

# HS ADC FMC Board: Overview

- **RF INPUT CHARACTERISTICS:**

- Input Mode: Single-ended or Differential (A.C. Coupled);
- Input BW in Single-Ended Mode: up to 6 GHz;
- Input BW in Differential Mode: up to 10 GHz;
- Connector: SSMC;

- **CLOCK INPUT CHARACTERISTICS:**

- Input Mode: Single-ended;
- Connector: SSMC;
- Direct or PLL+VCO Distribution Mode;
- Input Clock Frequency: (10 – 350) MHz ;

- **T&H CHARACTERISTICS:**

- Input Bandwidth up to 18 GHz (small signals);
- 2.5 Gsps Sampling Rate;

- **ADC CHARACTERISTICS:**

- ADC Resolution: 10 bit;
- Input Bandwidth up to 5 GHz;
- 2.5 Gsps Sampling Rate.

- **Electrical Performance:**

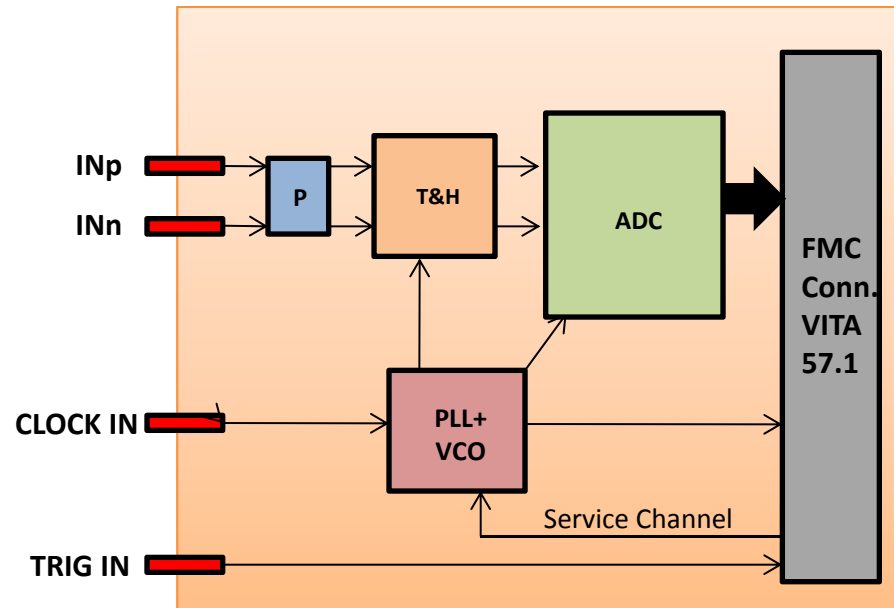
- SFDR: about 50 dBc;
- SNR: about 40 dB.

- **Internal or External Trigger Signal;**

- **FMC Format (VITA57.1) Conduction Cooled;**

- **Operative Temperature Range: (-40 , +85)°C.**

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# HS ADC FMC Board: Description

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D.&P. has designed an innovative acquisition solution to receive RF signal directly: ADC input bandwidth is extended using an external Track and Hold, obtaining high electrical performance (SFDR of about 50 dBc and SNR of about 40 dB up to 10 GHz in differential input mode).

The HS ADC FMC is a FMC daughter card with an only input channel. Differential and Single-Ended Input modes are available: the former has a wider bandwidth than the latter.

A 2.5 GHz clock allows to have a 1.25 GHz of Instantaneous Input Bandwidth; the sampling clock can be direct or generate through a PLL+VCO using an external reference clock.

The HS ADC FMC Board is mechanically and electrically compliant to FMC standard (ANSI/VITA 57.1).

The board has an high-pin count connector and front panel I/O and it can be used in a conduction cooled environment.

The analog signals are AC coupled and in the front panel there are a few SSMC connectors for external connection.