

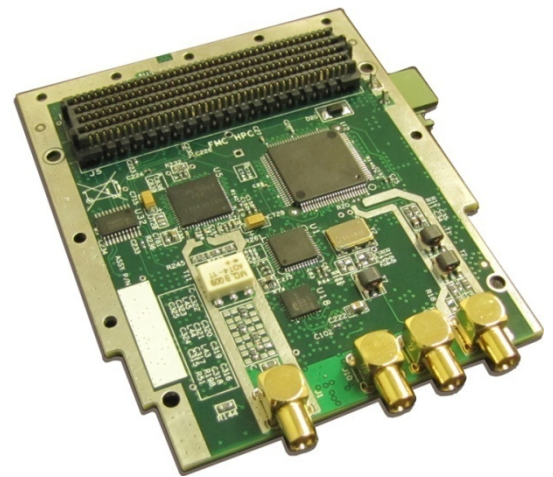
## **FMC-NKS-110110 High Pin Count FMC Module**

### **1- Channel 12-bit ADC 1GSPS**

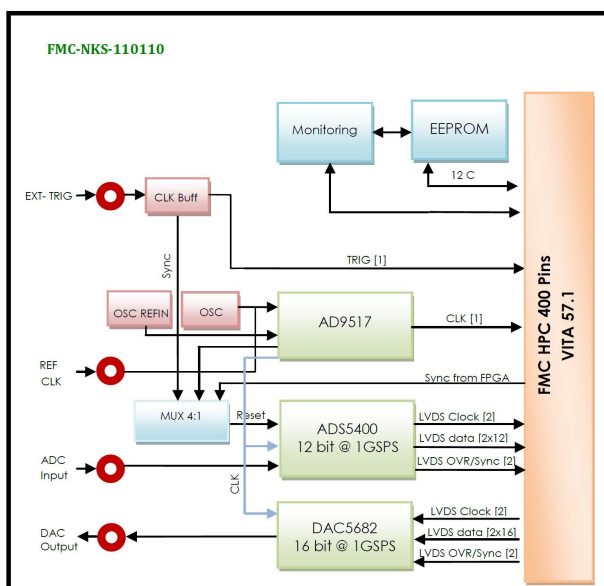
### **1- Channel 16-bit DAC 1GSPS**

### **Description**

The FMC-NKS-110110 is a single-channel 12-bit ADC at 1GSPS synchronous and maximum sampling rate and single-channel 16-bit DAC at 1GSPS synchronous and maximum sampling rate. This module was designed based on single-channel ADS5400 ADC of TI Company with DDR LVDS outputs and dual-channel DAC5682 (or single-channel DAC5681) DAC of TI Company with DDR LVDS inputs. Because of containing a FMC-HPC connector, FMC-NKS-110110 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 standard; therefore it can have the maximum data throughput and minimum latency.



### **Functional Block Diagram**



### **Application**

- RADAR/SONAR
- Medical Equipment
- Wide Band-Width Communications
- Radar Jamming and Deception

[WWW.NIKSOO.COM/FMC-NKS-110110](http://WWW.NIKSOO.COM/FMC-NKS-110110)

Support: [support@niksoo.com](mailto:support@niksoo.com)  
Email: [info@niksoo.com](mailto:info@niksoo.com)

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

## Features

### ADC's:

- 1 Channels, 12-bit Resolution, 1 GSPS
- 2.1 GHz Input Bandwidth
- Single Ended AC-Coupled Analog Input
- SFDR = 68 dBc @ 800MHz and 1GSPS
- SNR = 57.2 dBFS @ 800MHz and 1GSPS
- ENOB = 9 bits @ 800 MHz and 1 GSPS
- 1.5V to 2V Selectable Full-Scale Range
- Serial Port Control
- LVDS-Compatible Outputs, 1 or 2 Bus Options

