

**ADAM-4018** 8-Channel Thermocouple Input Module  
**ADAM-4018M** 8-Channel Analog Input Data Logger  
**ADAM-4021** Analog Output Module



**ADAM-4018**  
 8-Channel  
 Thermocouple Input  
 Module

**Analog Input**

- **Effective resolution:** 16-bit
- **Channels:**  
Six differential, two single-ended
- **Input type:** Thermocouple, mV, V, mA
- **Input range:**  $\pm 15$  mV,  $\pm 50$  mV,  $\pm 100$  mV,  $\pm 500$  mV,  $\pm 1$  V,  $\pm 2.5$  V,  $\pm 20$  mA
- **T/C type and temperature range:**

J	0	~	760° C
K	0	~	1370° C
T	-100	~	400° C
E	0	~	1000° C
R	500	~	1750° C
S	500	~	1750° C
B	500	~	1800° C
- **Isolation voltage:** 3000 V<sub>DC</sub>
- **Fault and overvoltage protection:**  
Withstands overvoltage up to  $\pm 35$  V
- **Sampling rate:** 10 samples/sec. (total)
- **Input impedance:** 20 MW
- **Bandwidth:** 13.1 Hz @ 50 Hz, 15.72 Hz @ 60 Hz
- **Accuracy:**  $\pm 0.1\%$  for voltage input
- **Zero drift:**  $\pm 3$   $\mu\text{V}/^\circ\text{C}$
- **Span drift:**  $\pm 25$  ppm/ $^\circ\text{C}$
- **CMR @ 50/60 Hz:** 92 dB min.

**Built-in Watchdog Timer**

**Power**

- **Power requirements:**  
Unregulated +10 ~ +30 V<sub>DC</sub>
- **Power consumption:** 0.8 W

**ADAM-4018M**  
 8-Channel Analog Input  
 Data Logger

**Analog Input**

- **Effective resolution:** 16-bit
- **Channels:**  
Six differential, two single-ended
- **Input type:** Thermocouple, mV, V, mA
- **Input range:**  $\pm 15$  mV,  $\pm 50$  mV,  $\pm 100$  mV,  $\pm 500$  mV,  $\pm 1$  V,  $\pm 2.5$  V,  $\pm 20$  mA
- **T/C type and temperature range:**

J	0	~	760° C
K	0	~	1370° C
T	-100	~	400° C
E	0	~	1000° C
R	500	~	1750° C
S	500	~	1750° C
B	500	~	1800° C
- **Isolation voltage:** 3000 V<sub>DC</sub>
- **Sampling rate:** 10 samples/sec. (total)
- **Input impedance:** 1.8 MW
- **Bandwidth:** 13.1 Hz @ 50 Hz, 15.72 Hz @ 60 Hz
- **Accuracy:**  $\pm 0.1\%$  for voltage input
- **Zero drift:**  $\pm 3$   $\mu\text{V}/^\circ\text{C}$
- **Span drift:**  $\pm 25$  ppm/ $^\circ\text{C}$
- **CMR @ 50/60 Hz:** 92 dB min.

**Storage**

- **Capacity (128KB Flash memory):** 38,000 samples (total)
- **Storage mode:** Write to end of memory & cyclic
- **Logging mode:** Internal log or event log (high/low)
- **Sampling interval:** 2 secs. ~ 18 hours

**Built-in Watchdog Timer**

**Power**

- **Power requirements:**  
Unregulated +10 ~ +30 V<sub>DC</sub>
- **Power consumption:** 1.8 W

**ADAM-4021**  
 Analog Output Module

**Analog Output**

- **Effective resolution:** 12-bit
- **Output type:** mA, V
- **Output range:** 0 to 20 mA, 4 to 20 mA, and 0 to 10 V
- **Isolation voltage:** 3000 V<sub>DC</sub>
- **Output Impedance:** 0.5 W
- **Accuracy:**  
 $\pm 0.1\%$  of FSR for current output  
 $\pm 0.2\%$  of FSR for voltage output
- **Readback accuracy:**  $\pm 1\%$  of FSR
- **Resolution:**  $\pm 0.015\%$  of FSR
- **Zero drift:**  
Voltage output:  $\pm 30$   $\mu\text{V}/^\circ\text{C}$   
Current output:  $\pm 0.2$   $\mu\text{A}/^\circ\text{C}$
- **Span temperature coefficient:**  
 $\pm 25$  ppm/ $^\circ\text{C}$
- **Programmable output slope:**  
0.125 ~ 128 mA/sec.  
0.0625 ~ 64.0 V/sec.
- **Current load resistor:**  
0 to 500  $\Omega$  (source)

**Built-in Watchdog Timer**

**Power**

- **Power requirements:**  
Unregulated +10 ~ +30 V<sub>DC</sub>
- **Power consumption:** 1.4 W