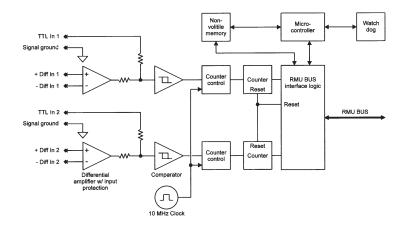
# Technical Bulletin

# MSC1000-004

# Accumulation Module (2 Channel)

**Airborne Data Acquisition Products** 



## **DESCRIPTION**

The MSC1000-004 is an Accumulation module designed to measure the number of events which have occurred from a preset time. This module has the following salient features:

## **FEATURES**

- Each channel is independently programmable via DASM software
- Two modes of operation: Accumulator mode or Frequency Measurement mode. In the Accumulator mode, the module counts events and keeps a 32-bit running total. The on-board controller scales this number and holds for insertion to the PCM stream. In the Frequency Measurement mode, the module is programmable as to the number of cycles to average. During the cycles, 100 nS clocks are accumulated and then averaged over the number of cycles.
- Includes custom mode for fuel consumption
- On-board power fail circuitry detects "brown out" and saves data to nonvolatile memory.

## **ELECTRICAL SPECIFICATIONS**

#### **Differential Input Characteristics (Per Channel)**

- Input impedance: 1 Megohm minimum
- Input waveform can consist of distored sinusoidal signals (third harmonic distortion) and pulses.
- Input signal amplitude: 20 mV to 75 V peak-to-peak
- Input frequency rates: 20 Hz to 20 Khz in accumulate mode; 30 Hz to 15 Khz in frequency measurement mode.

#### Cal Types

- NCAL: Responds with 80% of full scale output.
- ZCAL: Responds with 10% of full scale output.

#### **Balance (Per Channel)**

- Algorithm is program selectable from amplifier offset, or manual balance.
- Balance Algorithm accuracy: ±0.5% full scale

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