

FMC-NKS -K017-PCIe-A Low Pin Count FMC Carrier Kintex-7 Processing PCIe Card

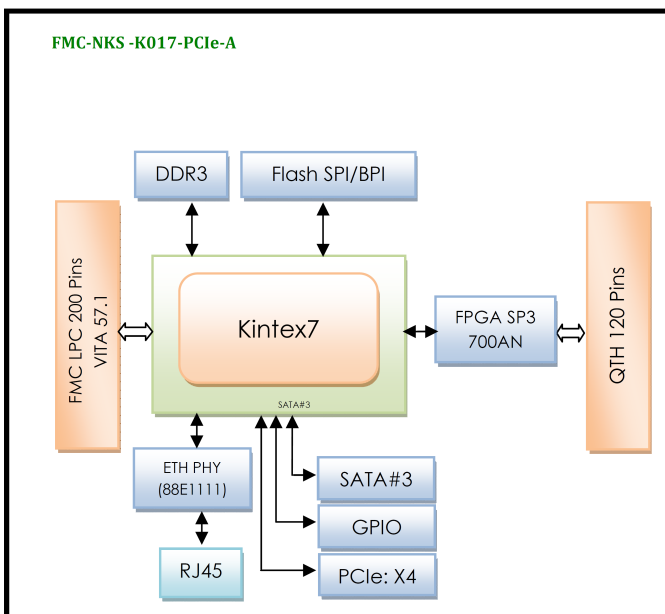
Description

The FMC-NKS-K017-PCIe-A board is a high performance FMC industrial carrier card based on the Xilinx Kintex-7 FPGA family and plugged into a serial PCIe bus system unit supporting 1x and 4x PCIe data paths, Ethernet10/100/1000 and SATA. This board also provides a developed platform for designing and verifying Kintex-7 FPGA based PCIe and stand-alone applications. Communication with a host computer via the PCIe bus and other interfaces enables users to control the card, modify algorithm settings and process real-time signals. The on-board FPGA Mezzanine Connectors (FMC) can make a high bandwidth data transfer channel with VITA 57.1 standard modules.

Features

- Kintex XC7K70T-1FBG676C Xilinx Device Compatible with 160T, 325T and 410T Kintex-7 Family
- Spartan-3 XC3S700AN
- 3x SATA ii, iii
- PCI Express x4 Edge Connector
- FMC LPC for ADC/DAC FMC Modules Connect to FPGA
- QTH Connector Connect to FPGA Spartan-3
- 4Gb DDR3 Component Memory
- Ethernet PHY 10/100/1000 Interface with RJ-45 Connector
- USB JTAG Module
- User Push-button, Switches, LEDs
- Multi-boot Configuration
- Power on/off Slide Switch
- 12V PCIe HDD Connector or External Voltage Supply
- Physical Dimensions (L: 185 mm, W: 135 mm)
- Industrial Temperature Range (0°C to 85°C)
- Operation System Support: Windows & Linux

