

## 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

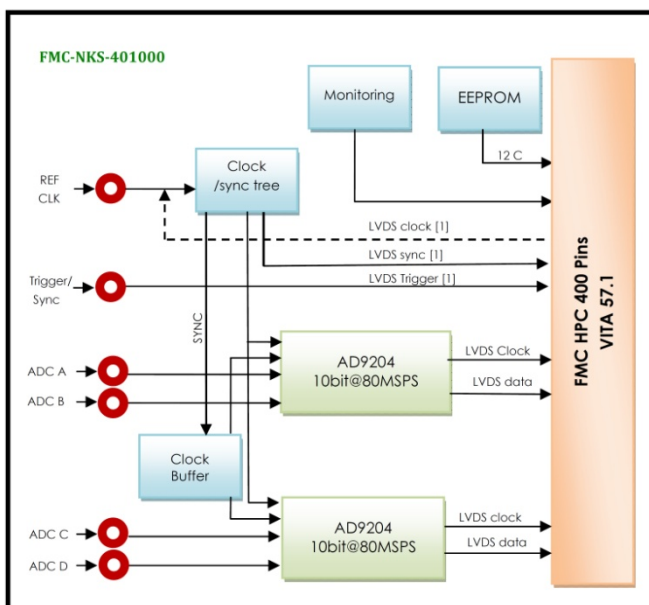
#### ADC's:

- 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



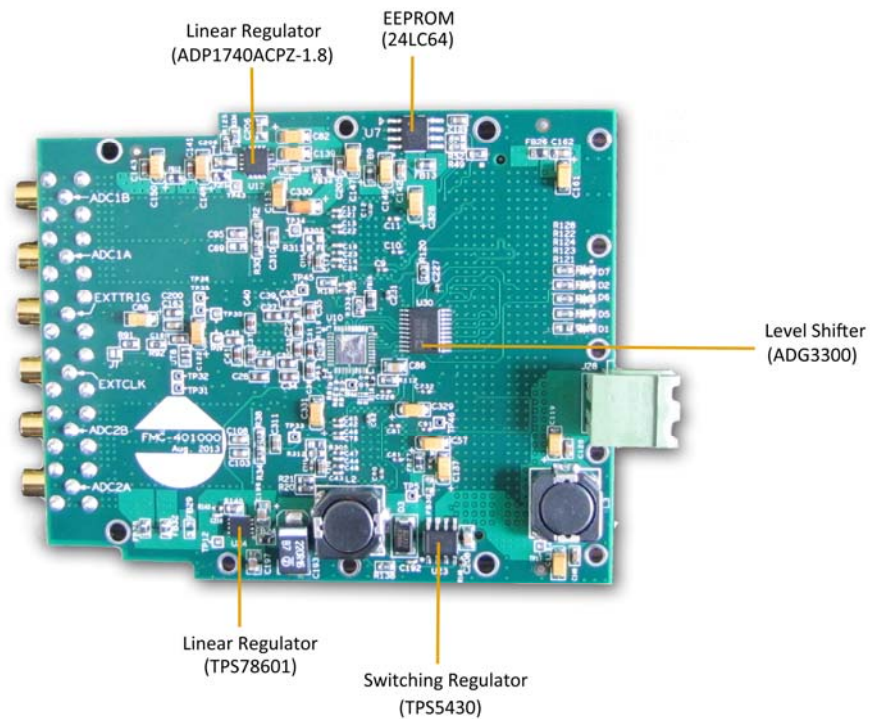
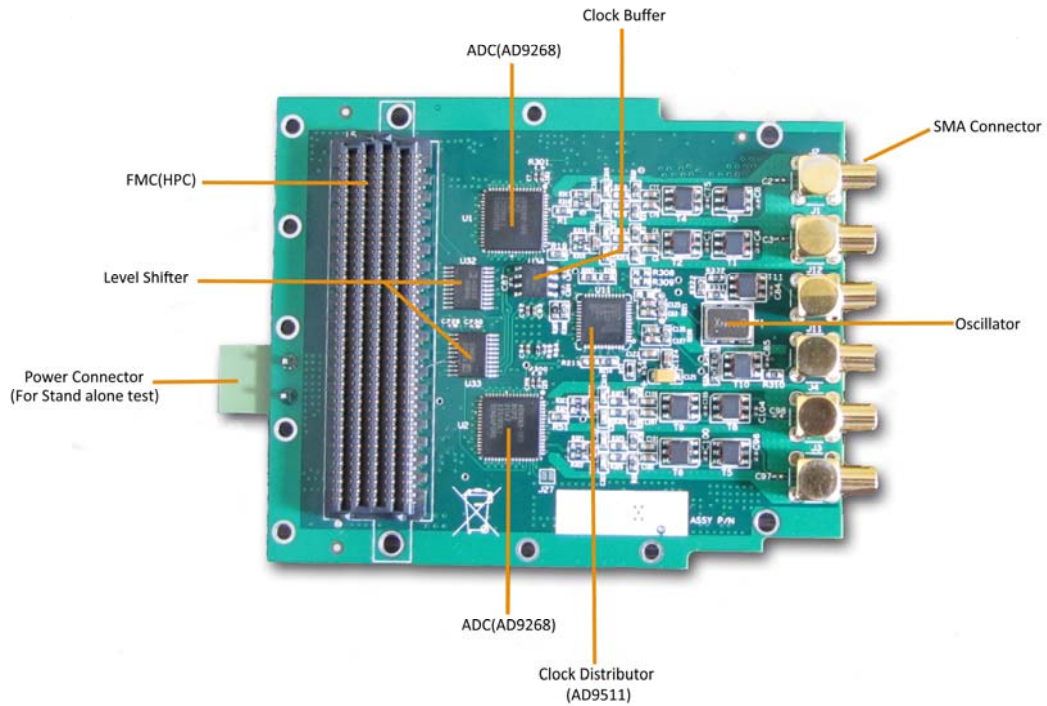
[WWW.NIKSOO.COM/FMC-NKS-401000](http://WWW.NIKSOO.COM/FMC-NKS-401000)

