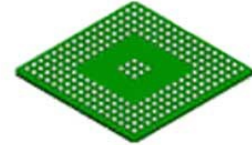


RF Transceiver Mykonos+DPD Broad Market Release dcdxrveccrbfccazcqysxsbvfdafztzdsf

Manufacturers	Analog Devices, Inc
Package/Case	196-LFBGA, CSPBGA
Product Type	RF Integrated Circuits
RoHS	Pb-free Halide free
Lifecycle	



Images are for reference only

Please submit RFQ for AD9375BBCZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The AD9375 is a highly integrated, wideband radio frequency (RF) transceiver offering dual-channel transmitters (Tx) and receivers (Rx), integrated synthesizers, a fully integrated digital predistortion (DPD) actuator and adaptation engine, and digital signal processing functions. The IC delivers a versatile combination of high performance and low power consumption required by 3G/4G small cell and massive multiple input, multiple output (MIMO) equipment in both frequency division duplex (FDD) and time division duplex (TDD) applications. The AD9375 operates from 300 MHz to 6000 MHz, covering most of the licensed and unlicensed cellular bands. The DPD algorithm supports linearization on signal bandwidths up to 40 MHz depending on the power amplifier (PA) characteristics (for example, two adjacent 20 MHz carriers). The IC supports Rx bandwidths up to 100 MHz. It also supports observation receiver (ORx) and Tx synthesis bandwidths up to 250 MHz to accommodate digital correction algorithms.

The transceiver consists of wideband direct conversion signal paths with state-of-the-art noise figure and linearity. Each complete Rx and Tx subsystem includes dc offset correction, quadrature error correction (QEC), and programmable digital filters, eliminating the need for these functions in the digital baseband. Several auxiliary functions such as an auxiliary analog-to-digital converter (ADC), auxiliary digital-to-analog converters (DACs), and general-purpose input/outputs (GPIOs) are integrated to provide additional monitoring and control capability.

An ORx channel with two inputs is included to monitor each Tx output and implement calibration applications. This channel also connects to three sniffer receiver (SnRx) inputs that can monitor radio activity in different bands.

The high speed JESD204B interface supports lane rates up to 6144 Mbps. Four lanes are dedicated to the transmitters and four lanes are dedicated to the receiver and observation receiver channels.

The fully integrated phase-locked loops (PLLs) provide high performance, low power, fractional-N frequency synthesis for the Tx, the Rx, the ORx, and the clock sections. Careful design and layout techniques provide the isolation demanded in high performance base station applications. All voltage controlled oscillator (VCO) and loop filter components are integrated to minimize the external component count.

The device contains a fully integrated, low power DPD actuator and adaptation engine for use in PA linearization. The DPD feature enables use of high efficiency PAs, significantly reducing the power consumption of small cell base station radios while also reducing the number of JESD204B lanes necessary to interface with baseband processors.

A 1.3 V supply is required to power the AD9375 core, and a standard 4-wire serial port controls it. Other voltage supplies provide proper digital interface levels and optimize transmitter and auxiliary converter performance. The AD9375 is packaged in a 12 mm × 12 mm, 196-ball chip scale ball grid array (CSP BGA).

Features

Dual differential Tx

Dual differential Rx

Observation receiver with 2 inputs

Fully integrated, ultralow power DPD actuator and adaptation engine for PA linearization

Sniffer receiver with 3 inputs

Tunable range: 300 MHz to 6000 MHz

Linearization signal BW to 40 MHz

Tx synthesis BW to 250 MHz

Rx BW: 8 MHz to 100 MHz

Supports FDD and TDD operation

Fully integrated independent fractional-N RF synthesizers for Tx, Rx, ORx, and clock generation

JESD204B digital interface

Application

3G/4G small cell base stations (BTS)

3G/4G massive MIMO/active antenna systems

Related Products



[ADL5330ACPZ](#)

Analog Devices, Inc
LFCSP24



[ADL5240ACPZ-R7](#)

Analog Devices, Inc
LFCSP-32



[AD630SD](#)

Analog Devices, Inc
20 ld Side-BrazedCerDIP



[ADRF5040BCPZ](#)

Analog Devices, Inc
HIGH ISOLATION, SP4T, 9KHZ - 12G



[AD607ARSZ-REEL](#)

Analog Devices, Inc
SSOP-20



[AD831AP](#)

Analog Devices, Inc
20 ld PLCC



[ADG901BRM](#)

Analog Devices, Inc
MSOP-8



[ADL5350ACPZ](#)

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LFCSP-8