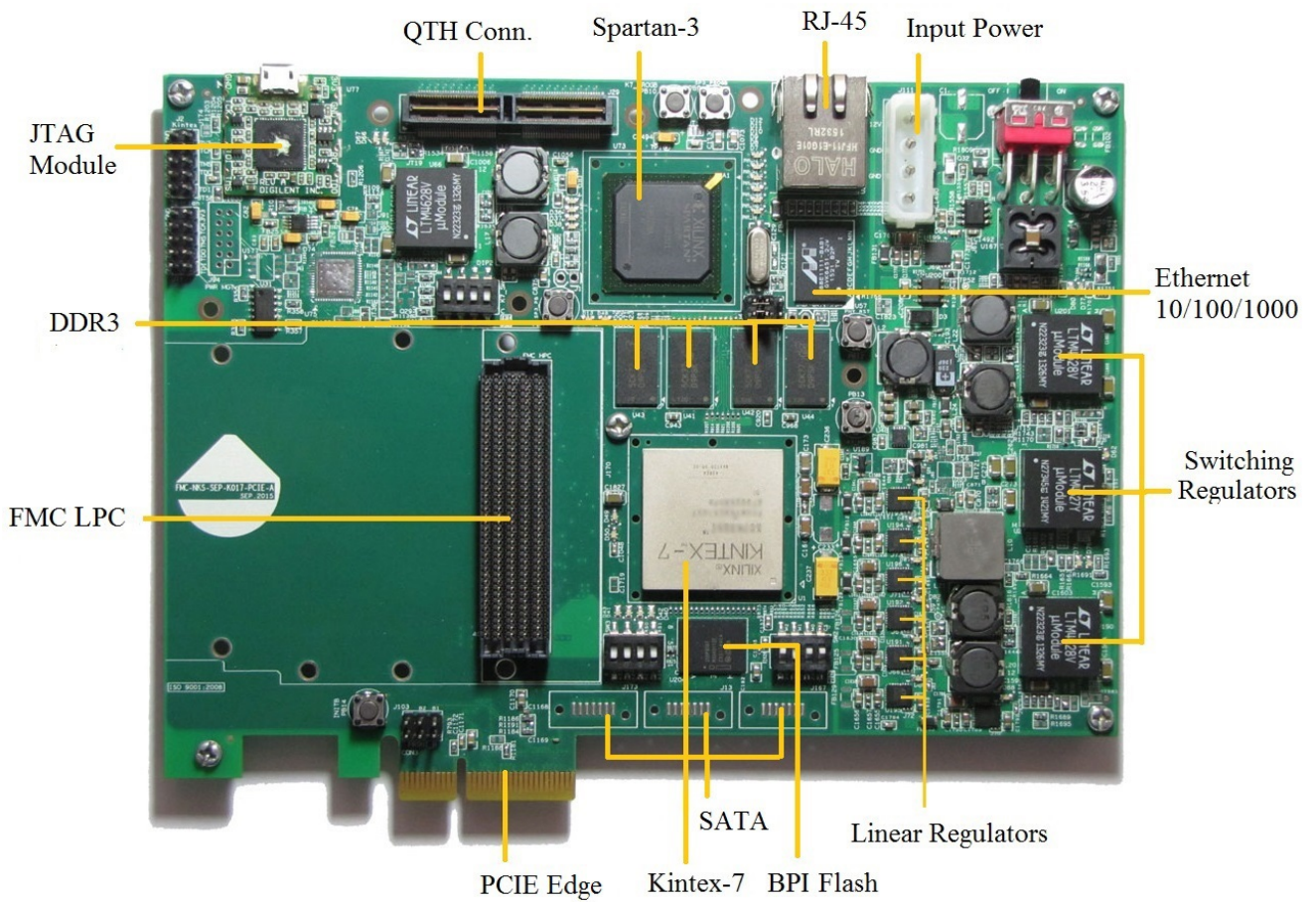
Functional Block Diagram



Application

- RADAR/SONAR
- Communications
- Multimode Digital Receivers
- Ultrasound Equipment
- Broadband data Applications

Board Features



FMC-NKS-401000 High Pin Count FMC Module 4-Channel 10-bit ADC 80MSPS

Description

The FMC-NKS-401000 is a 4-channel 10-bit ADC which can provide synchronous and maximum sampling rate at 80MSPS. This module was designed based on dual-channel AD9204 ADC of Analog Device Company with DDR LVDS or CMOS outputs. Because of containing a FMC-HPC connector, FMC-NKS-401000 is mechanically and electrically compliant to VITA 57.1 standard. Controlling of clock source, sampling frequency and calibration by a SPI BUS are its other features. The clock sampling can be provided from an external or internal source and then send to distribution clock unit. Additionally a trigger input for customized sampling control is available. This module can use on every carrier card which follows the VITA 57.1 standards; therefore it can have the maximum data throughput and minimum latency.

