

# A8B40G-ST28



## 8-bit, 40 GSPS Analog to Digital Converter IP block

### General Description

The A8B40G is a low-power, high-speed analog to digital converter (ADC) intellectual property (IP) design block. It is a time-interleaved successive approximation register (SAR) ADC, with 8-bit resolution and a sampling rate of 40 gigasamples per second (GSPS).

It 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 194 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

- ◆ 8 bit resolution
- ◆ 40 GSPS sampling rate
- ◆ 194 mW power
- ◆ 25 GHz Input Bandwidth
- ◆ Dynamic Performance:
  - ◆ SFDR: 54
  - ◆ ENOB: 6.5
- ◆ Hard IP block
- ◆ STMicroelectronics 28 nm process
- ◆ Radiation-tolerant design available: A8B40GRH

### Applications

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

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