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### Application

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

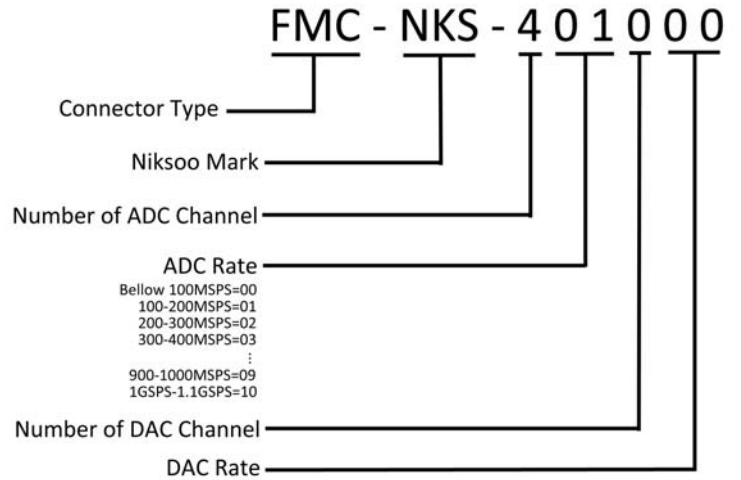
## Board Features



## 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



## FMC-NKS016-PCIe-A High Pin Count FMC & QSH Carrier Virtex-6 Processing PCIe Card

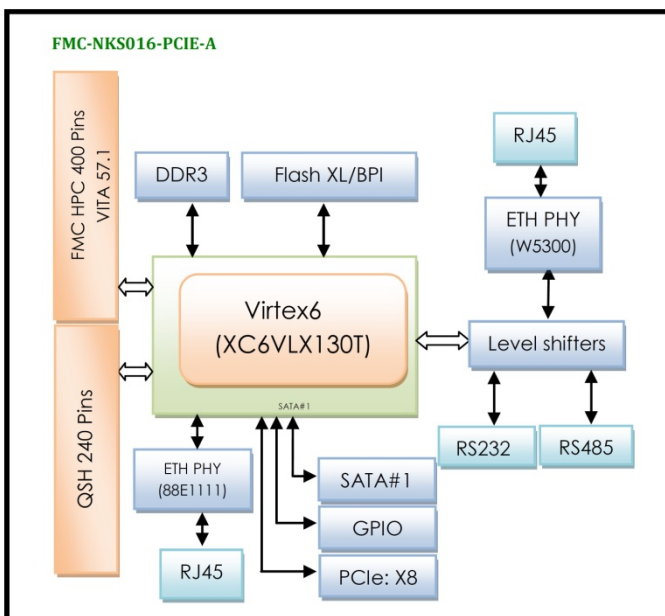
### Description

The FMC-NKS016-PCIe-A board is a high performance FMC industrial carrier card based on the Xilinx Virtex-6 LX130T FPGA family and plugged into a serial PCIe bus system unit supporting 1x, 4x and 8x PCIe data paths, Ethernet10/100 and Ethernet10/100/1000. This board also provides a developed platform for designing and verifying Virtex-6 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) and QSH can make a high bandwidth data transfer channel with VITA 57.1 and QSH/QTH standard modules.

