

# A10B500M-ST28



## 10-bit, 500 MSPS Analog to Digital Converter IP block

### General Description

The A10B500M is an ultra-low-power and high-speed analog to digital converter (ADC) intellectual property (IP) design block. It is a successive approximation register (SAR) ADC, with 10-bit resolution and a sampling rate of 500 megasamples per second (MSPS).

The A10B500M delivers performance that is unrivaled in the ultra-low power ADC market, with a power consumption of only 1.2 mW, and input bandwidth of 3 GHz.

The IP block has been designed in a 28nm CMOS process. Please contact the vendor about porting the IP to other processes.

The ADC IP is also available in a radiation tolerant version, that can function under harsh environmental constraints.

### Key Features

- ◆ 10 bit resolution
- ◆ 500 MSPS sampling rate
- ◆ 1.2 mW power
- ◆ 3 GHz Input Bandwidth
- ◆ Dynamic Performance:
  - ◆ SFDR: 64 dBc
  - ◆ ENOB: 8.9
- ◆ Hard IP block
- ◆ STMicroelectronics 28nm process
- ◆ Radiation-tolerant design available: A10B500MRH

### Applications

- ◆ Automotive Applications
  - ◆ Autonomous vehicles
  - ◆ LiDAR systems
- ◆ High-Speed Communications
  - ◆ 5G, LTE, WiFi
- ◆ Industrial and Medical Applications
- ◆ Military and Civil Aerospace

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