Features

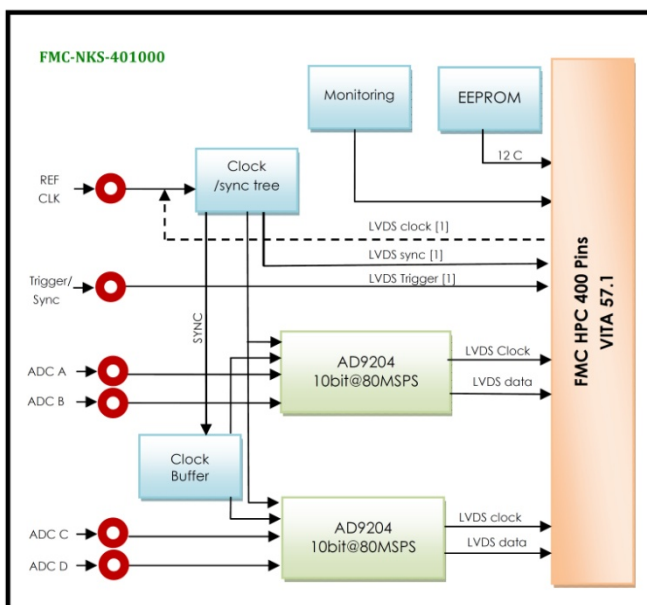
ADC's:

- 4 Channels, 10-bit Resolution, 80 MSPS
- Differential Analog Input with 650MHz Bandwidth
- Analog Input Filter Options
- SNR = 75 dBFS @ 70 MHz and 80 MSPS
- SFDR = 86 dBc @ 70 MHz and 80 MSPS
- ENOB = 12.5 Bits @ 70 MHz and 80 MSPS
- Xtalk Isolation > 95dB
- Low Power: 750 mW @ 80 MSPS
- High Performance AC-Coupled Analog Input
- 1.8 V Analog Supply Operation
- 1.8 V CMOS or LVDS Output Supply
- Flexible Analog Input Range: 1V p-p to 2V p-p
- Serial Port Control
- Pin Compatible with AD9258, AD9251, AD9231, AD9650 and AD9204.

Other's:

- VITA 57.1 Compliant
- FMC Interface Connector for Digital Output, Power LEDs and Single-Ended MCX Connector for AIN, AOUT& EXTCLK
- Flexible Clock Tree Enables (Internal Clock, External Clock, Internal Clock with External Reference)
- Direct ADC Connection to Host FPGA Ensures
- Operating Temperature: -40°C to +85°C (Industrial)
- Physical Dimensions (L: 83.8 mm, W: 69 mm)