### Features

- Virtex XC6VLX130T-1FFG1156C Xilinx Device
- PCI Express x8 Edge Connector
- FMC HPC for ADC/DAC FMC Modules Connect to FPGA
- QSH Connector for ADC/DAC QTH Modules Connect to FPGA
- 1 Gb DDR3 Component Memory
- Ethernet PHY 10/100/1000 Interface with RJ-45 Connector
- Enhanced 10/100 Ethernet Full Stack Interface with RJ-45 Connector
- 2x RS485 and 2x RS232 Interface Connect to FPGA
- USB JTAG Through Digilent 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: 236 mm, W: 127mm)
- Industrial Temperature Range (0°C to 85°C)
- Operation System Support: Windows & Linux

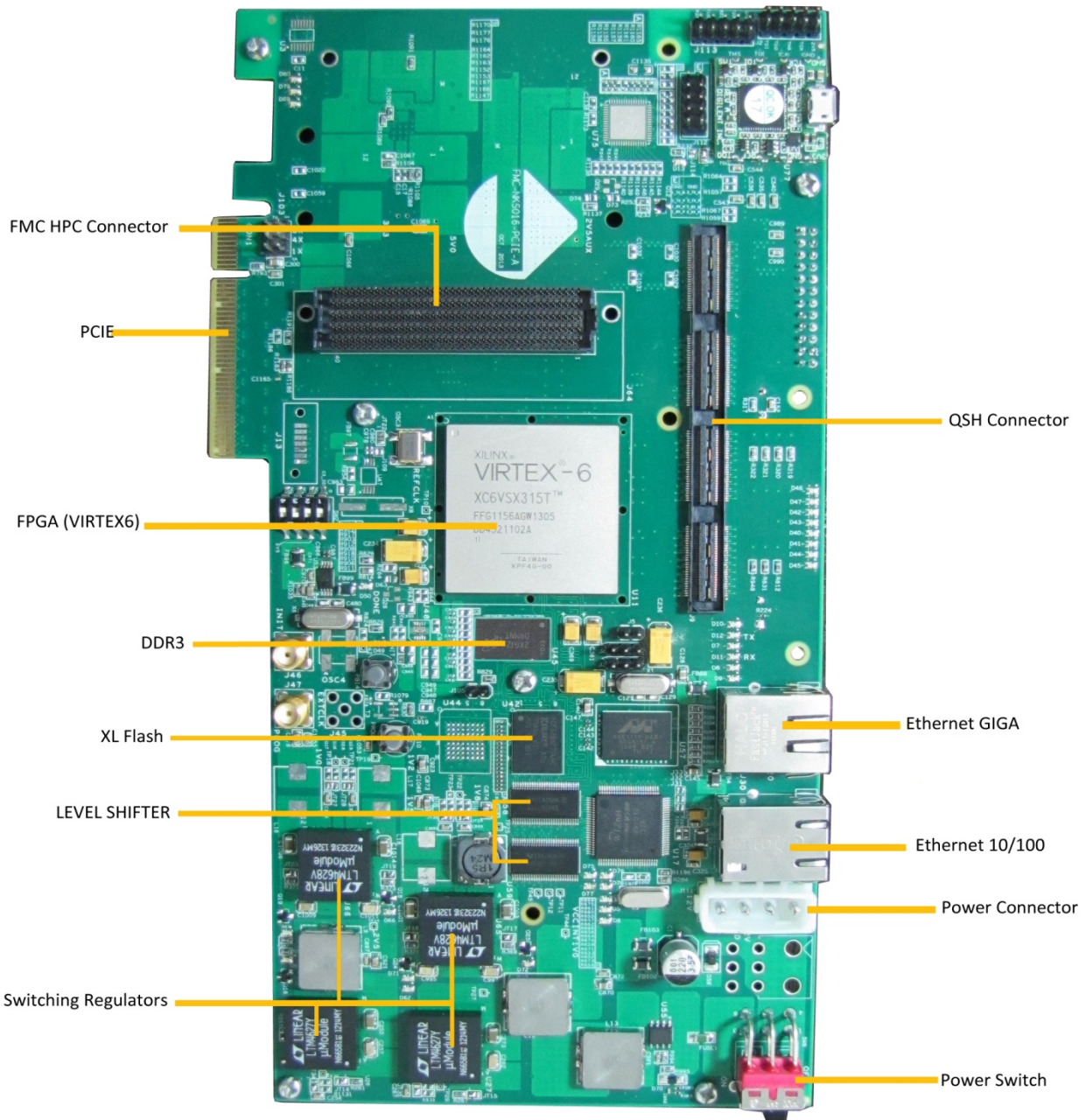
### Functional Block Diagram



### Application

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

## Board Features



## Compatibility Table

NIKSOO Platform	Compatibility
QTH-NKS-01	Yes
QTH-NKS-02	Yes
QTH-NKS-02-A	Yes
QTH-NKS-03	Yes
QTH-NKS-07	Yes
QTH-NKS-10	Yes
QTH-NKS-11	Yes
QTH-NKS-12	Yes
QTH-NKS-11-A	Yes
FMC-NKS-210000	Yes
FMC-NKS-210210	Yes
FMC-NKS-402410	Yes
FMC-NKS-401000	Yes
FMC-NKS-000210	Yes
FMC-NKS-110110	Yes
FMC-NKS-601000	Yes
FMC-NKS-401110	Yes

## Order Information

