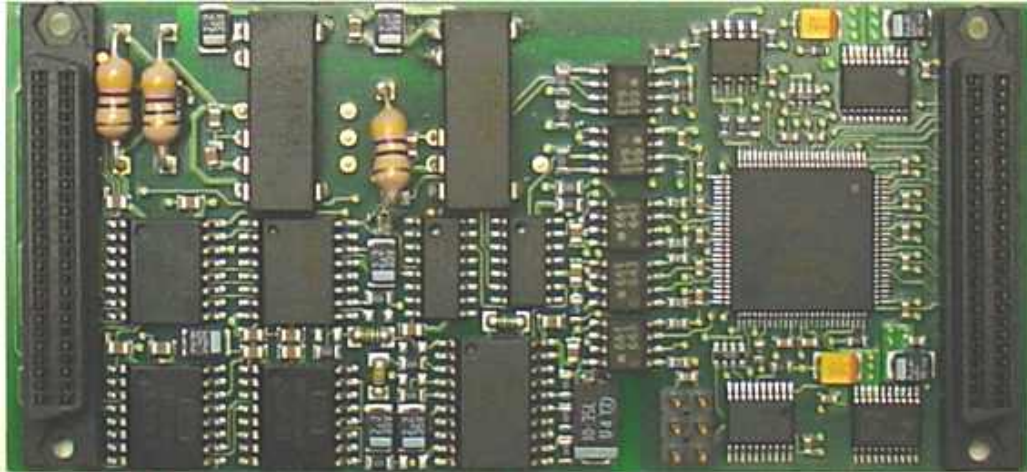# TIP500   16 Channels of Isolated 12 bit A/D Conversion

Application Information

The TIP500 is an IndustryPack® compatible module with 16 single-ended or 8 differential channels of isolated 12 bit A/D conversion. The data acquisition and conversion time is up to 10µs without channel / gain change and up to 12.5µs with channel / gain change.
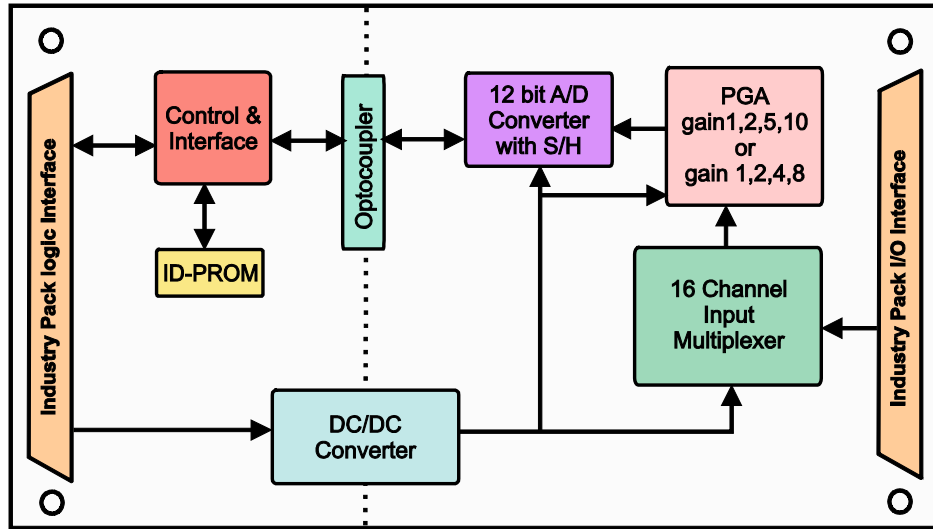
The input multiplexer offers analog overvoltage protection of up to 70 Vpp. A programmable gain amplifier allows gains of 1, 2, 5, 10 or 1, 2, 4, 8. The full-scale input range is +/-10V for the TIP500-1xR and 0-10V for the TIP500-2xR.

The isolated ADC, programmable gain amplifier and multiplexer are powered by an on board DC/DC converter. An interrupt can be generated at end-of-conversion supporting an 8 bit vector. Each TIP500 is factory calibrated. The calibration information is stored in the Identification-PROM unique to each IP.

Software support (TIP500-SW-xx) for different operating systems is available.

Technical Information

- Interface according to IndustryPack specification
- Identification-PROM supports auto-configuration
- Single Size IndustryPack
- 16 single-ended or 8 differential channels of isolated 12 bit A/D conversion
- ESD protected input multiplexer
- Programmable gain amplifier, gain 1, 2, 5, 10 or gain 1, 2, 4, 8

- 12 bit A/D converter with internal S/H and reference
- Full-scale input range +/- 10 V or 0-10V (gain = 1)
- Interrupt capability at end-of-conversion
- Factory calibrated, calibration information in Identification-PROM unique to each IP
- Operating temperature –40°C to +85°C

Order Information

RoHS Compliant
TIP500-10R   16 Channel Isolated Multiplexed 12 bit A/D, gain 1,2,5,10, +/-10V
TIP500-11R   16 Channel Isolated Multiplexed 12 bit A/D, gain 1,2,4,8, +/-10V
TIP500-20R   16 Channel Isolated Multiplexed 12 bit A/D, gain 1,2,5,10, 0-10V
TIP500-21R   16 Channel Isolated Multiplexed 12 bit A/D, gain 1,2,4,8, 0-10V

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

Documentation
TIP500-DOC   User Manual

Software
TIP500-SW-42   VxWorks Software Support (Legacy and VxBus-Enabled Software Support)
TIP500-SW-65   Windows Software Support
TIP500-SW-82   Linux Software Support
TIP500-SW-95   QNX Software Support

For operating systems please contact TEWS.

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