

ADC1010S Series:

Single Bit ADC; 65, 80, 105 or 125 Msps;

CMOS or LVDS DDR Digital Outputs

Product Feature Sheet

Features

- SNR, 62 dBFS; SFDR, 86 dBc
- Sample rate up to 125 Msps
- 10-bit pipelined ADC core
- Clock input divided by 2 for less jitter
- Single 3 V supply
- Flexible input voltage range: 1 V (p-p) to 2 V (p-p)
- CMOS or LVDS DDR digital outputs
- Pin compatible with the ADC1410S series and the ADC1210S series
- Input bandwidth, 600 MHz
- Power dissipation, 430 mW at 80 Msps
- Serial Peripheral Interface (SPI)
- Duty cycle stabilizer
- Fast Out-of-Range (OTR) detection
- Offset binary, two's complement, gray code
- Power-down and Sleep modes
- HVQFN40 package

Device Overview

The ADC1010S is a single-channel 10-bit Analog-to-Digital Converter (ADC) optimized for high dynamic performance and low power consumption at sample rates up to 125 Msps. Pipelined architecture and output error correction ensure the ADC1010S is accurate enough to guarantee zero missing codes over the entire operating range. Supplied from a single 3 V source, it can handle output logic levels from 1.8 V to 3.3 V in CMOS mode, because of a separate digital output supply. It supports the Low Voltage Differential Signaling (LVDS) Double Data Rate (DDR) output standard. An integrated Serial Peripheral Interface (SPI) allows the user to easily configure the ADC. The device also includes a programmable full-scale SPI to allow a flexible input voltage range from 1 V to 2 V (peak-to-peak). With excellent dynamic performance from the baseband to input frequencies of 170 MHz or more, the ADC1010S is ideal for use in communications, imaging and medical applications.

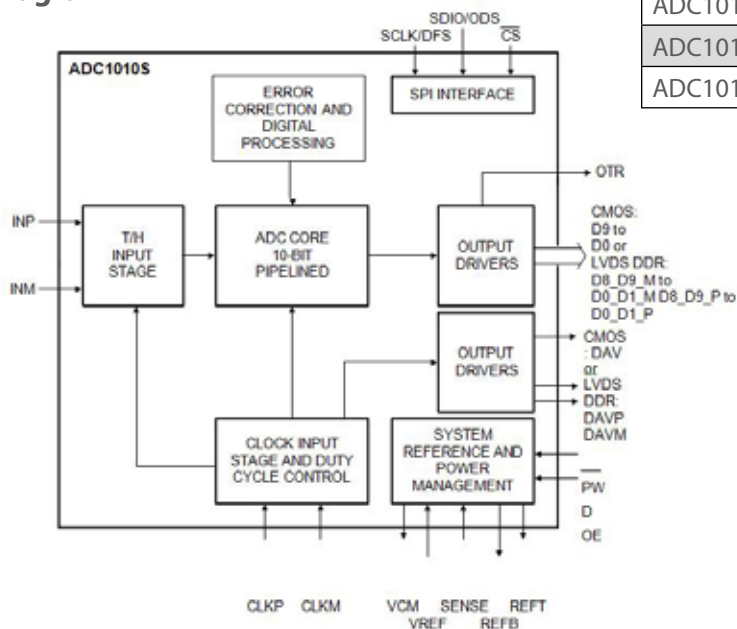
Typical Applications

- Wireless and wired broadband communications
- Spectral analysis
- Ultrasound equipment
- Portable instrumentation
- Imaging systems
- Software defined radio

Absolute Maximum Ratings:

Output Voltage	-0.4 V to +3.9 V
Analog Supply Voltage	-0.4 V to +3.9 V
Output Supply Voltage	-0.4 V to +3.9 V
Storage Temperature	-55 °C to +125 °C
Ambient Temperature	-40 °C to +85 °C
Junction Temperature	125 °C

Block Diagram



Ordering Information

ADC1010S125HN -C1, 518	125 Msps
ADC1010S105HN -C1, 518	105 Msps
ADC1010S080HN -C1, -518	80 Msps
ADC1010S065HN -C1, -518	65 Msps