

JXD1651PE

16-Bit, 500MSPS High-Speed DAC with Interpolation

Alternative to AD91xx Series High-Speed DACs

500 MSPS DAC Rate	16 Bit Resolution	- Channels	>80 dBc SFDR (typ.)
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Product Overview

The JXD1651PE is a 16-bit, 500MSPS high-speed digital-to-analog converter with on-chip 2x/4x/8x interpolation filters and LVDS/parallel data interface. Featuring a current-steering architecture paired with an on-chip 1.2V high-precision voltage reference, it maintains outstanding SFDR and SNR performance across a wide frequency range. The built-in interpolation filter effectively reduces the input data rate, easing timing pressure on downstream digital circuitry.

Key Features

- 16-bit resolution, 500 MSPS update rate
- Current-steering architecture with on-chip 1.2V precision reference
- 2x/4x/8x programmable interpolation filters
- LVDS / parallel interface, two's complement input format
- SNR >75 dB, SFDR >80 dBc typical
- 20 mA full-scale output swing (adjustable)
- Low power: <500 mW typical, 32-pin LFCSP package

Key Specifications

Parameter	Value
Resolution	16 Bit
Update Rate	500 MSPS
DAC Architecture	Current Steering
Interpolation	2x/4x/8x programmable
SNR (typical)	>75 dB
SFDR (typical)	>80 dBc
Output Swing	20 mA full-scale (adjustable)
Interface Type	LVDS / Parallel
Input Data Format	Two's complement
On-Chip Reference	1.2V, high precision
Supply Voltage	1.8V / 3.3V
Power Consumption	<500 mW (typical)
Operating Temperature	-40°C to +85°C
Package	32-Pin LFCSP
Lead Time	~6 Weeks

Applications

- Signal Generators — Arbitrary waveform generators, function generators
 - Wireless Infrastructure — IF transmit channels, digital pre-distortion
 - Software Defined Radio — Multi-standard transmit front-ends
 - Industrial Testing — Automated test equipment, production line testing
- Power Electronics — Digital power control, inverter drive
 - Research & Education — Teaching lab platforms, research prototypes
 - Professional Audio — High-end DACs, professional recording equipment
 - Satellite Communications — IF modulators, uplink transmit chains

Ordering Information

Attribute	Details
Part Number	JXD1651PE
Package	32-Pin LFCSP
Temperature Range	-40°C to +85°C
Compatible Device	AD91xx series (functionally equivalent)