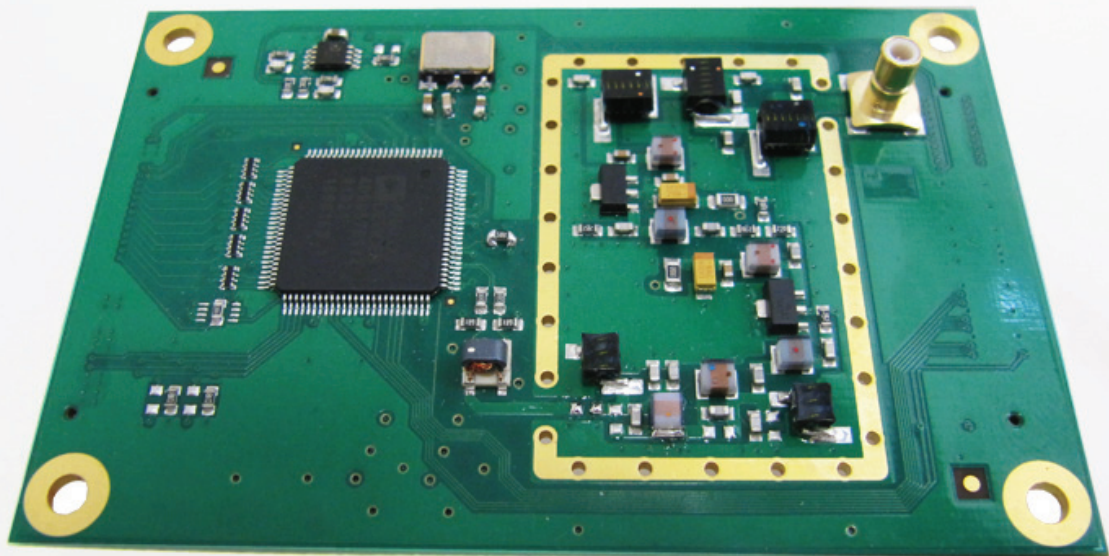


DI-6X TX-IF

TX component for DI-6X main board



DI-6X TX-IF is a very flexible **XILINX** based platform for a wide range of applications. The Ultimate **XILINX VirtexVI** with different high speed connections allows **DI-6X TX-IF** to be the right platform for the next generation of equipments.

The **DI-6X TX-IF** is built with the AD9957 component.

AD9957

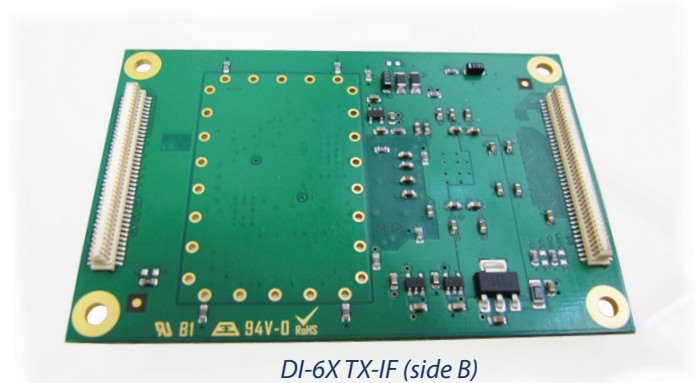
The AD9957 functions as a universal I/Q modulator and agile upconverter for communications systems where cost, size, power consumption, and dynamic performance are critical. The AD9957 integrates a high speed, direct digital synthesizer (DDS), a high performance, high speed, 14-bit digital-to-analog converter (DAC), clock multiplier circuitry, digital filters, and other DSP functions onto a single chip. It provides baseband upconversion for data transmission in a wired or wireless communications system.

The AD9957 is the third offering in a family of quadrature digital upconverters (QDUCs) that includes the AD9857 and AD9856. It offers performance gains in operating speed, power consumption, and spectral performance. Unlike its predecessors, it supports a 16-bit serial input mode for I/Q baseband data.

The device can alternatively be programmed to operate either as a single tone, sinusoidal source or as an interpolating DAC. The reference clock input circuitry includes a TCXO tunable oscillator or a clock coming from motherboard FPGA.

Features

- 1 GSPS internal clock speed (up to 400 MHz analog output)
- Integrated 1 GSPS 14-bit DAC
- 250 MSPS input data rate
- Phase noise ≤ -125 dBc/Hz (400 MHz carrier @ 1 kHz offset)
- Excellent dynamic performance >80 dB narrow-band SFDR



DI-6X TX-IF (side B)

Applications

- HFC data, telephony, and video modems
- Wireless base station transmissions
- Broadband communications transmissions
- Internet telephony