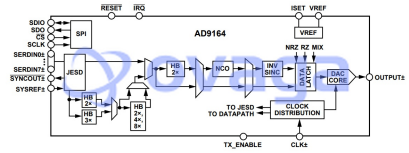


DAC 1-CH Quad-Switch 16-bit 169-Pin CSP-BGA Tray

Manufacturers	Analog Devices, Inc
Package/Case	169-VFBGA, CSPBGA
Product Type	Data Conversion ICs
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for AD9164BBCAZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The AD9164 is a high performance, 16-bit digital-to-analog converter (DAC) and direct digital synthesizer (DDS) that supports update rates to 6 GSPS. The DAC core is based on a quad-switch architecture coupled with a 2× interpolator filter that enables an effective DAC update rate of up to 12 GSPS in some modes. The high dynamic range and bandwidth makes these DACs ideally suited for the most demanding high speed radio frequency (RF) DAC applications.

The DDS consists of a bank of 32, 32-bit numerically controlled oscillators (NCOs), each with its own phase accumulator.

When combined with a 100 MHz serial peripheral interface (SPI) and fast hop modes, phase coherent fast frequency hopping (FFH) is enabled, with several modes to support multiple applications.

In baseband mode, wide analog bandwidth capability combines with high dynamic range to support DOCSIS 3.1 cable infrastructure compliance from the minimum of one carrier up to the full maximum spectrum of 1.791 GHz of signal bandwidth. A 2× interpolator filter (FIR85) enables the AD9164 to be configured for lower data rates and converter clocking to reduce the overall system power and ease the filtering requirements. In Mix-Mode™ operation, the AD9164 can reconstruct RF carriers in the second and third Nyquist zones up to 7.5 GHz while still maintaining exceptional dynamic range. The output current can be programmed from 8 mA to 38.76 mA. The AD9164 data interface consists of up to eight JESD204B serializer/deserializer (SERDES) lanes that are programmable in terms of lane speed and number of lanes to enable application flexibility.

An SPI interface configures the AD9164 and monitors the status of all registers. The AD9164 is offered in a 165-ball, 8 mm × 8 mm, 0.5 mm pitch CSP_BGA package, and a 169-ball, 11 mm × 11 mm, 0.8 mm pitch, CSP_BGA package, including a leaded ball option.

Product Highlights

High dynamic range and signal reconstruction bandwidth supports RF signal synthesis of up to 7.5 GHz

Up to eight lanes JESD204B SERDES interface flexible in terms of number of lanes and lane speed.

Bandwidth and dynamic range to meet DOCSIS 3.1 compliance and multiband wireless communications standards with margin.

Features

DAC update rate up to 12 GSPS (minimum)

Direct RF synthesis at 6 GSPS (minimum)

DC to 2.5 GHz in baseband mode

DC to 6 GHz in 2× nonreturn-to-zero (NRZ) mode

1.5 GHz to 7.5 GHz in Mix-Mode

Bypassable interpolation

2×, 3×, 4×, 6×, 8×, 12×, 16×, 24×

Excellent dynamic performance

Fast frequency hopping

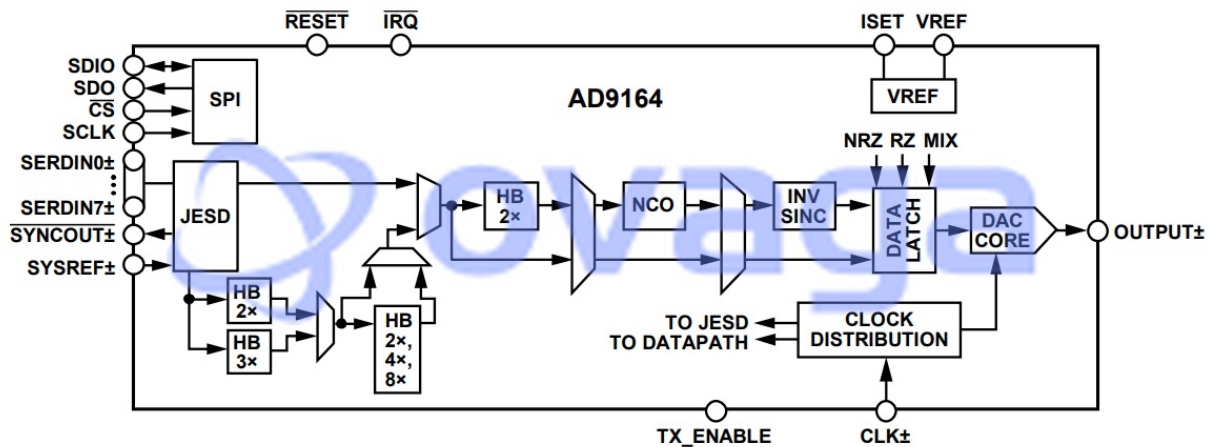
Application

Broadband communications systems

DOCSIS 3.1 CMTS/ video on demand (VOD)/edge quadrature amplitude modulation (EQAM)

Wireless communications infrastructure

W-CDMA, LTE, LTE-A, point to point



14414-001

Related Products



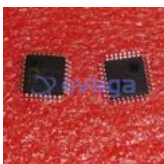
[ADAS3022BCPZ](#)

Analog Devices, Inc
LFCSP-40



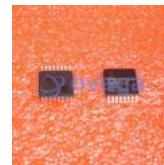
[AD574AJNZ](#)

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LFCSP-64