

## TIP830 8 Channel 12 (16) bit Simultaneous Sampling A/D

### Application Information

The TIP830 family are IndustryPack® compatible modules with 8 independent channels of high resolution 12 bit or 16 bit analog-to-digital conversion. Each channel consists of a Sample and Hold and a 12 bit or 16 bit A/D converter. The maximum time for sample and convert is 25µs for all channels. The full-scale input range is +/-10V.

A start-of-conversion is initiated by software command or via the trigger I/O pin. All eight channels of the TIP830 sample and convert simultaneous.

By connecting the trigger I/O pins of several modules it is possible to expand the simultaneous sample and convert feature to several TIP830 modules.

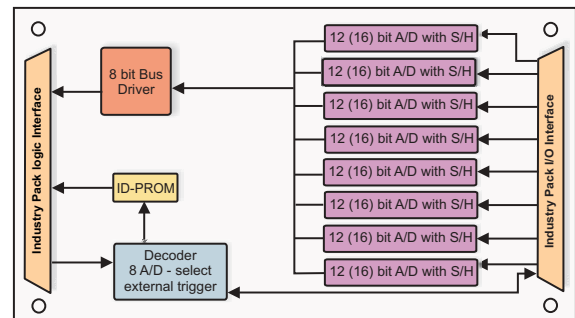


For First-Time-Buyers the engineering documentation TIP830-ED is recommended. The engineering documentation includes TIP830-DOC, schematics and data sheets.

Driver support (TIP830-SW-xx) is available for different operating systems.

### Technical Information

- Interface according to IndustryPack specification
- Identification-PROM supports auto-configuration
- Single Size IndustryPack
- Eight 12 bit (16 bit) A/D converter ( ADS7806/7 )
  - Complete 12 bit (16 bit) sampling A/D converter with internal reference
  - +/- 10 V input, impedance 45 KW
  - Integral linearity error: +/- 0.9LSB (+/- 3LSB)
  - Differential linearity error: +/- 0.9LSB (+3/-2LSB)
  - No missing codes: 12 bits (15 bits)
  - 25 µs maximum for sample and convert
- Factory calibration of gain and offset for each channel, correction parameters stored in ID-PROM
- Sample and convert simultaneous for all 8 channels, expandable to other TIP830 by external trigger I/O pin



### Order Information

|                     |                                                                              |
|---------------------|------------------------------------------------------------------------------|
| <b>TIP830-10</b>    | Eight 12 bit A/D channels, single-ended simultaneous sampling and converting |
| <b>TIP830-20</b>    | Eight 16 bit A/D channels, single-ended simultaneous sampling and converting |
| <b>TIP830-DOC</b>   | User Documentation                                                           |
| <b>TIP830-ED</b>    | Engineering Documentation, includes TIP830-DOC                               |
| <b>TIP830-SW-12</b> | OS-9 Software Support                                                        |
| <b>TIP830-SW-32</b> | pSOS Software Support                                                        |
| <b>TIP830-SW-42</b> | VxWorks Software Support                                                     |
| <b>TIP830-SW-62</b> | Windows NT 4.0 Software Support                                              |
| <b>TIP830-SW-72</b> | LynxOS Software Support                                                      |
| <b>TIP830-SW-82</b> | LiNux Software Support                                                       |
| <b>TIP830-SW-92</b> | QNX 4 Software Support                                                       |
| <b>TIP830-SW-95</b> | QNX 6 Software Support                                                       |