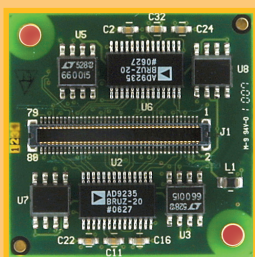
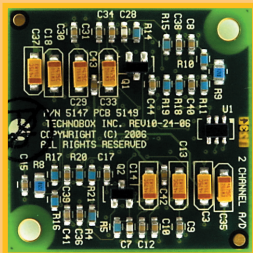
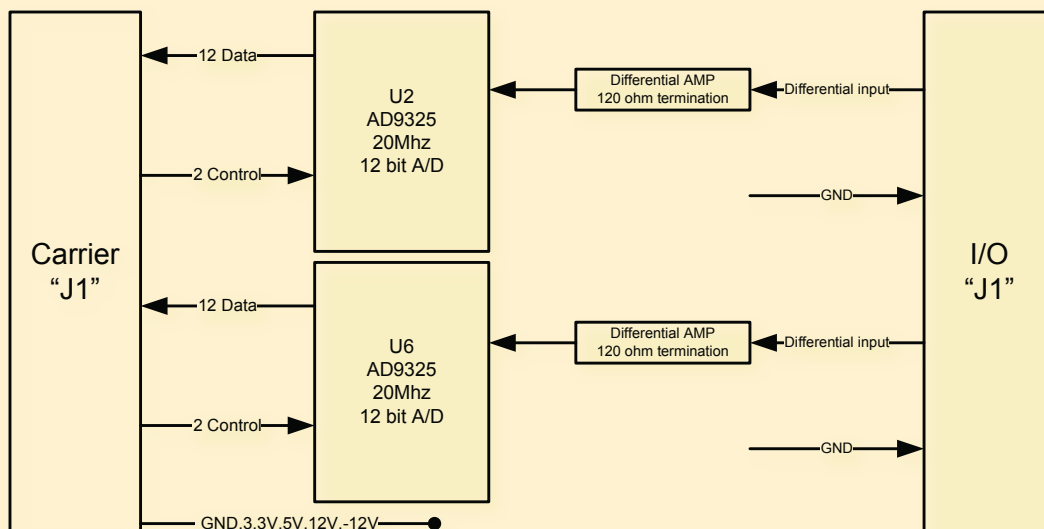


Conversion Module

2-channel Analog to Digital Converter



5147



- Analog input ECM
- Analog Devices AD9235 high-speed ADCs
- 12-bit / 20 MHz sampling
- Two Differential Inputs 120 ohms termination
- Differential input range +/-3.0 V
- 5 MHz 4 pole elliptical analog input filter
- 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

Technobox, inc.

140 Mount Holly Bypass
Unit 1
Lumberton, NJ 08048

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

www.technobox.com

Ordering Information

5147: 2-channel ADC, medium resolution/speed, differential input

The Technobox P/N 5147 ECM module provides two channels of 12-bit A/D conversion using the Analog Devices AD9235, and is suitable for medium resolution high speed applications.

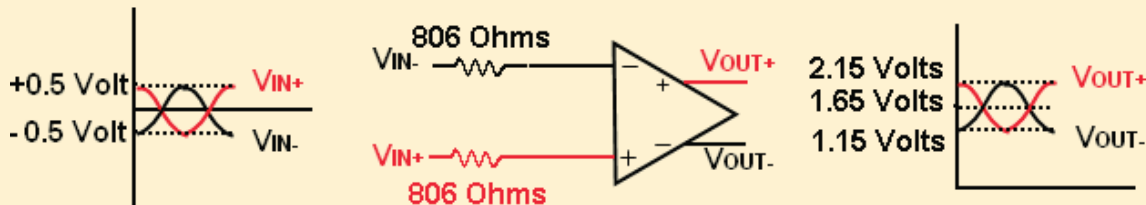
The two differential inputs are terminated in 120 ohms at a gain of 1 differential input buffer amplifier. Differential Input ranges are ± 3.0 V. Single Ended Input ranges are ± 5.0 V, ± 10.0 V, selectable per channel, using the internal 2.5 V reference.

