



# A6B20G

## 6-bit, 20 GSPS

### Analog to Digital Converter IP block

#### GENERAL DESCRIPTION

The A6B20G is a low-power, high-speed analog to digital converter (ADC) intellectual property (IP) design block. It is a flash-type ADC, with 6-bit resolution and a sampling rate of 20 gigasamples per second (GSPS). It is a unique solution that provides an extremely high sampling rate, with a very low power consumption of only 376 mW.

It is the only IP core in this sampling rate class that is available with a high-speed input buffer, track and hold stage, and encoder -based full data rate output interface.

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

#### KEY FEATURES

- ◆ 6 bit resolution
- ◆ 20 GSPS sampling rate
- ◆ 376 mW power
- ◆ 25 GHz Input Bandwidth
- ◆ Dynamic Performance:
  - ◆ SFDR: 37 dBc
  - ◆ ENOB: 4.5
- ◆ Hard IP Block
- ◆ STMicroelectronics 28nm process
- ◆ GDSII available. Verified with post layout PVT simulations
- ◆ Radiation-tolerant design available:

#### APPLICATIONS

- ◆ High-speed test and measurement systems
- ◆ Communications and Networking
  - ◆ Wideband RF Receivers
  - ◆ Phased Array Receivers
  - ◆ Optical Communications
- ◆ Radio astronomy
- ◆ Military and Civil Aerospace applications

#### TO GET MORE INFORMATION

**Contact us at:** P: 480-494-5618 E: [info@alphacoreinc.com](mailto:info@alphacoreinc.com)

**Visit us at:** 304 S Rockford Dr, Tempe, AZ 85281

Part no.: 06 1 1P0 002 ST

Rev: 05212021

Copyright © 2021 Alphacore, Inc