

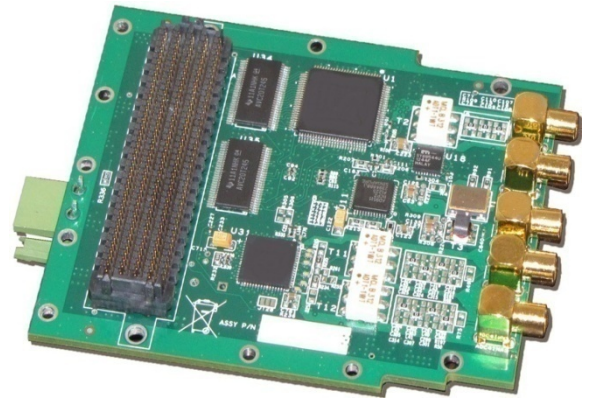
## FMC-NKS-000210 High Pin Count FMC Module

### 2- Channel 16-bit DAC 1GSPS

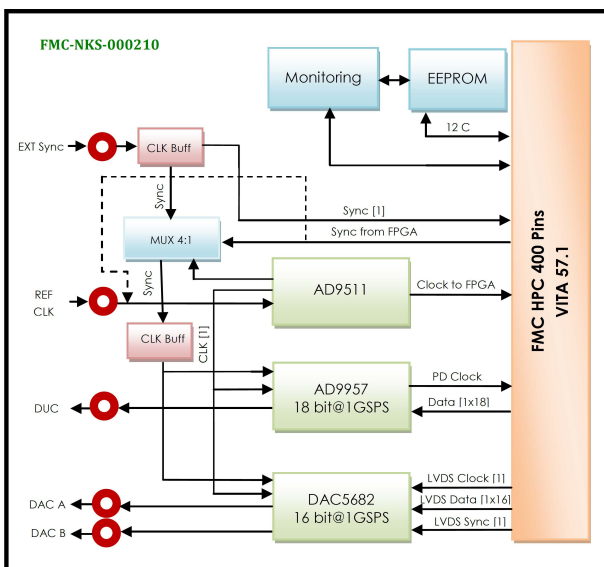
### 1- Channel 18-bit DUC 1GSPS

#### Description

The FMC-NKS-000210 is a dual-channel 16-bit DAC at 1GSPS synchronous and maximum sampling rate and single-channel 18-bit DUC at 1GSPS synchronous and maximum sampling rate. This module was designed based on dual-channel DAC5682 DAC of TI Company with DDR LVDS inputs and single-channel AD9957 DUC of Analog Device Company with CMOS inputs. Because of containing a FMC-HPC connector, FMC-NKS-000210 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.



#### Functional Block Diagram



#### Application

- RADAR/SONAR
- Medical imaging Equipment
- Wide Band-Width Communications
- Advanced control systems and remote forwarding

[WWW.NIKSOO.COM/FMC-NKS-000210](http://WWW.NIKSOO.COM/FMC-NKS-000210)

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[www.niksoo.com](http://www.niksoo.com)

## Features

### DAC's:

- 2 Channels, 16-Bit Resolution, 1 GSPS
- Analog Output with 500MHz Bandwidth
- Analog Output Filter Options
- Phase Noise > 100dBc @ 1kHz and 1GSPS
- 2x-32x Clock Multiplying PLL/VCO
- 2x or 4x Interpolation Filters
- Differential Scalable Output: 2 to 20 mA

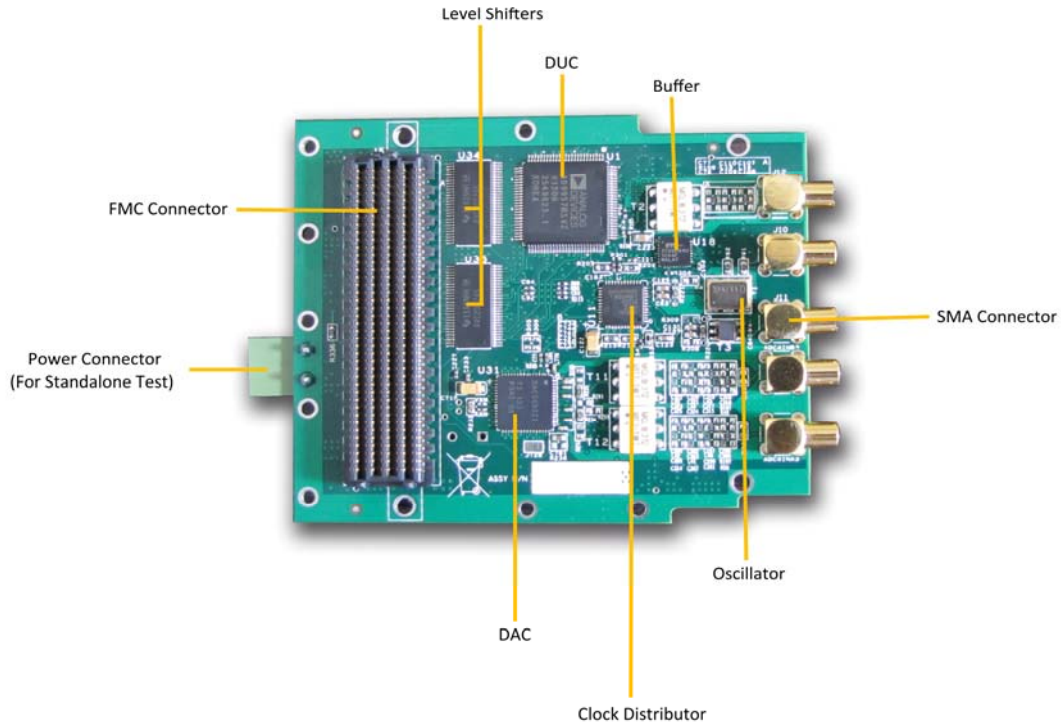
### DUC's:

- 1 GSPS Internal Clock speed (up to 400 MHz Analog Output)
- Phase Noise  $\leq -125$  dBc/Hz (400 MHz Carrier @ 1 kHz Offset)
- Excellent Dynamic Performance >80 dB Narrow-Band SFDR
- 8 Programmable Profiles for Shift Keying
- Sin(x)/(x) Correction (Inverse Sinc Filter)
- Internal Oscillator for a Single Crystal Operation
- Interpolation Factors From 4x to 252x
- Interpolation DAC Mode
- Internal Divider Allows References up to 2 GHz
- 1.8 V and 3.3 V Power Supplies

### 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
- Direct ADC Connection to Host FPGA Ensures
- Operating temperature: -40°C to +85°C (Industrial)
- Physical Dimensions (L: 83.8 mm, W: 69 mm)

## Board Features



## Compatibility Table

Platform	Compatibility
FMC-NKS016-PCIE-A	Yes
FMC-NKS106-PCI-A	Yes
FMC-NKS-V106-A	Yes
VC707	Yes
ML605	Yes
VITA57.1 Carrier Cards	Yes

## Order Information

