

Chameleon Analog Input Module (AIN-1)

High-Performance Programmable Controllers for Extreme Environments



The Chameleon Analog Input Module (AIN-1) provides a versatile input suite capable of reading a variety of signals, including voltage, current, and resistance (providing RTD and thermocouple support). Powered by an ARM processor with onboard RAM and flash memory providing sufficient computational power to handle the most demanding applications.

Using Fairmount Automation's intuitive graphical programming package (*Design Pad G3*) you can develop sophisticated data processing schemes for the AIN-1 in a matter of hours—without prior programming experience. Programming the unit entails “drawing” a signal processing algorithm using a vast array of configurable function blocks. Once complete, programs are downloaded to the unit via a wireless IrDA link.

Each AIN-1 provides integral data logging as well as an integral user-interface. Each display has an associated tag holder for signal labeling.

As with all Chameleon modules, the AIN-1 offers unequalled ruggedness. It is specifically designed for sustained operation in severe environments, including those characterized by extreme shock, vibration, electro-magnetic interference, temperature, and/or humidity. Its fully-sealed enclosure (sealing end-caps not pictured) ensures long-lasting operation in the most challenging environments. In fact, Chameleon modules can operate fully submerged!

ENVIRONMENTAL CHARACTERISTICS

Operating Ambient Temperature Range.....	-40°C to 65°C
Storage/Transport Ambient Temperature Range.....	-40°C to 85°C
High Impact Shock.....	MIL-STD-901D (Grade A)
Mechanical Vibration.....	MIL-STD-167B
Electro-Magnetic Interference.....	MIL-STD-461E
Facial/Housing Protection.....	NEMA 1,2,4,4X,5,6,12,12K,13

ANALOG INPUTS

Quantity / Resolution.....	14 Channels / 16 Bits Minimum
Sampling Rate.....	10 Hz Typical (Varies on Mode and number of channels used)
Current Input Ranges Supported.....	0-20mA, 4-20mA
Current Input Accuracy.....	+/-40uA at 25°C, +/-100uA Over Temperature
Standard Voltage Input Ranges Supported.....	0-20V, 0-10V, 0-5V, 1-5V, 0-2.5V
Standard Voltage Input Range Accuracy.....	+/-36mV at 25°C, +/-86mV Over Temperature
Low Voltage Input Ranges Supported.....	0-1V, 0-500mV, 0-250mV, 0-100mV
Low Voltage Input Range Accuracy.....	+/-2mV at 25°C, +/-5mV Over Temperature
Resistance Input Range Supported.....	0-2400Ω
Resistance Input Range Accuracy.....	+/-2.4Ω or +/-0.4% of Reading (whichever is smaller) Over Temperature
RTD Support.....	3 Wire, 100Ω Platinum (European or American curve), 120Ω Nickel, or Custom
RTD Accuracy.....	+/- 1°C Over Temperature
Thermocouple Support.....	Type E, J, K, R, S, or T

DISPLAYS

Digital Readouts.....	Eight user programmable on/off LEDs with label holders
Analog Readouts.....	Four 4-digit, 7-segment user-programmable numerical displays with label holders
Other Readouts.....	LED Status Indicator

PHYSICAL CHARACTERISTICS

Weight.....	2 pounds
Dimensions.....	4" W x 6" L x 3" H

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