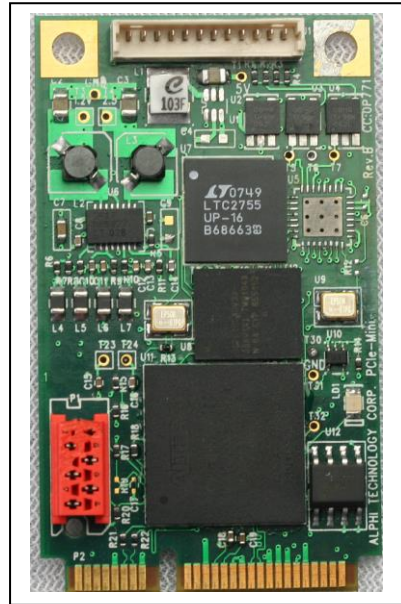


PCIexpress Mini
4 Ch 16-bit D/A Software Programmable 2 μ Second DACs

Features

- 16-bit D/A converter
- Settling time 2 μ sec, 0-5V range
- 500 KSPS throughput
- Six Programmable Output Ranges per channel
- Up to 30ma Output Drive
- requires +/-12V External Power Supply
- Unipolar: 0V to 5V, 0V to 10V
- Bipolar Mode: $\pm 5V$, $\pm 10V$, $\pm 2.5V$, $-2.5V$ to 7.5V, ± 10 mA continuous, ± 30 mA max
- Multiple output spans available
- Temperature monitoring function
- Simultaneous or single update of D/A converter outputs
- Power-On Reset to 0V
- Two stage buffers
- Global output buffer w/ internal or external triggering



Block Diagram and Operational Overview

The PCIe-Mini-DA4 is a PCIexpress Mini board with a total of 4 voltage outputs D/A. Each output is followed by a buffer able to provide +/- 30 mA.

Special function code allows global updates of all channels or by a group of eight channels at a time. Standard ping-pong output registers for each channel or optional data RAM allows waveform generation with minimum processor involvement.

An internal register sets the sampling rate of the internal sampling rate generator. The card operates in one of 3 modes:

- State machine providing automatic update and load on sampling clock.
- Manual load with update on sampling clock
- Manual load and update

Application:

This is a perfect solution for:

- Process control
- Industrial control
- Precision instrumentation
- Data acquisition systems (DAS)
- Multiaxis positioning systems

D/A Device Specifications:

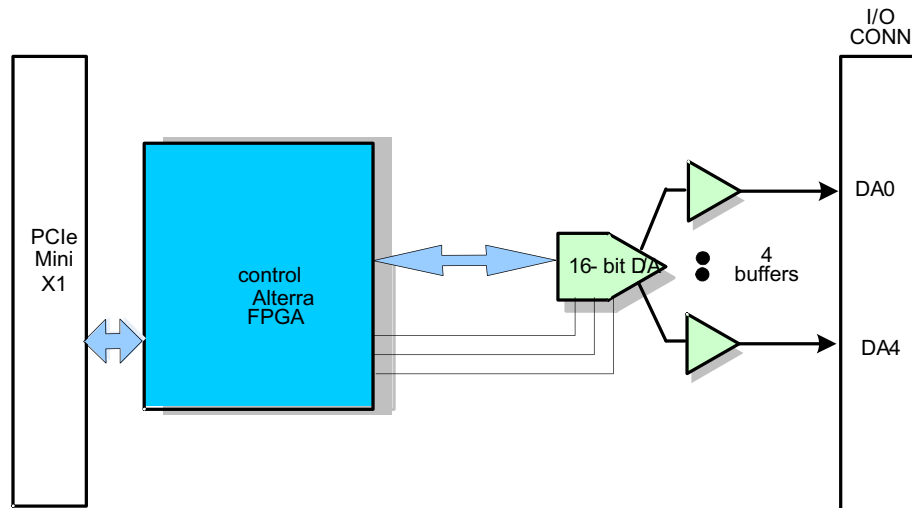
- 16-bit, monotonic D/A converter
- Maximum 16-Bit INL Error: ± 1 LSB over Temperature
- 4 output channels per D/A
- 2 μ s Settling Time to ± 1 LSB
- Low Glitch Impulse 1nV•s
- Program or Pin-Strap Six Output Ranges
- Unipolar: 0V to 5V, 0V to 10V
- Bipolar: $\pm 5V$, $\pm 10V$, $\pm 2.5V$, $-2.5V$ to 7.5V
- Power-On Reset to 0V

Mechanical: Environmental:

- Size – Mini PCIe Module
30 mm x 50.95mm
- Power – T.B.D.
- Front panel I/O
- Vibration – 0.5G, 20-2000 Hz rand
- Shock – 20G, 11 msec, ½ sine
- Weight – tbd
- MTBF – >250,000 hours

Operating Environment

- Operating temperature
-40 °C to +85 °C
- Airflow requirement – 5 CFM
- Humidity – 5 to 90% (non-cond)
- Altitude – 0 to 10,000 feet



Ordering Information

Part number: PCIe-Mini-DA4 4 Channels 16 Bits DA,
 Ext Temp: -40 °C to +85 °C