

# M8K708

The M8K708 is a multichannel ARINC 708/453 interface module for Excalibur's 8000 family of multiprotocol carrier boards. The M8K708 module supports two ARINC 708/453 channels, each programmable as transmit or receive, which provides a complete solution for the development and testing of Weather Radar Display Databases. Each channel implements a 64K x 16 FIFO and supports polling and/or interrupt driven operation. The M8K708 comes complete with C drivers including source code.

In Transmit mode, each ARINC 708 word is written to the FIFO as a block of 100 16-bit words. In Receive mode, each ARINC 708 word is stored in the FIFO as a block of 103 16-bit words. The first two words comprise the 32-bit Time Tag, indicating the word's time stamp. The next 100 words comprise the 1600 bits of the ARINC 708 word, which are followed by the Status Word.

## General Features

- ◆ Supports 2 ARINC-708/453 channels, each programmable as transmit or receive
- ◆ 64K x 16 FIFO per channel holds up to 655 1600-bit Words
- ◆ 78 ohm bus termination
- ◆ Interrupt and polling modes of operation
- ◆ Loopback test capability
- ◆ Programmable hardware output trigger
- ◆ Extended temperature option



## Receive Mode

- ◆ Receive features:
  - Word status tagging
  - 32-bit 10 µsec Time Tag
  - Receive count interval trigger
- ◆ Receive counter – indicates number of words received
- ◆ Polling conditions:
  - FIFO full
  - FIFO half full
  - FIFO empty
  - 'n' Words received
- ◆ Interrupt conditions:
  - FIFO full
  - 'n' Words received

## Transmit Mode

- ◆ Transmission modes:
  - One-shot (one 1600-bit word at a time)
  - Continuous (as long as FIFO not empty)
- ◆ Programmable inter word gap time (0–6.5 sec @ 100 µsec resolution)
- ◆ Polling conditions:
  - FIFO full
  - FIFO half full
  - FIFO empty
  - 'n' Words transmitted
- ◆ Interrupt conditions:
  - FIFO empty
  - 'n' Words transmitted

## 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: 620,000 hours at 25°C, G<sub>F</sub>, S217F

## Host Interface

- ◆ EXC-8000 family of carrier boards
- ◆ Power: 5V @ 600mA

## Software Support

- ◆ *ARINC 708 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
- ◆ *Weather Radar 708* for Windows
- ◆ *Transmit 708* for Windows
- ◆ *Exalt Plus*: Excalibur Analysis Laboratory Tools (optional)

## Ordering Information

- ◆ **M8K708** ARINC 708 two 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