

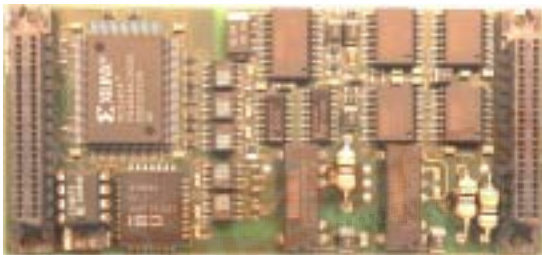
*The Embedded I/O Company*

**TIP501 16 Channels of Isolated 16 bit A/D Conversion**

**Application Information**

The TIP501 is an IndustryPack® compatible module providing 16 single-ended or 8 differential channels of isolated 16 bit A/D conversion. The data acquisition and conversion time is up to 12µs without channel / gain change and up to 14.5µs with channel / gain change.

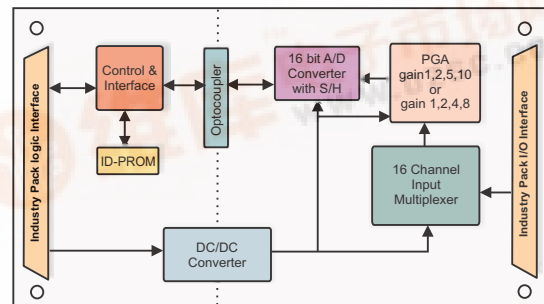
The input multiplexer offers analog overvoltage protection of up to 70Vpp. A programmable gain amplifier allows gains of 1, 2, 5, 10 or 1, 2, 4, 8. The full-scale input range is +/-10V for the TIP501-1x and 0-10V for the TIP501-2x. The isolated ADC, programmable gain amplifier and multiplexer are powered by an on board DC/DC converter. An interrupt can be generated at end-of-conversion supporting an 8 bit vector. Each TIP501 is factory calibrated. The calibration information is stored in the Identification-PROM unique to each IP.



For First-Time-Buyers the engineering documentation TIP501-ED is recommended. The engineering documentation includes TIP501-DOC, schematics and data sheets. Driver support (TIP501-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 16 bit A/D conversion
- ESD protected input multiplexer
- Programmable gain amplifier, gain 1, 2, 5, 10 or gain 1, 2, 4, 8
- 16 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**

- TIP501-10** 16 Single-Ended or 8 Differential Channels of Isolated 16 bit Conversion, gain 1, 2, 5, 10, input range +/-10V
- TIP501-11** 16 Single-Ended or 8 Differential Channels of Isolated 16 bit Conversion, gain 1, 2, 4, 8, input range +/-10V
- TIP501-20** As TIP501-10 but input range 0-10V
- TIP501-21** As TIP501-11 but input range 0-10V
- TIP501-DOC** User Documentation
- TIP501-ED** Engineering Documentation, includes TIP501-DOC
- TIP501-SW-12** OS-9 Software Support
- TIP501-SW-32** pSOS Software Support
- TIP501-SW-42** VxWorks Software Support
- TIP501-SW-62** Windows NT 4.0 Software Support
- TIP501-SW-72** LynxOS Software Support
- TIP501-SW-82** LiNux Software Support
- TIP501-SW-92** QNX 4 Software Support
- TIP501-SW-95** QNX 6 Software Support

