

## 6-bit, 5 GSPS Analog-to-Digital Converter IP Block

### General Description

The A6B5G is a low-power, high-speed analog to digital converter (ADC) intellectual property (IP) design block. It is a digitally folding, flash-type ADC, with a 6-bit resolution, and a sampling rate of 5 gigasamples per second (GSPS).

The A6B5G is a unique solution that provides the dual benefit of reaching an extremely high sampling speed, while maintaining an exceptionally low power consumption of approximately 14 mW.

The IP block has been designed in a 28nm CMOS process. Please contact us about porting the IP to the other processes. The ADC IP is also available in a radiation-tolerant version, that can function under harsh environmental constraints, and support demanding reliability and survivability needs.

### Key Features

- ◆ 6 bit Resolution
- ◆ 5GSPS Sampling Rate
- ◆ 14mW Power
- ◆ 10 GHz Input Bandwidth
- ◆ Dynamic Performance:
  - ◆ SFDR: 37 dBc
  - ◆ ENOB: 5.2
- ◆ Area
- ◆ STMicroelectronics 28nm Process
- ◆ Radiation tolerant design available: A6B5GRH

### Applications

- ◆ High-speed test and measurement systems
  - ◆ Oscilloscopes, spectrometers & digitizers
  - ◆ Automated test equipment
- ◆ High performance data acquisition
- ◆ Wideband RF receivers

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\*All data are preliminary. This IP block is currently in development and all specifications will be updated after silicon qualification.