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Performance Gallery is a web-based tool for distributing and viewing performance data. Quickly narrow the search space with intuitive filtering and manipulate dynamic plots with zoom, pan, mouse-over traces, and more.

[Performance Gallery - BETA](#)

# AD9208

14-Bit, 3GSPS,  
JESD204B, Dual Analog-  
to-Digital Converter



Recommended  
for New Designs

Data Sheet Rev. 0

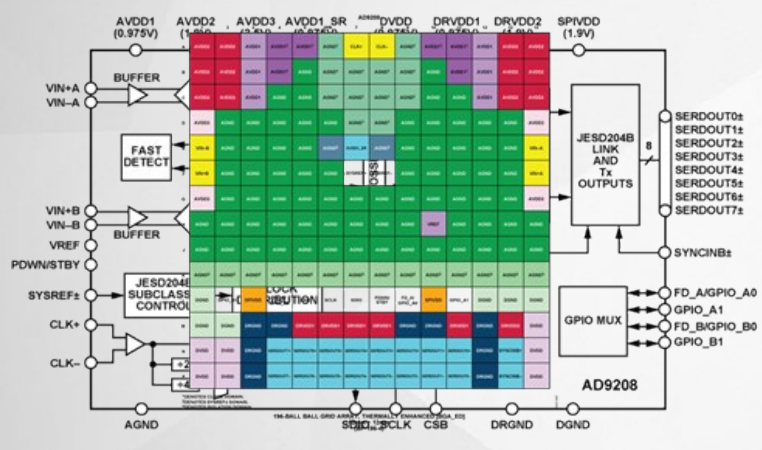
JP Rev. 0



S-  
Parameter  
s

1

View All



## Overview

### Features and Benefits | Product Details

- JESD204B (Subclass 1) coded serial digital outputs
  - Support for lane rates up to 16 Gbps per lane
- 1.65 W total power per channel at 3 GSPS (default settings)
- Performance at  $-2$  dBFS amplitude, 2.6 GHz input
  - SFDR = 70 dBFS
  - SNR = 57.2 dBFS
- Performance at  $-9$  dBFS amplitude, 2.6 GHz input
  - SFDR = 78 dBFS
  - SNR = 59.5 dBFS
- Integrated input buffer
- Noise density =  $-152$  dBFS/Hz
- 0.975 V, 1.9 V, and 2.5 V dc supply operation
- 9 GHz analog input full power bandwidth ( $-3$  dB)
- Amplitude detect bits for efficient AGC implementation
- 2 integrated, wideband digital processors per channel
  - 48-bit NCO
  - 4 cascaded half-band filters
- Phase coherent NCO switching
- Up to 4 channels available
- Serial port control
  - Integer clock with divide by 2 and divide by 4 options
  - Flexible JESD204B lane configurations

## Product Categories

[A/D Converters \(ADC\)](#)

[Standard High Speed A/D Converters >20 MSPS](#)

## Markets & Technology

[Communications](#)

[Wireless Infrastructure](#)

[Wideband RF Signal Processing](#)

[Software Defined Radio \(SDR\)](#)

[Aerospace and Defense](#)

[Phased Array](#)

[Electronic Surveillance and Countermeasures](#)

[Missiles and Precision Munitions](#)

[Aerospace and Defense Radar](#)

[Instrumentation & Measurement](#)

- On-chip dither



- Instrumenting 5G
- Communications Test Equipment
- Oscilloscopes & Digitizers
- RF Signal Analyzers & Vector Network Analyzers
- Data Acquisition
- Electronic Test & Measurement
- RF Converters

Comparable Parts | [Click to see all in Parametric Search](#)

Product Lifecycle ☒ Recommended for New Designs

This product has been released to the market. The data sheet contains all final specifications and operating conditions. For new designs, ADI recommends utilization of these products.

## Evaluation Kits (2)

	
<div>EVAL-AD9208</div> <div>AD9208 Evaluation Board</div>	<div>ADS8-V1EBZ</div> <div>ADS8-V1 Evaluation Board</div>

## Documentation

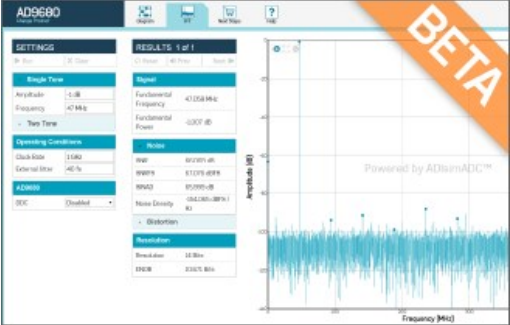
- [View All \(2\)](#)
- [Data Sheets \(1\)](#)
- [Product Highlight \(1\)](#)

## Tools & Simulations

# Virtual Eval - BETA

Virtual Eval is a web application to assist designers in product evaluation of ADCs, DACs, and other ADI products. Using detailed models on Analog’s servers, Virtual Eval simulates crucial part performance characteristics within seconds. Configure operating conditions such as input tones and external jitter, as well as device features like gain or digital down-conversion. Performance characteristics include noise, distortion, and resolution, FFTs, timing diagrams, response plots, and more.

