contains 32K x 16 dual-port RAM for Data Blocks, control registers, and Look-up tables. In addition, the module contains another 32K x 16 dual-port RAM for a Concurrent Monitor. All data blocks and control registers are memory mapped, and may be accessed in real-time.

Each of the independent, dual-redundant M8KH009 modules may be programmed to operate in one of three modes of operation: Peripheral Units (PU), Central Control Complex/Concurrent-PU and Bus Monitor. In addition, the module can simultaneously operate as an independent Internal Concurrent Monitor in PU and CCC/Concurrent-PU modes.

## General Features

- ◆ Operates as PU, CCC/Concurrent PU and Bus Monitor
- ◆ 32K x 16 dual-port RAM for PU, CCC/Concurrent-PU, and Bus Monitor modes
- ◆ 32K x 16 dual port RAM for the Internal Concurrent Monitor
- ◆ Programmable Interrupts
- ◆ Error injection: Word Count, Bit Count, Parity & Gap Time
- ◆ Error detection:
  - No clock on active bus, Manchester error, Parity error,
  - Bit Count High, Bit Count Low, Word Count High, Word Count Low
- ◆ Programmable Time Tag resolution (PU & MON)
- ◆ Ruggedized option



## CCC Mode

- ◆ Programmable Intermessage Gap
- ◆ Programmable Frame Time
- ◆ Programmable Retries
- ◆ Loop and Single Shot modes
- ◆ Adjustable skew between Clock and Data
- ◆ Can simulate CCC and up to 16 PUs Simultaneously
- ◆ Internal Concurrent Monitor

## PU Mode

- ◆ Simulates up to 16 Peripheral Units
- ◆ 32-bit 4  $\mu$ sec Time Tag
- ◆ 1024 entry message stack
- ◆ Adjustable skew between Clock and Data
- ◆ Internal Concurrent Monitor

## Monitor Mode

- ◆ Holds 1184 messages in a circular buffer
- ◆ Filters messages based on PU/CI/CF/TR fields
- ◆ Interrupts based on PU/CI/CF/TR fields
- ◆ 32-bit 4  $\mu$ sec Time Tag
- ◆ Adjustable skew between Clock and Data

## Physical Characteristics

- ◆ Dimensions: 46mm x 60.5mm
- ◆ Weight: 25g

## Operating Environment

- ◆ Operating Temperature: 0° to +70°C
- ◆ Storage Temperature: -50° to +125°C
- ◆ Humidity: 5% to 90% noncondensing
- ◆ MTBF: 524,800 hours at 25°C, G<sub>F</sub>, S217F

## Host Interface

- ◆ EXC-8000 family carrier board
- ◆ Power (max): 5V @ 1.1A

## Software Support

- ◆ *H009 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
- ◆ *Exalt Plus*: Excalibur Analysis Laboratory Tools (optional)

## Ordering Information

- ◆ **M8KH009** H009 interface, double-sized module
- ◆ Additional Options:

- 001 With conformal coating
- 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.

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These specifications are subject to change without notification