Sample rates are 20 MHz per channel with a 5 MHz 4-pole elliptical analog input filter.

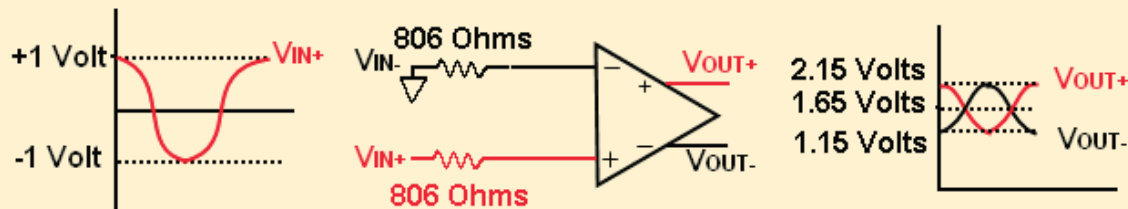
Input Signal Chain. The 5147 uses a 5 MHz low pass filtering differential input amplifier to drive a high speed differential input A/D converter.

Input Voltage Range. Limit input signals to a range of +3 V to -3 V relative to ground. Larger voltages may result in circuit damage.

Differential Inputs. Differential inputs are limited to ± 0.5 volts with a common mode range of +2.5 V to -2.5 V. Larger differential signals will result in an out of range error since the A/D converter is limited to 2 V peak to peak signals.



Single Ended Inputs. Single ended inputs are limited to ± 1 volts with a common mode range of +2.0 V to -2.0 V. Larger signals will result in out of range error since the A/D converter is limited to 2 V peak to peak signals.



User IO	J1 Pin number	Direction J1	Description*
IO0	16	INPUT	+ Differential Input U3/U2
IO1	18	INPUT	- Differential Input U3/U2
IO2	28	POWER	GND signal reference
IO3	30	POWER	GND signal reference
IO4	52	N/C	NC
IO5	54	N/C	NC
IO6	64	N/C	NC
IO7	66	N/C	NC
IO8	65	INPUT	+ Differential Input U5/U6
IO9	63	INPUT	- Differential Input U5/U6
IO10	53	POWER	GND signal reference
IO11	51	POWER	GND signal reference
IO12	29	N/C	NC
IO13	27	N/C	NC
IO14	17	N/C	NC
IO15	15	N/C	NC

Table 1 User IO signal connections

Carrier Data	J1 Pin number	J1 Direction	Description
DA0	10	OUTPUT	U2, Data 0
DA1	12	OUTPUT	U2, Data 1
DA2	22	OUTPUT	U2, Data 2
DA3	24	OUTPUT	U2, Data 3
DA4	34	OUTPUT	U2, Data 4
DA5	36	OUTPUT	U2, Data 5
DA6	46	OUTPUT	U2, Data 6
DA7	48	OUTPUT	U2, Data 7
DA8	58	OUTPUT	U2, Data 8
DA9	60	OUTPUT	U2, Data 9
DA10	70	OUTPUT	U2, Data 10
DA11	72	OUTPUT	U2, Data 11
DA12	71	OUTPUT	U6, Data 0
DA13	69	OUTPUT	U6, Data 1
DA14	59	OUTPUT	U6, Data 2
DA15	57	OUTPUT	U6, Data 3
DA16	47	OUTPUT	U6, Data 4
DA17	45	OUTPUT	U6, Data 5
DA18	35	OUTPUT	U6, Data 6
DA19	33	OUTPUT	U6, Data 7
DA20	23	OUTPUT	U6, Data 8
DA21	21	OUTPUT	U6, Data 9
DA22	11	OUTPUT	U6, Data 10
DA23	9	OUTPUT	U6, Data 11
DA24	40	INPUT	U2, Clock
DA25	41	INPUT	U6, Clock
DA26	42	OUTPUT	U2, Out of Range
DA27	39	OUTPUT	U6, Out of Range

Table 2 Carrier DA signal connections

