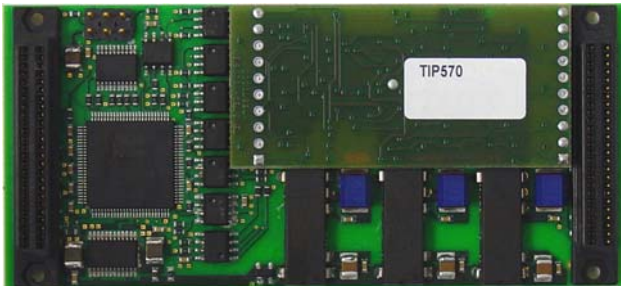## TIP570  16 Channel multiplexed isolated 12 bit ADC / 8 Channel isolated 12 bit DAC

### Application Information

The TIP570 is an IndustryPack® compatible module with an optically isolated 16 channel multiplexed 12 bit ADC and an optically isolated 8 channel 12 bit DAC. The ADC can be software configured to operate as 16 input channels in single-ended mode or 8 input channels in differential mode.

The ADC input multiplexer is overvoltage protected up to 70Vpp. A programmable gain amplifier supports gains of 1, 2, 5, 10 (TIP570-10) or gains of 1, 2, 4, 8 (TIP570-11). The full-scale input voltage range is +/-10V. The data acquisition and conversion time is mode-dependent: up to 1µs typical without channel or gain change, up to 12.5µs typical with channel or gain change. The 8 channel DAC full-scale output voltage is +/-10V.

The output amplifier is capable of sinking and sourcing 2mA for each DAC channel (1000pF load). The output voltage settles to 12 bits in 5µs typical. Each TIP570 is factory calibrated. The calibration data is stored in the EEPROM unique to each IP.
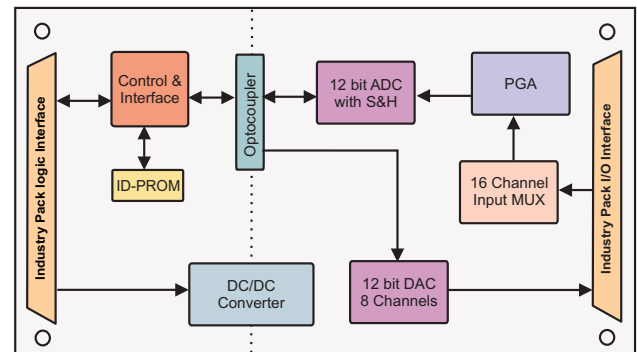


For First-Time-Buyers the Engineering Documentation TIP570-ED is recommended.

The Engineering Documentation includes TIP570-DOC, schematics and data sheets.

Software support (TIP570-SW-xx) for different operating systems is available.

### Technical Information

- ❍ Interface according to IndustryPack specification
- ❍ Identification-PROM supports auto-configuration
- ❍ Single Size IndustryPack
- ❍ 16 channel multiplexed isolated 12 bit analog input
  Input voltage range: +/-10V
  Input gains: 1, 2, 5, 10 or 1, 2, 4, 8
- ❍ 8 channel isolated 12 bit analog output
  Output voltage range: +/-10V
  Output sources and sinks 2mA / 1000pF load
- ❍ Factory calibrated, calibration information in Identification-PROM unique to each IP
- ❍ Operating temperature  -40°C to +85°C

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## Order Information

### RoHS Compliant

**TIP570-10R**   16 Channel Multiplexed Isolated 12 bit ADC with Gain = 1, 2, 5, 10 and 8 Channel Isolated 12 bit DAC

**TIP570-11R**   16 Channel Multiplexed Isolated 12 bit ADC with Gain = 1, 2, 4, 8 and 8 Channel Isolated 12 bit DAC

**TIP570-IO-10R**   Mounting Rail I/O module, provides 50 terminals, 50 pin flat cable

### None RoHS Compliant

TIP570-10   None RoHS compliant version of TIP570-10R

TIP570-11   None RoHS compliant version of TIP570-10R

TIP570-IO-10   None RoHS compliant version of TIP570-IO-10R

### Documentation

**TIP570-DOC**   User Manual
**TIP570-ED**   Engineering Documentation, includes TIP570-DOC

### Software

**TIP570-SW-25**   Integrity Software Support
**TIP570-SW-42**   VxWorks Software Support (Legacy and VxBus-Enabled Software Support)
**TIP570-SW-65**   Windows XPXPE/2000 Software Support
**TIP570-SW-72**   LynxOS Software Support
**TIP570-SW-82**   LiNUX Software Support
**TIP570-SW-95**   QNX 6 Software Support

For other operating systems please contact TEWS.

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