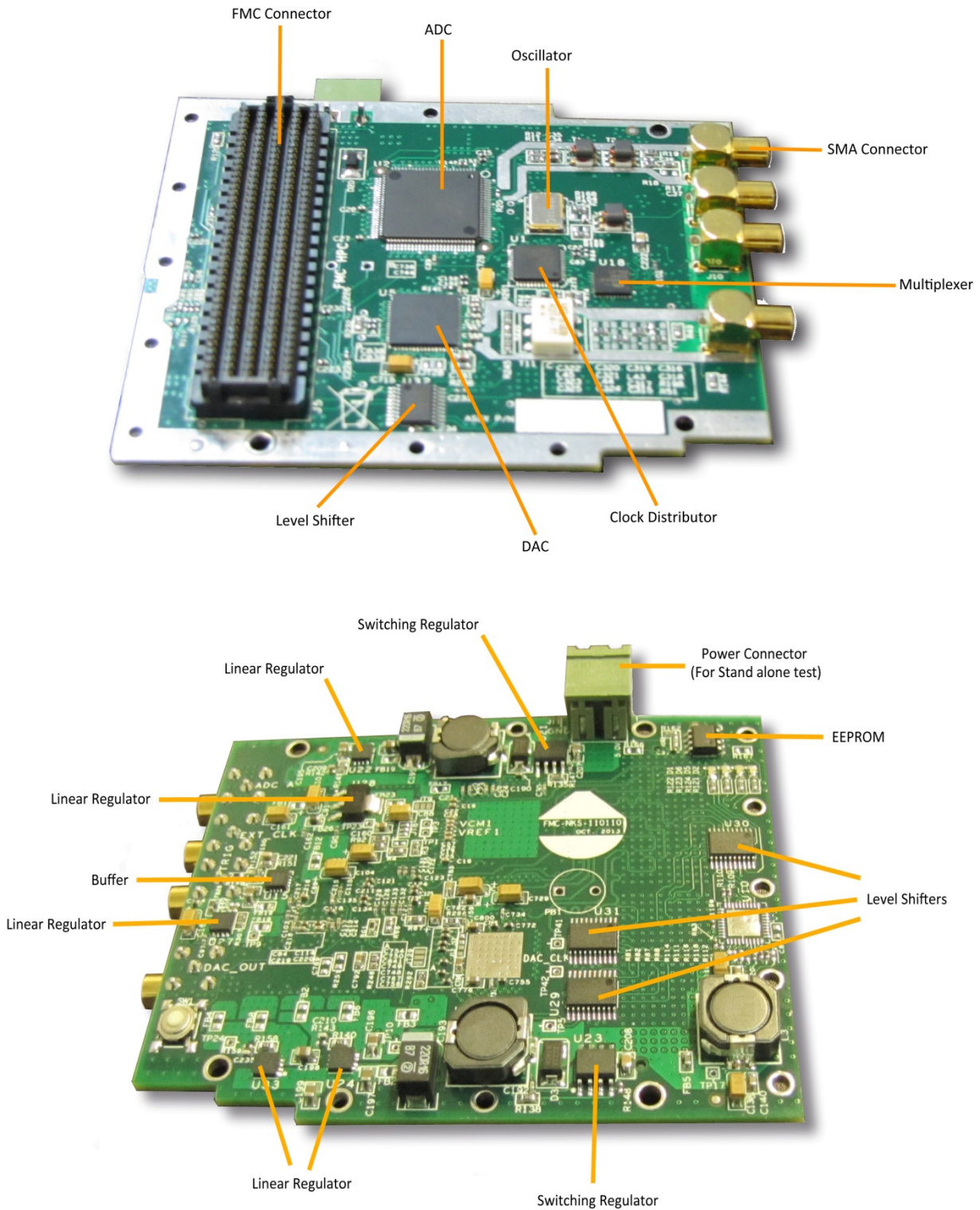
### Other's:

- 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)

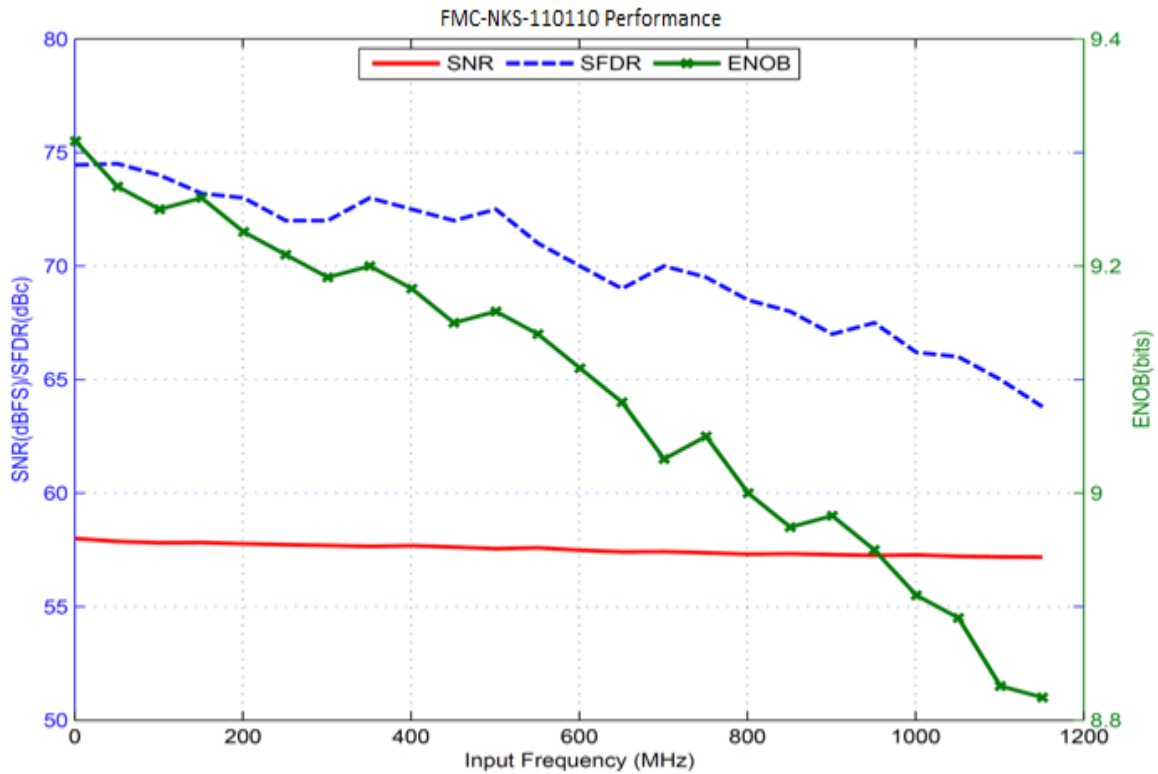
### DAC's:

- 1 Channels, 16-Bit, 1GSPS Update Rate
- Analog Output with 500MHz Bandwidth
- Analog Output Filter Options
- Phase Noise > 100dBc @ 1kHz and 1GSPS
- Interleaved I/Q data for Dual-DAC Mode
- 2x-32x Clock Multiplying PLL/VCO
- 2x or 4x Interpolation Filters
- Differential Scalable Output: 2 to 20 mA

## Board Features



## FMC-NKS-110110 Performance (Full Scale, $F_s = 1\text{GSPS}$ )



### 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

