

# LXD11K4

## Four channels 310 Msps ADC with 16-bits resolution

The LXD11K4 provides four 16-bit A/D channels with up to 310 Msps data rate. All the data interfaces are based on LVCMOS and LVDS signalling. The design is based on the Analog devices AD9652 analog to digital converters.

### Analog input

Depending on the application requirements it is possible to order the LXD11K4 with either a DC coupled or an AC coupled analog front end. The DC coupled interface is meant for signal acquisitions in the first Nyquist zone while the AC coupled inputs also offers the option for signal acquisition in the second Nyquist zone.

### 16 bits

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

### LVDS signaling

The ADC devices make use of LVDS signaling for their data interfaces. This allows easy integration of the LXD11K4 into user FPGA designs without the need to acquire expensive and complex JESD204B interface cores. Furthermore the low pin count implementation make

sure the card can be used 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
- Digital Beam Forming
- Experimental Physics
- Analog record and playback systems
- Aerospace and test instrumentation
- Radar waveform generators and receivers
- Medical systems
- Telecommunication systems
- Software defined radio (SDR)

### Key Features:

- FPGA Mezzanine (LPC)
- 4 channels ADC
- 310 MHz ADC 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 input

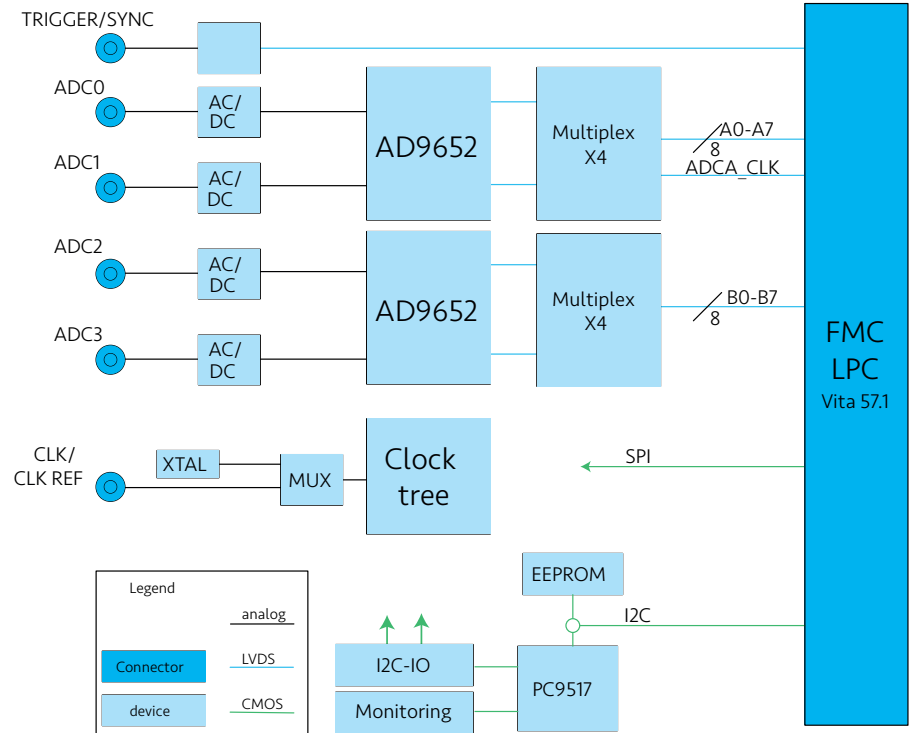
- AC or DC coupling
- Bandwidth AC 10 MHz -400 MHz
- Bandwidth DC DC -200 MHz
- AC Full scale input power +6 dBm
- DC Full scale input power +12 dBm
- Impedance 50  $\Omega$
- SSMC or MMCX (default)

### Analog to Digital Conversion

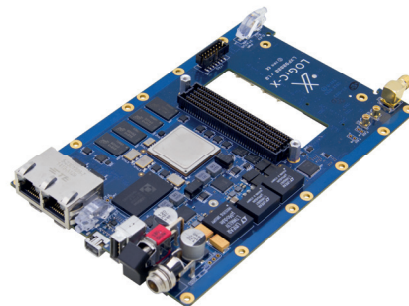
- FS = Max 310 Msps
- 16 bits
- SNR @ 70MHz 75 dFs
- SFDR @ 70MHz 87 dBc
- SNR @ 170MHz 73.7 dFs
- SFDR @ 170MHz 85 dBc
- ENOB @ 70MHz 12 bits

### Mechanical

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



Compatible with LXF90K0



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