

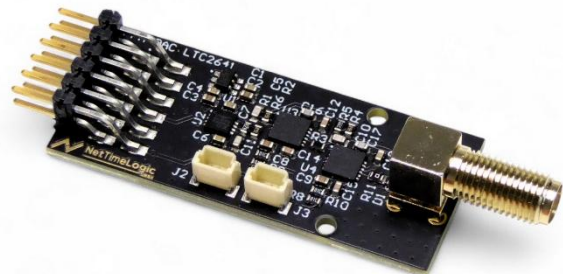
PmDacLTC2641

The Pmod™ DAC LTC2641 module provides high-speed, high-resolution digital-to-analog conversion based on the LTC2641 12-bit DAC. The DAC accepts digital data over a 50 MHz SPI interface at 3.3 V logic levels and supports update rates of up to 2 MSPS. The on-board precision analog back-end amplifies the DAC's 0–3.3 V output range to a ± 24 V output range, enabling direct interfacing with high-voltage analog systems. The amplified output is delivered via a robust SMA connector for optimal signal quality. A precision 3.3 V reference voltage ensures consistent DAC performance and output accuracy. The module is optimized for analog signals up to 200 kHz, making it ideal for precision timing and communication applications such as IRIG-B/G encoding, as well as general-purpose waveform generation and test equipment. The module needs to be powered by an external power supply (e.g., PmPower) for amplifying the signal.

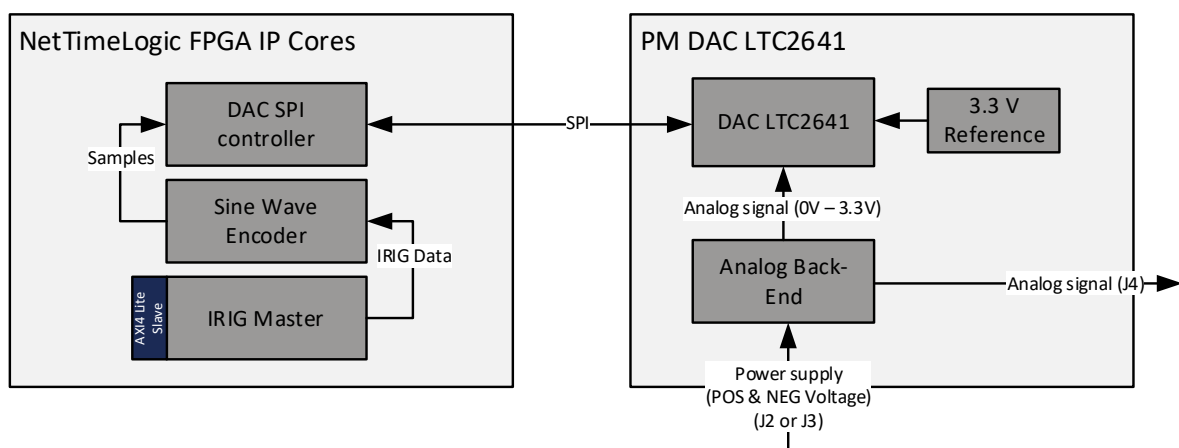
Key Features:

- LTC 2641 12-bit DAC with up to 2 MSPS update rate
- Analog backend-end for ± 24 V signal output range
- SMA connector for robust, low-loss signal output
- 50 MHz SPI digital input
- Compatible with Pm ADC ADS7046 and Pm Power

Module:



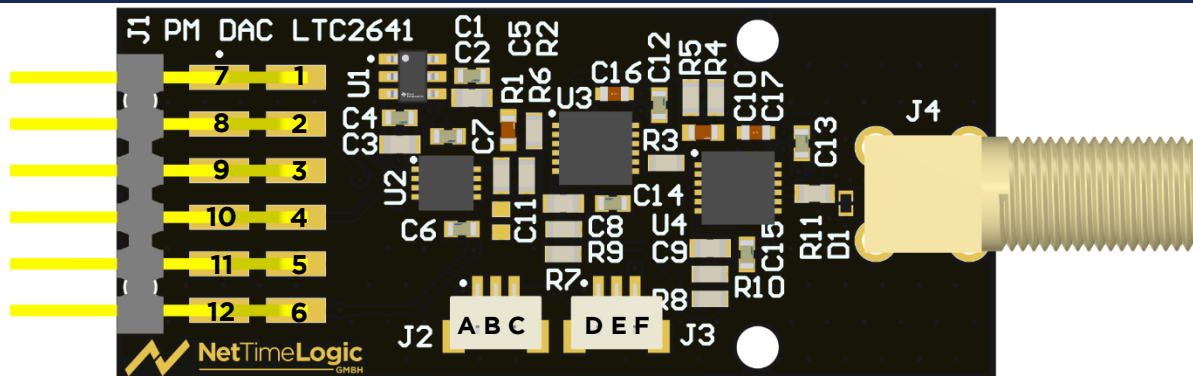
Block Diagram:



Specification:

LTC2641	12-bit DAC with up to 2 MSPS update rate
Data Interface	50 MHz capable 3-wire SPI interface (3.3 V logic)
PMOD Power J1	30 mA @ 3.3V
External Power J2/J3	Required by Operational Amplifiers to amplify the signal max. 45 mA @ ± 24 V, max. 240 mA @ ± 5 V
Analog signal	Outputs analog signal up to ± 24 V

Pmod™ Pins and Module Overview:



Pin	Signal	Direction	Description
Header J1 (Pmod™)			
1	CS	In	SPI Chip select signal
2	SDI	In	SPI Data In
3	NC	-	Not connected
4	SCLK	In	SPI Clock
5	GND		GND connection to the carrier board
6	VCC		3.3V supply from the carrier board
7	NC	-	Not connected
8	NC	-	Not connected
9	NC	-	Not connected
10	NC	-	Not connected
11	GND		GND connection to the carrier board
12	VCC		3.3V supply from the carrier board
JST J2			
A	VEXT_POS	In/Out	Positive Rail from external power supply
B	GND		GND connection to the carrier board
C	VEXT_NEG	In/Out	Negative Rail from external power supply
JST J3			
D	VEXT_POS	In/Out	Positive Rail from external power supply
E	GND		GND connection to the carrier board
F	VEXT_NEG	In/Out	Negative Rail from external power supply
SMA			
J4	ANALOG_OUT	Out	Outgoing Analog signal