Functional Block Diagram

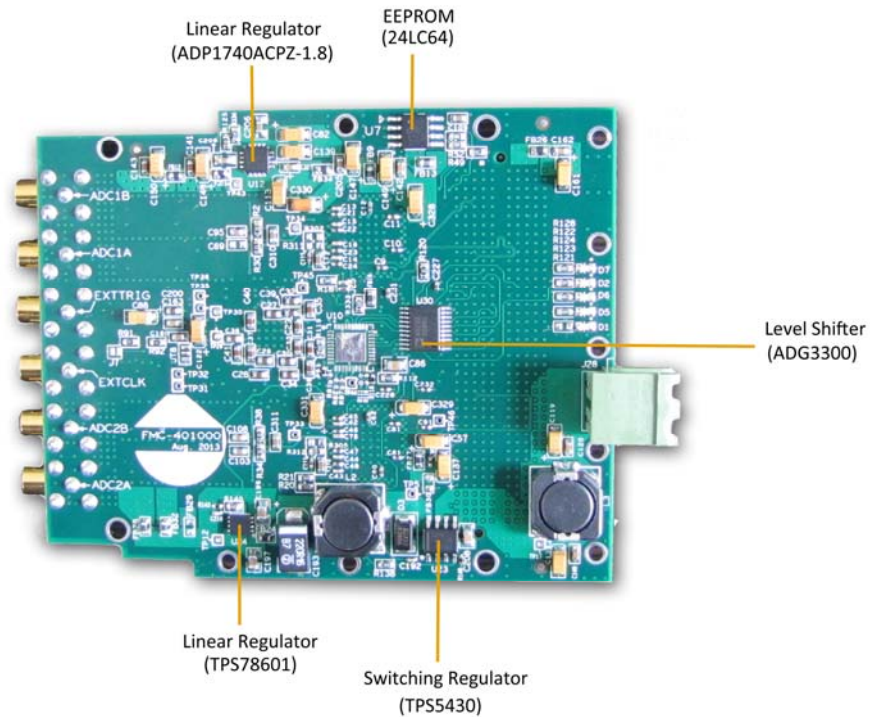
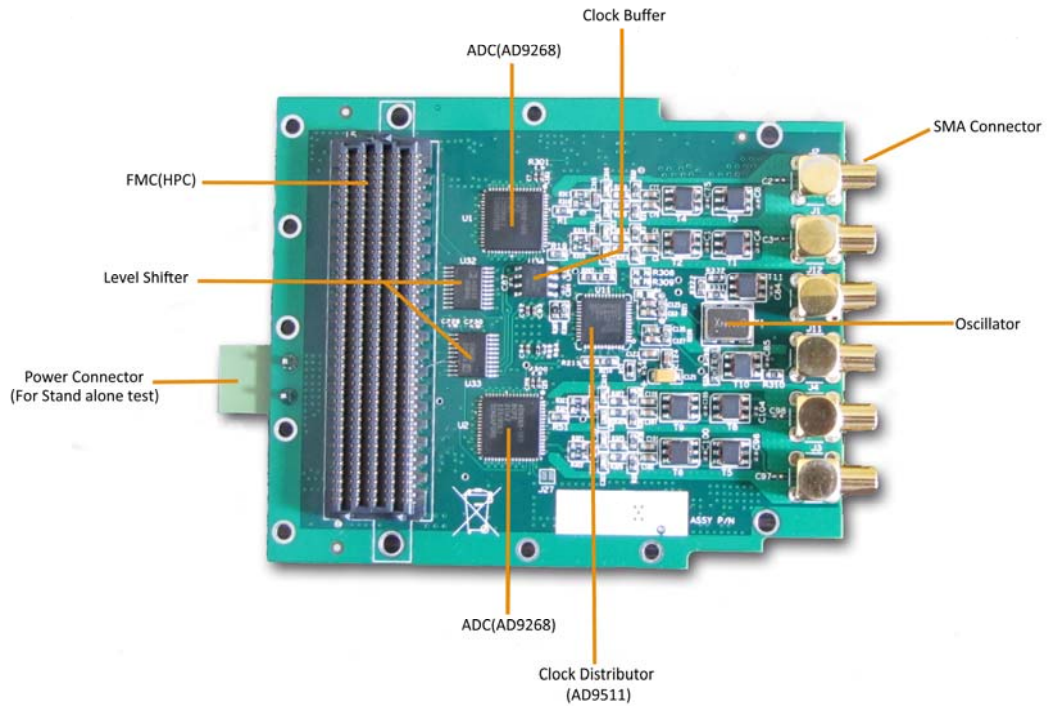


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Application

- RADAR/SONAR
- Medical Equipment
- Multimode digital receivers (3G)
- GSM, EDGE, W-CDMA, LTE
- CDMA2000, WiMAX, TD-SCDMA

Board Features



Compatibility Table

Platform	Compatibility
FMC-NKS016-PCIE-A	Yes
FMC-NKS106-PCI-A	Yes
FMC-NKS-V106-A	Yes
VITA57.1 Carrier Cards	Yes

Order Information

