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IP-16ADC 16 Channel 16 Bit ADC IndustryPack®

Application Information

The IP-16ADC provides 16 single-ended or eight differential channels of 16-bit analog to digital conversion on a single-wide IndustryPack. The single-ended and differential inputs may be mixed. A programmable gain amplifier provides a selection of input ranges. Conversions take place in less than 10 μ s.

Gain and offset calibration parameters are stored in the board's ID PROM.

Note that this product **requires** an external low noise +/- 15 VDC power supply.

Key Features

- Up to 16 single-ended or eight differential 16-bit ADC channels
- Precision on-board reference
- Input ranges of 0-5V, 0-10, \pm 5V, \pm 10V
- 10 μ s conversion time
- Factory calibrated; data in ID PROM

Specifications

Form Factor	Single-wide IndustryPack
IndustryPack Bus Speed	8 MHz
Wait States	One on writes None on reads
Number of Channels	16 ADC single-ended or 8 ADC differential (may be mixed)
Precision	16 bits
Input Voltage Ranges	0-10V, 0-5V, $\pm 10V$, $\pm 5V$ nominal Selectable by software
Accuracy	16 bit with no missing codes 0.002% typical (ADC and amp)
Calibration	Offset and gain factory calibrated. Parameters in ID PROM
Conversion Time	8 μ s. 100 ksamples/sec aggregate if single channel driven
Input Impedance	60 Mohm
Input Protection	± 65 V with power on, ± 80 V with power off
Reference	1ppm/C typical, 0.01% accuracy
Dimensions	3.9" x 1.8"
Power Requirements	+5 VDC, 210 mA typical, 270 mA max +15 VDC external, 45 mA typical, 70 mA max -15 VDC external, 45 mA typical, 70 mA max
Environmental	Operating temperature: 0° to 70° C Humidity: 5% to 95% non-condensing Storage: -10° to +85° C

Order Information

IP-16ADC	IndustryPack with sixteen 16-bit ADC channels
EKIP50-16ADC	Engineering kit for IP-16ADC if mounted on a carrier with 50-pin ribbon cable header front panel I/O connectors. Contains: Three-foot 50 conductor ribbon cable (C-IP50F-IP50F-3) Fifty screw terminal block with ribbon header (IP-TERM) <i>(More items as below)</i>
EKHD50-16ADC	Engineering kit for IP-16ADC if mounted on a carrier with HD50 front panel I/O connectors. Contains: Six-foot cable HD50 male to HD50 male (C-HD50M-HD50M) Fifty screw terminal block with HD50 female (IP-TERM-HD50) <i>(More items as below)</i>
EKCM50-16ADC	Engineering kit for IP-16ADC if mounted on a carrier with Champ50 front panel I/O connectors. Contains: Three-foot Champ50 male to ribbon cable (C-CM50M-IP50M) Six foot Champ50 male to HD50 male cable (C-HD50M-CM50M) Fifty screw terminal block with HD50 female (IP-TERM-HD50) <i>(More items as below)</i>
All IP-16ADC engineering kits include:	Printed hardware user manual Bill of materials Board schematics Assembly diagram SBS Appnote: AN94001 data sheet Maxim: MAX358 data sheet Analog Devices: AMP03 data sheet Burr Brown: INA103 data sheet Crystal Semiconductor: CS5101A data sheet Linear Technology: LT1027 data sheet Siliconix: DG419 data sheet

Associated Products

C-IP50F-IP50F-3	Three-foot 50 conductor ribbon cable
C-IP50F-IP50F-6	Six-foot 50 conductor ribbon cable
IP-TERM	Fifty screw terminal block with ribbon connector



8371C Central Avenue, Newark, CA 94560
(510) 742-2500 • info.commercial@sbs.com • www.sbs.com