

D12B500M



12-bit, 500 MSPS Digital-to-Analog Converter IP Block

General Description

The D12B500M is an ultra low-power, high-speed digital to analog converter (DAC) intellectual property (IP) block. It is a current steering DAC that has a 12-bit resolution, and a sampling speed of 500 megasamples per second (MSPS).

The D12B500M 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 36 mW, making it a perfect fit for designs with high efficiency, low power and high performance requirements.

The advanced IP block has been designed in a 55 nm CMOS process. The DAC IP is also available as a radiation-tolerant version, that can function under harsh environmental constraints.

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Key Features

- ◆ 12 bit resolution
- ◆ 500 MSPS sampling rate
- ◆ 36 mW power
- ◆ Output bandwidth: 240MHz
- ◆ Output Settling Time: 9ns
- ◆ Dynamic Performance:
 - ◆ SFDR: 72 dBc
 - ◆ ENOB: 9.8
- ◆ Hard IP block
- ◆ GlobalFoundries 55nm process

Applications

- ◆ Wideband Communications and Networking
 - ◆ Microwave Receivers
 - ◆ Radar and Satellite Communications
- ◆ Electronic Warfare
 - ◆ Software-defined Radio
- ◆ High Speed Test Equipment