

Rugged Waveform Generator Board

PRODUCT DESCRIPTION

Rugged Waveform Generator Board is used to generate LFM waveforms with bandwidth up to 540 Mhz and pulse-width up to 200 μ s. This module provides two wide bandwidth waveforms.

The waveforms are generated depending on the trigger input signals. The unit can be used for user defined waveform generation.

The center frequency of waveforms are fixed and the pulse width and bandwidth can be varied according to the 'Bandwidth' control input.

The board is used part of exciter system in airborne radar application.

KEY FEATURES

- Dual channel waveform generation up to 200 μ s pulse width
- I & Q method for waveform generation supporting up to +/- 270 MHz bandwidth
- Holds upto 16 user selectable waveform patterns per channel
- Waveform and bandwidth selection from external control
- External or internal reference clock
- Health status monitoring over status ports
- External LO for carrier frequency (default filter set for 1600 MHz)
- Health monitoring and built-in self test



SPECIFICATIONS

FPGA

- Xilinx Virtex-5 LX85 FPGA

Interfaces

- DB connector for control and power
- BMA connectors for blind mate RF connections

Software / IP

- On-chip 32-bit MicroBlaze processor
- Command line interface for
 - User access for updating waveform patterns
 - Health monitoring
 - Built-in self test



Additional Information

- Dual DAC
- 4 GB DDR2 SDRAM waveform pattern memory
- Configuration flash for FPGA self-configuration at power-ON
- Pattern generation using Matlab
- All connections available over the backplane

MECHANICAL

- Conduction-cooled custom board in 6U width

POWER CONSUMPTION

- The unit consumes 30W
- Input voltage is 5V

ENVIRONMENTAL

- Qualification : CEMILAC approved
MIL-STD-810F
MIL-STD-461E
- Temperature range : -40°C and +85°C (Storage)
-40°C and +55°C (Operational)

PART NUMBER(S)

CB10D0	Rugged Waveform Generator Board
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