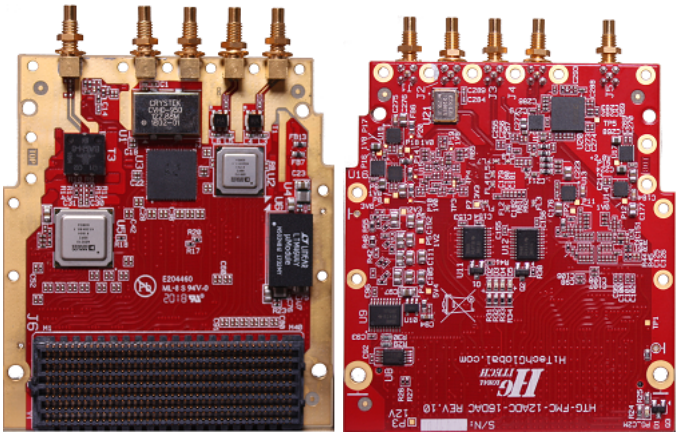
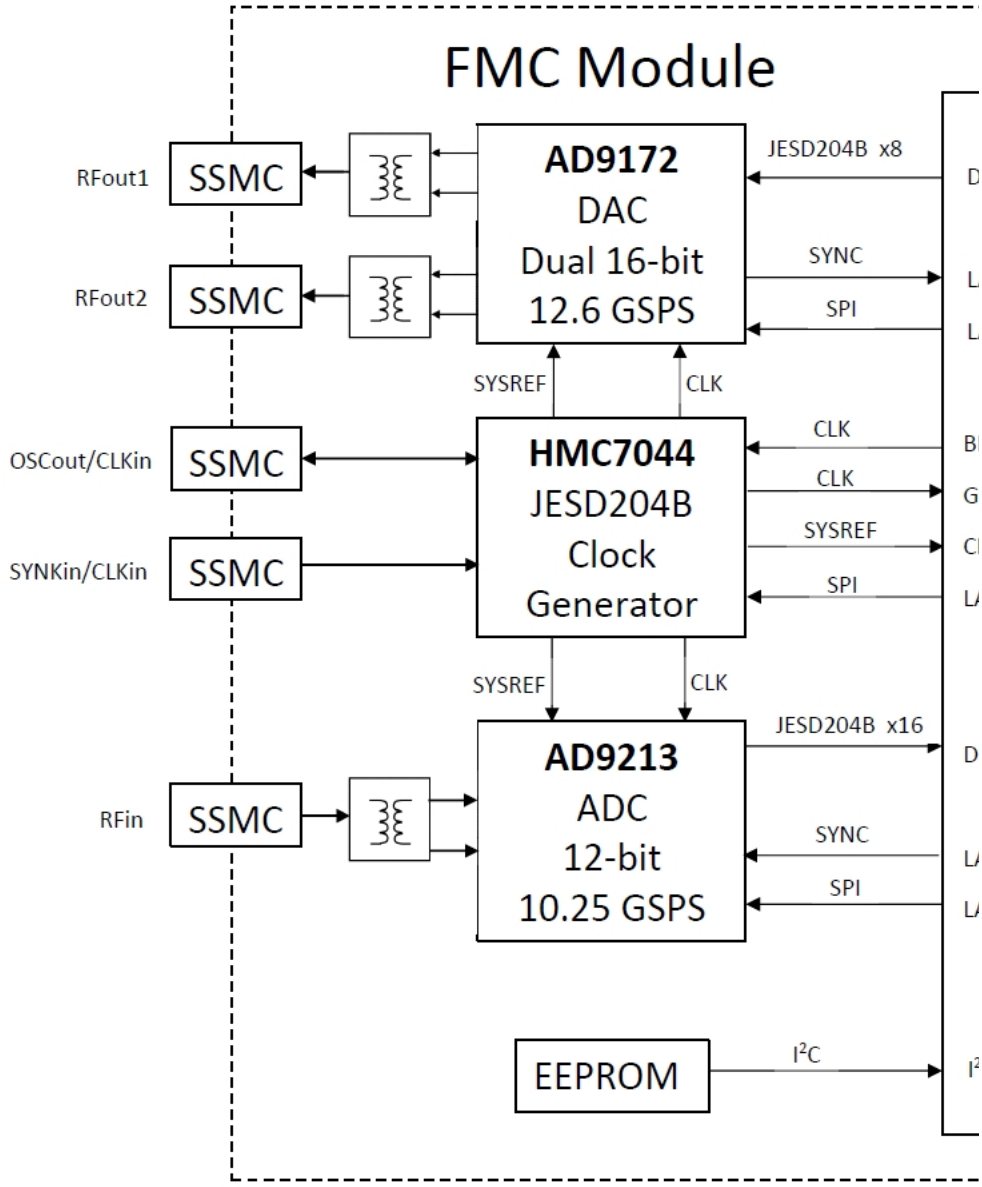
Single 12-bit ADC (10.25 GSPS)/ Dual 16-bit DAC (12.6 GSPS) FMC+ Module (Vita57.4)





