

# M8KDiscrete

The M8KDiscrete is an interface module for Excalibur's 8000 family of multiprotocol carrier boards. The M8KDiscrete provides a complete solution for developing and testing Discrete voltage-level interfaces.

The M8KDiscrete contains control I/O registers that are memory-mapped and may be accessed in real-time.

The module supports 10 programmable I/O Discretes that can record or control the external Discretes that are connected to it. In addition, the module can record changes in the input Discrete with an associated Time Tag via a built-in FIFO. Output Discretes are open collector, capable of handling up to 32V with a maximum sink current of 100 mA each.

## General Features

- ◆ 10 bi-directional Discretes (software selectable)
- ◆ 8KB FIFO memory
- ◆ 32-bit 4  $\mu$ sec Time Tag or 64-bit IRIG B Time Tag
- ◆ IRIG B input (standard IRIG B120 Serial Time Code)
- ◆ Programmable triggers
- ◆ Programmable interrupts
- ◆ Option for on-board pull-up resistors
- ◆ Extended temperature option



## Input Discretes

- ◆ Software selectable debounce enable per Discrete
- ◆ Software selectable voltage per input Discrete: TTL 0 – 5V / Avionics 0 – 32V
- ◆ Programmable trigger mask
- ◆ Trigger output and/or interrupt on changing input

## Output Discretes

- ◆ Open collector outputs (0 – 32 V)
- ◆ Drive capability up to 100mA sink current per Discrete channel

## Physical Characteristics

- ◆ Dimensions: 46mm x 30mm
- ◆ Weight: 9g

## Operating Environment

- ◆ Operating Temperature: 0° to 70°C standard  
-40° to +85°C extended
- ◆ Storage Temperature: -50° to +125°C
- ◆ Humidity: 5% to 90% noncondensing
- ◆ MTBF: 354,800 hours at 25°C, G<sub>F</sub>, S217F

## Host Interface

- ◆ EXC-8000 family of carrier boards
- ◆ Power: 5V @ 130mA

## Software Support

- ◆ *Discrete 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
- ◆ *Discrete Generator* for Windows
- ◆ *Exalt Plus*: Excalibur Analysis Laboratory Tools (optional)

## Ordering Information

- ◆ **M8KDiscrete** Discrete 10 channel 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