

Summary

The Linear LTC®1588/LTC1589/LTC1592 are serial input 12-/14-/16-bit multiplying current output DACs that operate 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-M

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
- 64k DAC buffers
- 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

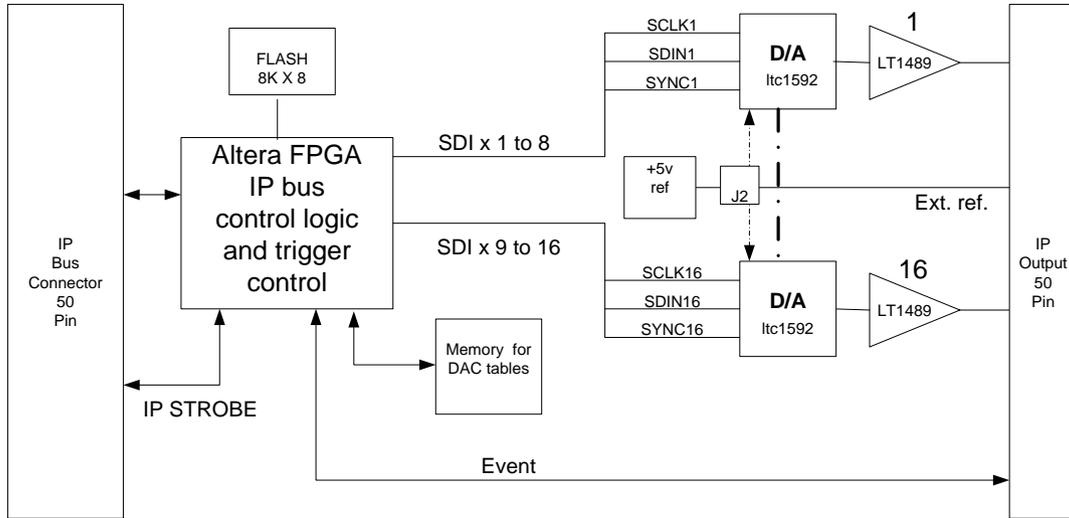
- 8/32 Mhz clock
- 16 bit data

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-M	16 Channel with Memory DAC Industry Pack Module
	IP-SoftDAC-M-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

Alphi Technology Corporation
 1898 E. Southern Ave.,
 Tempe, Arizona 85282, USA
 Tel: (480) 838 2428
 Fax: (480) 838 4477

825-00-000-4100

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

Products mentioned are trademarks or registered trademarks of their respective holders. Alphi Technology believes this information is accurate as of its publication date and is not responsible for any inadvertent errors. The information contained herein is subject to change without notice. Copyright © 2005 Alphi Technology Corp. document number: 800-0-001-4100 rev.p