

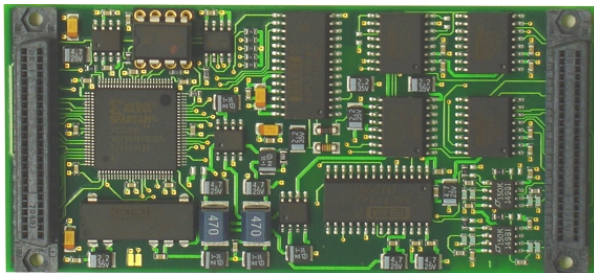
### TIP850 16 Channel 12 bit A/D, 4 Channel 12 bit D/A

#### Application Information

The TIP850 is an IndustryPack® compatible module and offers 16 single-ended or 8 differential channels of 12 bit A/D conversion together with 4 channels of 12 bit D/A conversion.

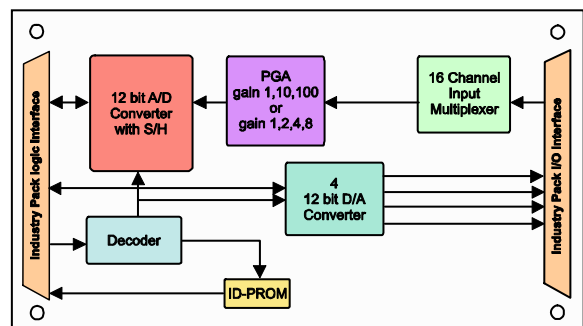
The input multiplexer of the A/D circuit offers analog overvoltage protection of up to 70Vpp. A programmable gain amplifier allows gains of 1, 10, 100 or 1, 2, 4, 8. The full-scale input range is +/-10V. The data acquisition and conversion time is up to 10µs without channel / gain change and up to 62µs with channel / gain change.

The four D/A channels provide simultaneous loading and output voltages of +/-10V. Default value after reset is 0V for all D/A channels. The settling time to 0.01% is 10µs maximum. Each TIP850 is factory calibrated. The calibration information for A/D and D/A circuits are stored in the Identification PROM unique to each IP.



#### Technical Information

- Interface according to IndustryPack specification
- Identification-PROM supports auto-configuration
- Single Size IndustryPack
- 16 single-ended or 8 differential channels of 12 bit A/D conversion
- ESD protected input multiplexer
- Programmable gain amplifier gain 1, 10, 100 or gain 1, 2, 4, 8
- Complete 12 bit A/D converter with internal S/H and reference (100 KHz)
- Full-scale input range +/- 10 V (gain = 1)
- 4 channels of 12 bit D/A conversion, simultaneous load
- Output range +/-10V, 0V after RESET
- Factory calibrated, calibration information in Identification-PROM unique to each IP
- Operating temperature -40°C to +85°C



For First-Time-Buyers the Engineering Documentation TIP850-ED is recommended. The Engineering Documentation includes TIP850-DOC, schematics and data sheets.

Software Support (TIP850-SW-xx) is available for different operating systems.

### Order Information

#### RoHS Compliant

<b>TIP850-10R</b>	16 Single-Ended or 8 Diff. Channels 12 bit A/D, gain 1,10,100 and 4 Channel 12 bit D/A
<b>TIP850-11R</b>	16 Single-Ended or 8 Diff. Channels 12 bit A/D, gain 1,2,4,8 and 4 Channel 12 bit D/A

#### None RoHS Compliant

TIP850-10	None RoHS compliant version of TIP850-10R
TIP850-11	None RoHS compliant version of TIP850-11R

#### Documentation

<b>TIP850-DOC</b>	User Manual
<b>TIP850-ED</b>	Engineering Documentation, includes TIP850-DOC

#### Software

<b>TIP850-SW-25</b>	Integrity Software Support
<b>TIP850-SW-42</b>	VxWorks Software Support (Legacy and VxBus-Enabled Software Support)
<b>TIP850-SW-65</b>	Windows XP/XPE/2000 Software Support
<b>TIP850-SW-72</b>	LynxOS Software Support
<b>TIP850-SW-82</b>	LiNIX Software Support
<b>TIP850-SW-95</b>	QNX 6 Software Support

For other operating systems please contact TEWS.