

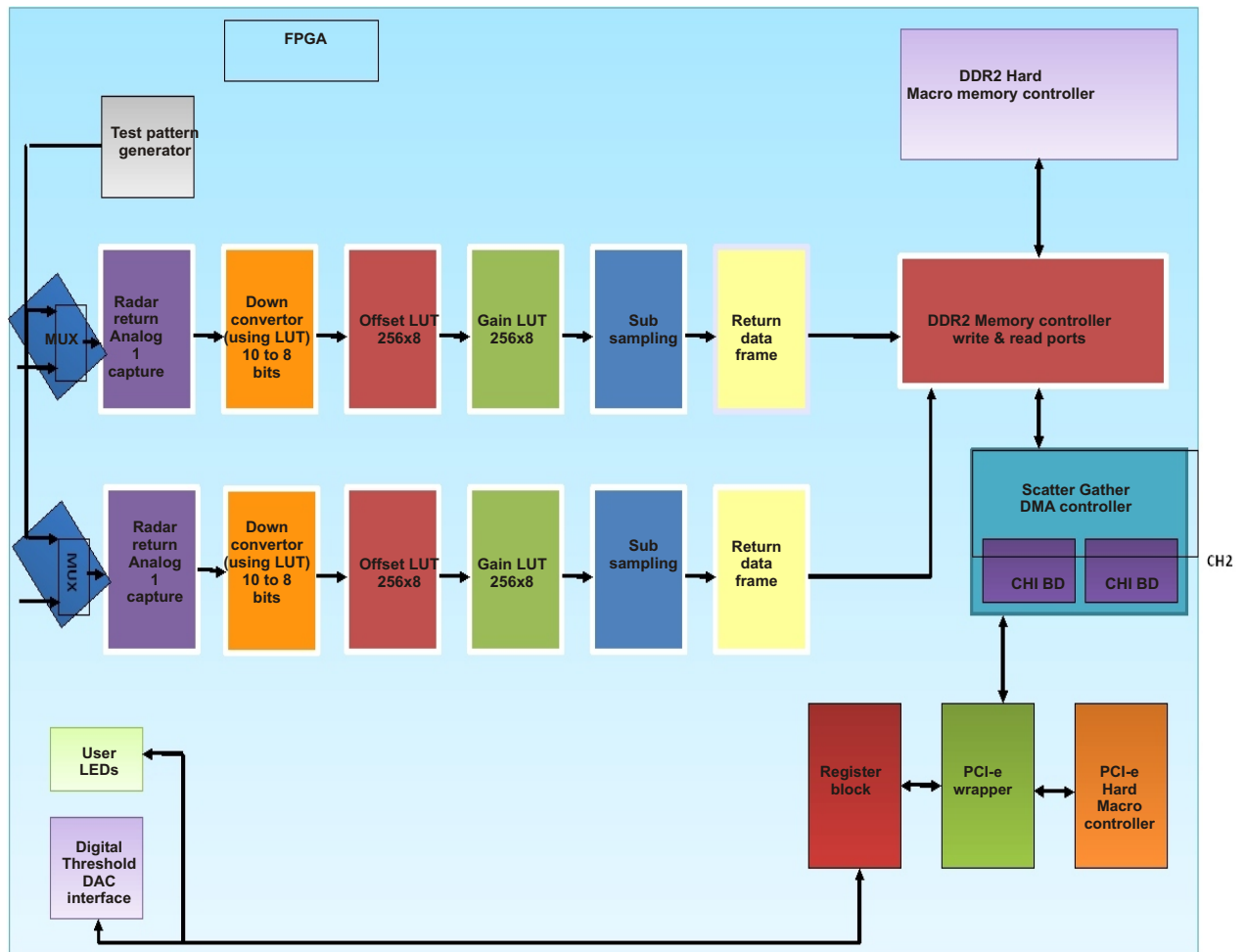
Overview

Iwave's radar interface card is designed around and Lattice FPGA with the PMC/XMC Industry standard form factor. RIC is a high performance, dual-channel radar interface board that accepts and processes analog and radar digital signals and Provides a PCI express interface to applications.

Features

- ❖ Lattice ECP3 FPGA
- ❖ Lattice MachXO CPLD for FPGA configuration
- ❖ Memory
 - 2MB NOR Flash for FPGA
 - 128MB DDR2 SDRAM
- ❖ Analog
 - Single channel ADC for digitization of radar video (2nos)
- ❖ Digital
 - Octal Channel DAC for controlling the threshold voltage (-5V to +5V, 0 to +10V)
 - Differential Line RX for digital inputs (differential & single-ended)
- ❖ Radar Video Inputs
 - Two Analog video inputs
 - Differential, single-ended or high impedance
 - Eight digital inputs, RS-422 or TTL
 - Clock input
 - 75 Ohms termination (single-ended), 120 Ohms (differential), 1k Ohms (high impedance)
- ❖ Dual-sync (Trigger) Input
 - Differential, single-ended or high impedance
 - 75 Ohms termination (single-ended), 120 Ohms (differential), 1k Ohms (high impedance)
 - 0 to +25V input
- ❖ Turning Data
 - ACP/ARP
 - Differential, single-ended or high impedance
 - 75 Ohms termination (single-ended), 120 Ohms (differential), 1k Ohms (high impedance)
- ❖ Radar Data Output
 - PCI-e interface to host processor
 - 32-bit, 33 MHz PCI interface to host processor (optional)
- ❖ Connectors
 - 36 way MDR socket for all radar video, trigger and azimuth signals
 - JTAG for FPGA & CPLD
 - XMC connector for PCI-e interface to host processor
 - PMC connector for PCI interface to host processor (optional)
- ❖ Status LEDs
 - ACP & Sync status LEDs – 4nos
 - Debug LEDs – 4nos
 - Power Supply indication LEDs
- ❖ Power
 - +12V, -12V, 5V & 3.3V DC Power In from XMC connector
 - 5V, 1.8V, 2.5V & 1.2V – onboard power regulators
- ❖ Physical & Mechanical
 - Single width XMC form factor
 - Dimensions: 74 x 149 mm IEEE 1386
- ❖ Environmental
 - Air-cooled
 - Operating temperature -20 to +65°C
 - Storage temperature -40 to +85°C
- ❖ Misc
 - Quick Switch for PCI signals (optional)

Radar Capture System FPGA Implementation



About Us

iWave Systems Technologies is an embedded Hardware and Software Turnkey Design Services company, focused on providing integrated solutions for developing innovative products and systems in the areas of Communication, Consumer electronics and Multimedia. iWave offers complete turnkey solutions for systems engineering and product development.

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