

# AD9363 INTEGRATED PROGRAMMABLE RF TRANSCEIVER

*Simplify Your System Design and  
Standardize Your Radio Platform*



## High Performance and Integration

- ▶ High linearity and noise performance relax the requirements on the external components
- ▶ Enhanced integration simplifies system development, reducing component count and BOM costs, while achieving smaller size and higher power efficiency

## Versatility

- ▶ Operates from 325 MHz to 3800 MHz
- ▶ Supports bandwidths up to 20 MHz
- ▶ Offers a common platform for a wide range of applications, reducing development time and inventory costs

## Reliable Link

- ▶ High interference rejection reduces flyaway and other liability risks
- ▶ Frequency agility enhances link security and antijamming capabilities
- ▶ Wide RF tuning range enables frequency reuse of limited spectrum resources and operation in different bands

## Long Range

- ▶ Covers over 2 km distance with higher power efficiency, enabling more applications

## Low Latency

- ▶ Enables customizable radio protocols, reducing latency for real-time video transmission

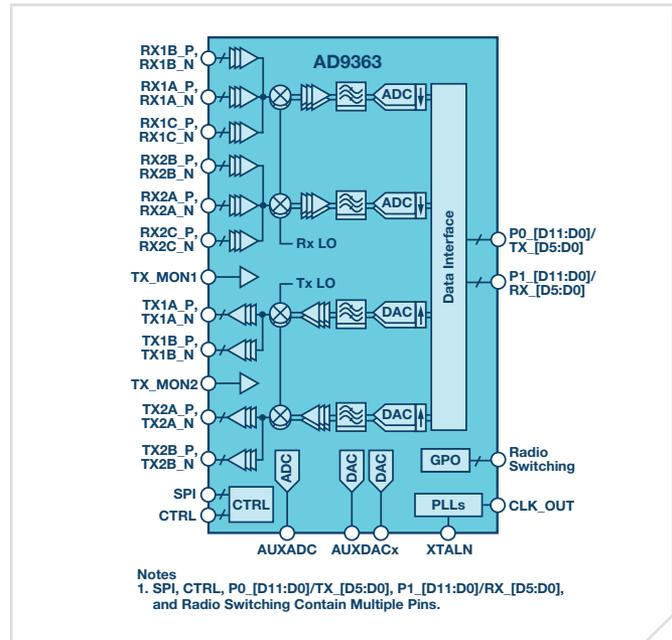


## Applications

- ▶ 3G/4G femtocell base stations
- ▶ Wireless video surveillance
- ▶ Drones/UAVs
- ▶ Software-defined radio

## AD9363 Functionality

- ▶ Dual transmitters (Tx): 4 differential outputs
- ▶ Dual receivers (Rx): 6 differential or 12 single-ended inputs
- ▶ Tunable range: 325 MHz to 3800 MHz
- ▶ Tunable bandwidth: <200 kHz to 20 MHz
- ▶ Supports frequency division duplex (FDD) and time division duplex (TDD) operation
- ▶ Superior receiver sensitivity with a noise figure <3 dB
- ▶ Receiver gain control
- ▶ CMOS/LVDS digital interface



AD9363 functional block diagram.

## Product Evaluation Options

ADI provides several options for simulating and prototyping AD9363 performance using both hardware and software tools. The following table outlines the available tools.

Evaluation Board	FMC Motherboards	Control and Data Capture	Software Simulation Tools
<a href="#">ADRV9363-W/PCBZ</a>	Variety of Xilinx® and Altera® development boards	<ul style="list-style-type: none"> <li>▶ Operating system agnostic API source in ANSI C</li> <li>▶ Open-source GUI that runs on Windows®, Linux®, OS X</li> <li>▶ Open-source Linux IIO device driver</li> <li>▶ Streams data to GNU radio, MATLAB, and Simulink</li> </ul>	<ul style="list-style-type: none"> <li>▶ MathWorks SimRF model</li> <li>▶ MATLAB Filter Design Wizard</li> </ul>

## RadioVerse Radio Design Environment

ADI recognizes the challenges associated with RF design and integration, and what it takes to bring a high performance radio solution to market quickly.

The RadioVerse™ technology and design ecosystem gets our customers through the entire radio design process—from idea, to proof of concept, to production—as fast as possible.

In addition to ADI's market-leading integrated transceiver technologies, RadioVerse offers a choice of evaluation options, software user guides, complete API, a standard serial peripheral interface (SPI), training, an active technical support community, and a growing ecosystem of industry-leading ODM partners.

## Integrated Wideband RF Transceiver Product Series

Part Number	RF Tuning Range	Bandwidth	Channels	Interface	Power Consumption	Price @ 1k (\$)
<a href="#">AD9361</a>	70 MHz to 6 GHz	56 MHz	2 Rx, 2 Tx	JESD207 CMOS/LVDS	<1.5 W	175
<a href="#">AD9363</a>	325 MHz to 3.8 GHz	20 MHz	2 Rx, 2 Tx	JESD207 CMOS/LVDS	<1.5 W	80
<a href="#">AD9364</a>	70 MHz to 6 GHz	56 MHz	1 Rx, 1 Tx	JESD207 CMOS/LVDS	<1.5 W	130
<a href="#">AD9371</a>	300 MHz to 6 GHz	100 MHz Rx, 250 MHz Tx	2 Rx, 2 Tx, 2 ORx, 3 SnRx	6 Gbps JESD204B	<5 W	245

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