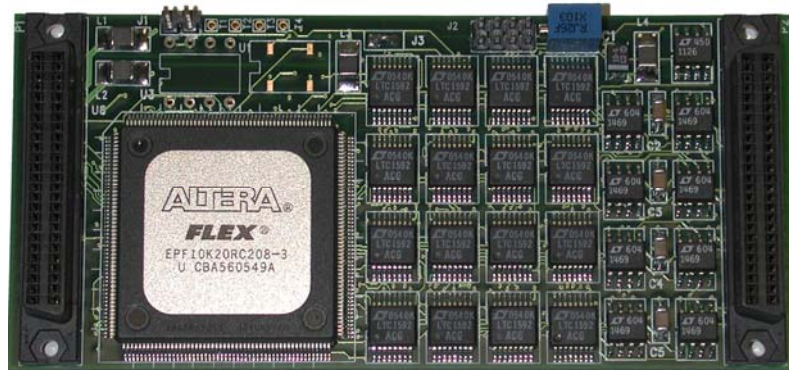# IP-SoftDAC

Summary

The Linear LTC®1588/ LTC1589/LTC1592 are serial input 12-/14-/16-bit multiplying current output DACs that operates from a single 5Volt supply. These SoftSpan DACs can be software-programmed for either uni-polar or bi-polar mode through a 3-wire SPI interface. In either mode, the voltage output range can also be software-programmed. Two output ranges in uni-polar mode and four output ranges in bi-polar mode are available.

The DACs are accurate to 1LSB over the industrial temperature range in both uni-polar and bi-polar modes. True 16-bit 4-quadrant multiplication is achieved with on-chip four quadrant multiplication resistors.

These devices include an internal deglitcher circuit that reduces the glitch impulse to less than 2nV-s (typ).

Software Programmable 2 μSecond DACs
16 channel 16 bit DAC with programmable outputs

IP-SOFTDAC

Features

- 2 μS settling time, 0-5v range
- Six Programmable Output Ranges per channel
- Unipolar: 0V to 5V, 0V to 10V
- Bipolar Mode: ±5V, ±10V, ±2.5V,–2.5V to 7.5V
- 1LSB Max DNL and INL Over the Industrial Temperature Range
- Glitch Impulse < 2nV-s
- Power-On Reset to 0V
- Flash ram for configuration file
- Two stage buffers
- Global output buffer w/ internal or external triggering

Applications

- Process Control and Industrial Automation
- Precision Instrumentation
- Direct Digital Waveform Generation
- Software-Controlled Gain Adjustment
- Automatic Test Equipment

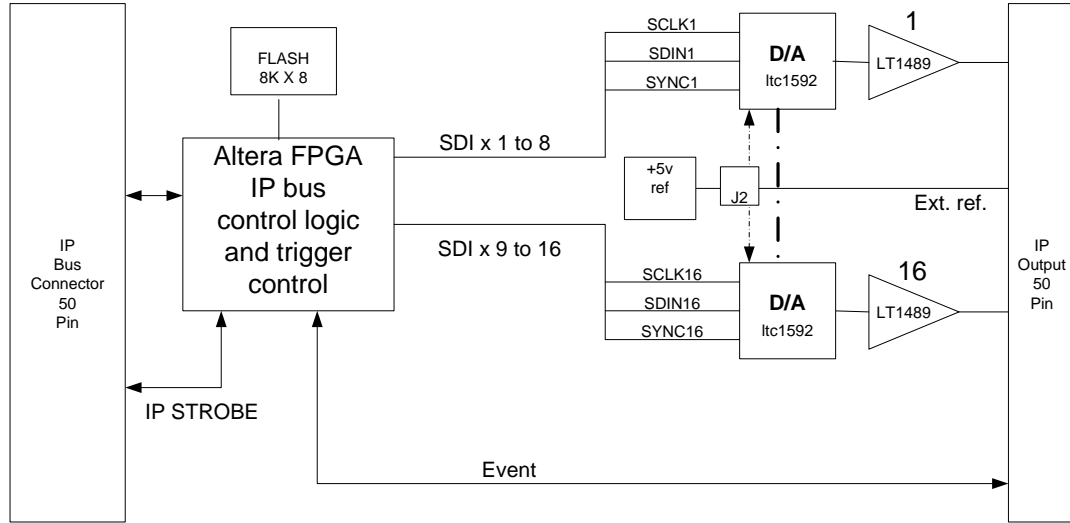### Programmable via

- IP Bus

IP interface

- 8/32 Mhz clock
- 16 bit data

Operating: Environmental

- Operating temperature
    Commercial: 0 to +55 °C
    Optional: -25°C to +80°C
- Non-operating: -40°C to 85 °C
- Airflow requirement: .5 CFM
- Humidity: 5 to 90% (non-cond.)
- Altitude: 0 to 10'000 ft

Mechanical: Environmental

- Size: Vita 4 Type 1 IP
    1.8" x 3.9"
- Power: +5, +12, -12 volts
- Vibration: 0.5G RMS
    20-2000 Hz rand
- Shock: 20 G, 11 ms, ½ sine
- Weight: tbd
- MTBF: >250000 hours

Functional Block Diagram

ORDERING INFORMATION

Part Number:	IP-SoftDAC	16 Channel DAC Industry Pack Module
	IP-SoftDAC-I	Same as above with -40 to +85 C

Optional Accessories

Part Number :	TB-50-HDR	50 pin terminal block and 1meter flat ribbon cable
	CBL-50-HDR	50 pin,1meter flat ribbon cable, IDC header connector

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For ordering information: sales@alphitech.com   Please visit our web site at www.alphitech.com