

LXD21K4

Four channels 310 Msps DAC with 16-bits resolution

The LX21K4 provides four 16-bit D/A channels with up to 310 Msps data rate and a 1.24 Gsps update rate. This is the only FMC card on the market to offer this number of channels with LVDS digital signalling interfaces. The design is based on the Analog devices AD9142A digital to analog converters.

Analog output

Depending on the application requirements it is possible to order the LX21K4 with either a DC coupled or an AC coupled analog front end. The DC coupled interface is meant for signal acquisitions and playback in the first Nyquist zone while the AC coupled inputs also offers the option for signal acquisition and playback in the second Nyquist zone.

16 bits

The DAC offers 16-bits resolution further contributing to achieve best in class signal to noise ratios.

LVDS signaling

The DAC devices make use of LVDS signaling for their data interfaces. This allows easy integration of the LX21K4 into user FPGA designs without the need

to acquire expensive and complex JESD204B interface cores. Thanks to the low pin count implementation the LX21K4 will work on all Xilinx development boards as well as the Logic-X FPGA FMC carrier boards.

Clock tree

The onboard low noise clock generator ensures easy integration into small single board systems as well as standalone operation. For larger systems it is possible to easily synchronize multiple boards by providing an external reference clock. This is a special feature offered by the onboard clock PLL.

Applications

Systems that will benefit greatly from this product are:

- MIMO Applications
- Experimental Physics
- Analog playback systems
- Aerospace and test instrumentation
- Radar waveform generators
- Medical systems
- Telecommunication systems
- Software defined radio (SDR)

Key Features:

- FPGA Mezzanine (LPC)
- 4 channels DAC
- 1240 MHz DAC update rate
- 16-bit Resolution
- AC or DC coupled
- LVDS signaling
- Flexible clock tree
- External Trigger input or output
- Advanced power monitoring
- VITA 57.1 and 57.4 compatible



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Specifications

Analog output

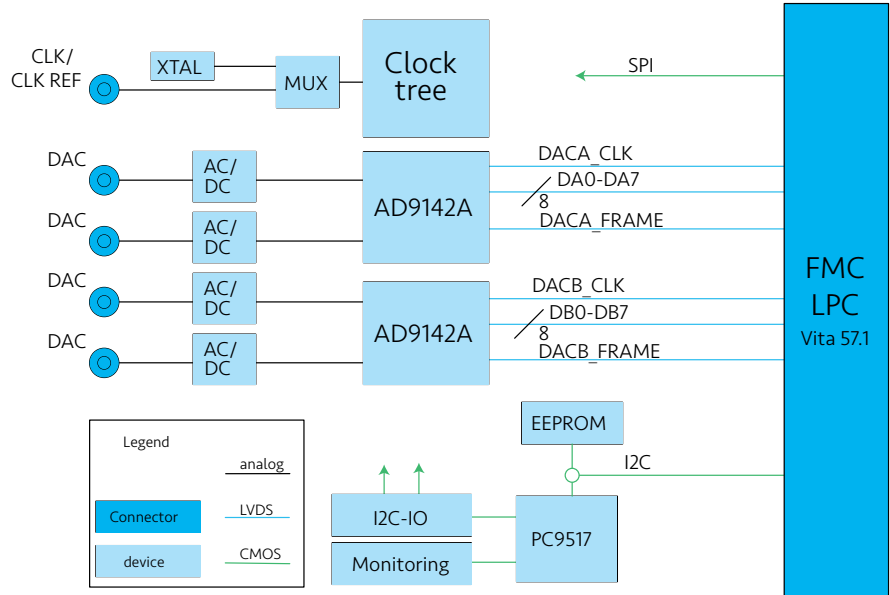
- AC or DC coupling
- Bandwidth AC 10 MHz -400 MHz
- Bandwidth DC DC -200 MHz
- AC Full scale output power +6 dBm
- DC Full scale output power +12 dBm
- Impedance 50 Ω
- SSMC or MMCX (default)

Digital to Analog conversion

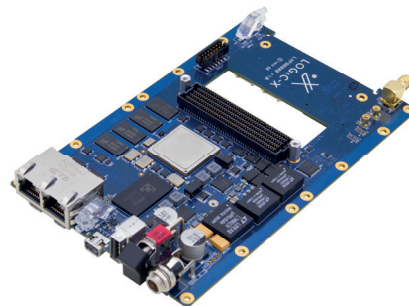
- FS = Max 1.6 Gsps
- Data rate =Max 575 Gsps
- 16 bit
- SFDR @ 200MHz 85 dBc

Mechanical

- Vita 57.1 Low Pin Count FMC
- Vita 57.4 compatible
- Convection and conduction cooled
- SSMC or MMCX connectors



Compatible with LXF90K0



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