Virtual Eval Tool - BETA



## IBIS Models

[AD9208 IBIS Model](#)

IBIS  
90.41 K

## S-Parameters

[AD9208 S-Parameters](#)

ZIP  
2 M

## Design Tools

[AD9208 Delphi Model Companion Transport Layer RTL Code Generator Tool \(Rev. 1.0\)](#)

ZIP  
1.25 K

This command line executable tool generates a Verilog module which implements the JESD204 receive transport layer. The user specifies in a configuration file one or more modes to be supported by the transport layer module. These modes are defined as a set of JESD204 parameter values: L, M, F, S, N', and CF. The transport layer converts JESD204 lane data output from a JESD204 link layer IP to a data bus with a fixed width, containing interleaved virtual converter samples. Both JESD204B and JESD204C link layers are supported.

[JESD204x Frame Mapping Table Generator](#)

The JESD204x Frame Mapping Table Generator tool consists of two Windows executables that will allow the user to input any valid combination of JESD204x parameters (L, M, F, S, NP) in order to output a .csv file that illustrates the frame mapping of the JESD204x mode in table format. There is an executable that allows the user to input a single JESD204x mode and another, that allows the user to input the parameters for multiple JESD204x modes in a specified .csv format in order to output a .csv file that illustrates the frame mapping of each of the JESD204x modes that were input into separate tables.

[Performance Gallery](#)

Performance Gallery is a web-based tool for distributing and viewing performance data. Quickly narrow the search space with intuitive filtering and manipulate dynamic plots with zoom, pan, mouse-over traces, and more.

# Product Recommendations

## AD9208 Companion Parts

### Recommended Clock Distribution Device

- [LTC6953](#), [HMC7043](#), [HMC6832](#).

### Recommended RF Amplifiers

- For high speed RF converters like the AD9208: [ADL5569](#), [ADL5205](#).

### Recommended Clock Generation Device

- [HMC7044](#), [LTC6952](#).

# Reference Materials

- [View All \(34\)](#)   [3rd Party Solutions \(7\)](#)   [FPGA Interoperability Reports \(3\)](#)   [Videos \(7\)](#)   [Press Releases \(3\)](#)   [Technical Articles \(10\)](#)   [Webcast \(3\)](#)
- [Rarely Asked Questions \(1\)](#)

# Design Resources

ADI has always placed the highest emphasis on delivering products that meet the maximum levels of quality and reliability. We achieve this by incorporating quality and reliability checks in every scope of product and process design, and in the manufacturing process as well. "Zero defects" for shipped products is always our goal.

 [AD9208 Material Declaration](#)

 [Quality And Reliability](#)

 [Symbols and Footprints](#)

# Support & Discussions

## AD9208 Discussions

[How to provide the AD9689 sample clock and ref clock?](#)  
19 week(s) ago in Speed ADCs

[JESD204 Interface Framework - SPORT over JESD](#)  
23 week(s) ago in Linux Software Drivers

[RE: AD9208 Vref pin](#)  
24 week(s) ago in Speed ADCs

[All AD9208 Discussions](#)

 **ADI** Technical Support

[Contact ADI Technical Support »](#)

 **ADI EngineerZone™**

[Ask your question »](#)

SUPPORT COMMUNITY

# Sample & Buy

Model	Package	Pins	Temp Range	Packing Qty	Price (100-499)	Price (1000+)	RoHS	Order from Analog Devices
AD9208BBPZ-3000 Request PCN/PDN Notification Production	196-Ball BGA (12mm x 12mm x 1.42mm w/ EP)	196	-40 to 85C	Tray, 189			Y  Info	<a href="#">Purchase</a>
AD9208BBPZRL-3000 Request PCN/PDN Notification Production	196-Ball BGA (12mm x 12mm x 1.42mm w/ EP)	196	-40 to 85C	Reel, 1500	-		Y  Info	<a href="#">Purchase</a>

Back

Select a country

Check Inventory

The USA list pricing shown is for BUDGETARY USE ONLY, shown in United States dollars (FOB USA per unit for the stated volume), and is subject to change. International prices may differ due to local duties, taxes, fees and exchange rates. For volume-specific price or delivery quotes, please contact your local Analog Devices, Inc. sales office or authorized distributor. Pricing displayed for Evaluation Boards and Kits is based on 1-piece pricing.

[Price Table Help](#)

## Evaluation Boards

Pricing displayed is based on 1-piece.

Model	Description	RoHS	
AD9208-3000EBZ Production	Evaluation Board for the AD9208		Yes
AD9208-DUAL-EBZ Production	Evaluation Board for the AD9208 with HMC7044 Clock		Yes
ADS8-V1EBZ Production	Evaluation Board		Yes

Back

Add to cart

Select a country

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Up to two boards can be purchased through Analog.com. To order more than two, please purchase through one of our listed distributors. Pricing displayed is based on 1-piece. The USA list pricing shown is for budgetary use only, shown in United States dollars (FOB USA per unit), and is subject to change. International prices may vary due to local duties, taxes, fees and exchange rates.

