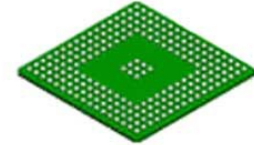


RF Agile Transceiver

Manufacturers	Analog Devices, Inc
Package/Case	144-Ball CSPBGA (10mm x 10mm x 1.7mm)
Product Type	RF Integrated Circuits
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for AD9361BBCZ-CSL or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The AD9361S-CSL is a high performance, highly integrated, RF agile transceiver designed for use in 3G and 4G applications. Its programmability and wideband capability make it ideal for a broad range of transceiver applications. The device combines an RF front end with a flexible mixed-signal baseband section and integrated frequency synthesizers, simplifying design-in by providing a configurable digital interface to a processor. The AD9361S-CSL receiver LO operates from 70 MHz to 6.0 GHz and the transmitter LO operates from 46.875 MHz to 6.0 GHz range, covering most licensed and unlicensed bands. Channel bandwidths from less than 200 kHz to 56 MHz are supported.

The two independent direct conversion receivers have state-of-the-art noise figure and linearity. Each receive subsystem includes independent automatic gain control (AGC), dc offset correction, quadrature correction, and digital filtering, thereby eliminating the need for these functions in the digital baseband. The AD9361S-CSL also has flexible manual gain modes that can be externally controlled.

Two high dynamic range analog-to-digital converters (ADCs) per channel digitize the received inphase (I) and quadrature (Q) signals and pass them through configurable decimation filters and 128-tap finite impulse response (FIR) filters to produce a 12-bit output signal at the appropriate sample rate.

The transmitters use a direct conversion architecture that achieves high modulation accuracy with ultralow noise. This transmitter design produces a best-in-class transmit error vector magnitude (EVM) of ≤ -40 dB, allowing significant system margin for the external power amplifier (PA) selection. The on-board transmit power monitor can be used as a power detector, enabling highly accurate transmit power measurements.

The fully integrated phase-locked loops (PLLs) provide low power fractional-N frequency synthesis for all receive and transmit channels. Channel isolation, demanded by frequency division duplex (FDD) systems, is integrated into the design. All voltage controlled oscillator (VCO) and loop filter components are integrated. The AD9361S-CSL is packaged in a 10 mm \times 10 mm, 144-ball chip scale package ball grid array (CSP_BGA).

Additional application and technical information can be found in the Commercial Space Products Program brochure and the AD9361 data sheet.

APPLICATIONS

Features

RF 2 \times 2 transceiver with integrated 12-bit DACs and ADCs

Application

Low Earth orbit (LEO) satellites

Transmit band: 46.875 MHz to 6.0 GHz

Avionics

Receive band: 70 MHz to 6.0 GHz

Point to point communication systems

Dual receivers: 6 differential or 12 single-ended inputs

Superior receiver sensitivity with a NF of 2 dB at 800 MHz LO

Receive gain control

Real-time monitor and control signals for manual gain

Independent AGC

Dual transmitters: 4 differential outputs

Real-time monitor and control signals for manual gain

Independent AGC

Highly linear broadband transmitter

Transmit EVM: -40 dB (typical) at 800 MHz

Transmit noise: -157 dBm/Hz (typical)

Transmit monitor: 66 dB dynamic range (typical) with 1 dB accuracy

Integrated fractional-N synthesizers

2.4 Hz typical LO frequency step size

Multichip synchronization

CMOS/LVDS digital interface

Commercial Space Features

Wafer diffusion lot traceability

Radiation lot acceptance testing: TID

Transmit EVM: -40 dB (typical) at 800 MHz

Transmit noise: -157 dBm/Hz (typical)

Transmit monitor: 66 dB dynamic range (typical) with 1 dB accuracy

2.4 Hz typical LO frequency step size

Multichip synchronization

CMOS/LVDS digital interface

Wafer diffusion lot traceability

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



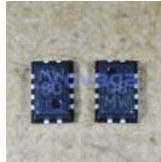
[AD607ARSZ-REEL](#)
Analog Devices, Inc
SSOP-20



[AD831AP](#)
Analog Devices, Inc
20 ld PLCC



[ADG901BRM](#)
Analog Devices, Inc
MSOP-8



[ADL5350ACPZ](#)
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LFCSP-8