This Vita57.4/ JESD204B compliant FMC+ module is powered by Analog Devices' AD9213 (12-bit ADC @ 10.25GSPS), AD9172(dual 16- and HMC7044 attenuator. The main interface with a host FPGA is supported through 16 serial transceivers.

The AD9213 is a single 12-bit, 10.25 GSPS, RF analog-to-digital converter (ADC) with a 6.5 GHz input bandwidth. The AD9213 has been o dynamic range frequency and time domain applications requiring wide instantaneous bandwidth and low code error rates (CER). The AD921 JESD204B interface to support its maximum bandwidth capability.

ADC (AD9213) Parameters

- High instantaneous dynamic range
  - Noise spectral density 154dBFS/Hz
  - SFDR 68dBc (1GHz, −1dBFS)
- Low power consumption: 5.1W at 10Gsps
- Integrated Input Buffer (6.5GHz input bandwidth)
  - 1.4V p-p full-scale input with RIN=50 Ω
  - Overvoltage protection
- 16-lane JESD204B output (up to 16 Gbps line rate)
- Multichip sync capable with 1 sample accuracy
  - DDC NCO synchronization included
- Fast overrange detection for efficient AGC
- Integrated DDC
  - Selectable decimation factors
  - 16-profile settings for fast frequency hopping

DAC (AD9172) Parameters

- Supports multiband wireless applications
  - 3 bypassable, complex data input ch
  - 1.54 GSPS maximum complex input channel
  - 1 independent NCO per input chann
- Proprietary, low spurious and distortion desi
  - 2-tone intermodulation distortion (IM GHz, −7 dBFS/tone RF output
  - Spurious free dynamic range (SFDR −7 dBFS RF output
- Flexible 8-lane, 15.4 Gbps JESD204B interf
  - Supports single-band and multiband
  - Supports 12-bit high density mode f throughput
- Multiple chip synchronization
  - Supports JESD204B Subclass 1
- Selectable interpolation filter for a complete
  - 1×, 2×, 3×, 4×, 6×, and 8× configura interpolation
  - 1×, 2×, 4×, 6×, 8×, and 12× configu

- Optional on-chip PLL clock multiplier
- On-chip temperature sensor
- On-chip negative voltage generators
- Low CER <1e−16

Applications:

- Spectrum analyzers
- Military communications
- Radar
- High performance digital storage oscilloscopes
- Active jamming/antijamming
- Electronic surveillance and countermeasures
- DPD observation path

- Final 48-bit NCO that operates at the DAC r
  synthesis up to 6 GHz
- Transmit enable function allows extra powe
  circuitry protection
- High performance, low noise PLL clock mu
  - Supports 12.6 GSPS DAC update ra
  - Observation ADC clock driver with
- Low power
  - 2.55 W at 12 GSPS, dual channel m

Applications:

- Wireless communications infrastructure
  - Multiband base station radios
  - Microwave/E-band backhaul system
- Instrumentation, automatic test equipment (
- Radars and jammers

Features

► Vita57.4 FMC+ HPC Connector
► x1 ADI AD9213 single 12-bit ADC
► x1 ADI AD9172 Dual 16-bit DAC
► x6 SSMC RF Connectors

Ordering information

- **Part Number:** HTG-FMC-12ADC-16DAC
- **Price:** Please contact us

12" SSMC To SMA Cable
24" SSMC To SMA Cable

ECCN #: EAR99
SCHEDULE B #: 8471601050