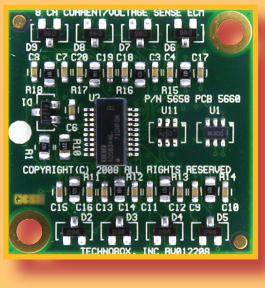
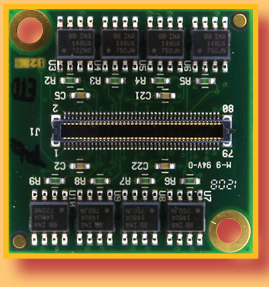
Conversion Module

8-channel High Common Mode A/D Converter





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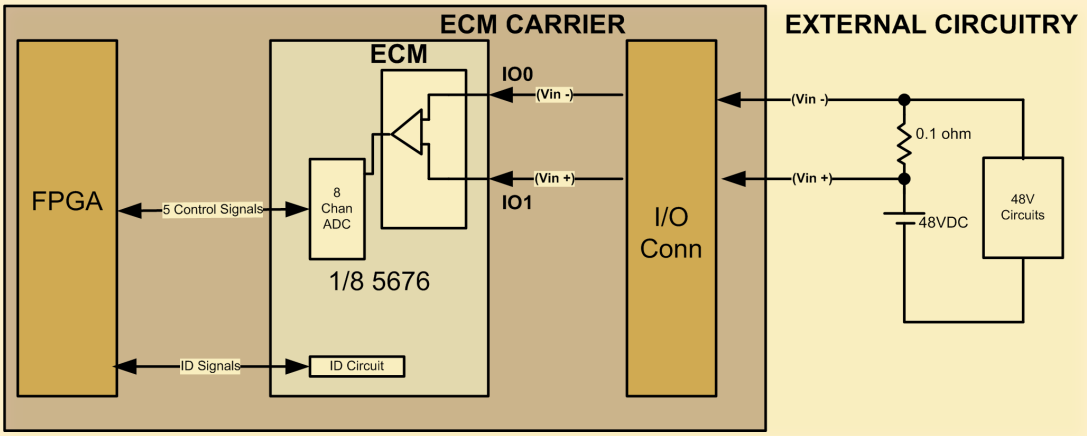


- **Analog input ECM**
- **Eight channels 0 to 2.5 volts A/D conversion**
- **Sample rate 12.5KHz 8 channels active**
- **Wide common mode range +/- 100 volts**
- **On board serial identification circuit**
- **Industrial temperature range**
- **ROHS compliant**
- **Patented**

Specifications

Temperature (Operating): -40 to +85 degrees C

Temperature (Storage): -55 to +100 degrees C

Altitude: Not Specified or Characterized. Typical similar equipment is at 15,000 ft.

Humidity (Operating/Storage): 5% to 90% non-condensing.

Vibration: Not specified or Characterized.

Shock: Not specified or Characterized.

MTBF: Available on request.

Weight: 3 grams.

Power: TBD

Ordering Information

5676: 8 Channel High Common Mode, 16-bit A:D converter

Technobox, inc.®

140 Mount Holly Bypass
Unit 1
Lumberton, NJ 08048

Tel: 609-267-8988
Fax: 609-261-1011

www.technobox.com

The Technobox P/N 5676 ECM module provides eight channels of 16 bit voltage measurement in the 0 to 2.5V volt range.

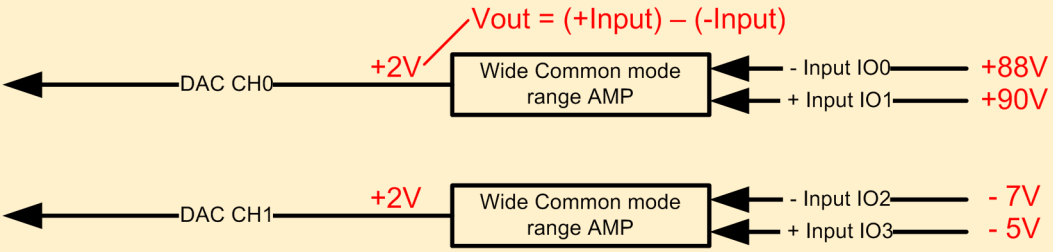
For each channel the common mode voltage range is -100 volts to +100 volts.

Maximum data rates are 100KHz, but samples per channel will depend on the number of channels scanned, if all eight channels are scanned the rate per channel would be 100KHz / 8 = 12.5KHz.

The 5676 provides analog to digital conversion of positive differential voltages 0 to 2.5V within a common mode range of +97.5 to -97.5 volts.

Positive Voltage application, Apply up to +100 volts to the odd numbered IO signal in the case of a positive voltage.

Negative Voltage application, Apply up to -100 volts to the even numbered IO signal in the case of a negative voltage.



Saturation, For positive voltage differences greater than +2.5V between pairs, the output will saturate and the A/D conversion values will not represent the input voltages. For negative voltage differences the output will clamp to somewhere near ground and the voltage readings will again be inaccurate.

User IO	J1 Pin number	Direction	Description
IO0	16	OUTPUT	U2 CH0 Voltage Input Negative
IO1	18	INPUT	U2 CH0 Voltage Input Positive
IO2	28	OUTPUT	U2 CH1 Voltage Input Negative
IO3	30	INPUT	U2 CH1 Voltage Input Positive
IO4	52	OUTPUT	U2 CH2 Voltage Input Negative
IO5	54	INPUT	U2 CH2 Voltage Input Positive
IO6	64	OUTPUT	U2 CH3 Voltage Input Negative
IO7	66	INPUT	U2 CH3 Voltage Input Positive
IO8	65	OUTPUT	U2 CH4 Voltage Input Negative
IO9	63	INPUT	U2 CH4 Voltage Input Positive
IO10	53	OUTPUT	U2 CH5 Voltage Input Negative
IO11	51	INPUT	U2 CH5 Voltage Input Positive
IO12	29	OUTPUT	U2 CH6 Voltage Input Negative
IO13	27	INPUT	U2 CH6 Voltage Input Positive
IO14	17	OUTPUT	U2 CH7 Voltage Input Negative
IO15	15	INPUT	U2 CH7 Voltage Input Positive

Table 1 User IO signal connections

Carrier Data	J1 Pin number	Direction	Description
DA0	10	INPUT	U2, Chip Select when Low
DA1	12	INPUT	U2, Data clock, clocks data in/out of A/D converter
DA2	22	INPUT	U2, Data Input, clocked by rising edge of data clock
DA3	24	OUTPUT	U2, Data output, clocked by falling edge of data clock
DA4	34	OUTPUT	U2, Busy, A/D conversion done when signal goes High
DA5	36	N/C	No connection
DA6	46	N/C	No connection
DA7	48	N/C	No connection
DA8	58	N/C	No connection
DA9	60	N/C	No connection
DA10	70	N/C	No connection
DA11	72	N/C	No connection
DA12	71	N/C	No connection
DA13	69	N/C	No connection
DA14	59	N/C	No connection
DA15	57	N/C	No connection
DA16	47	N/C	No connection
DA17	45	N/C	No connection
DA18	35	N/C	No connection
DA19	33	N/C	No connection
DA20	23	N/C	No connection
DA21	21	N/C	No connection
DA22	11	N/C	No connection
DA23	9	N/C	No connection
DA24	40	N/C	No connection
DA25	41	N/C	No connection
DA26	42	N/C	No connection
DA27	39	N/C	No connection

Table 2 Carrier DA signal connections