# D12B500M

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

## **General Description**

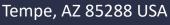
The D12B500M is an ultra low-power, highspeed digital to analog converter (DAC) intellectual property (IP) block. It is a current steering DAC that has a 12-bit resolution, and a sampling speed of 500 megasamples per second (MSPS).

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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#### Part no.: 06 1 1P0 042 Rev: 20230816

## 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



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