



NXP high-speed ADC/DAC selection guide

High-speed ADC/DAC solutions for wideband communication and industrial applications

Available with three different data interfaces (including JESD204A), our high-speed ADC/DAC solutions deliver best-in-class speed, size, and integration.

High-speed single/dual ADCs

- ▶ Resolution : 8 to 16 bits
- ▶ Sampling rates : 20 to 250 Msps
- ▶ Supply voltages : 1.8 / 3.3 / 5.0 V
- ▶ Serial interface, input buffer, internal V_{ref}
- ▶ JESD204A and other digital interfaces
- ▶ Low power dissipation
- ▶ Excellent SFDR and SNR ratings
- ▶ Packages: HVQFN, QFP, SSOP, LQFP, HTQFN

High-speed dual DACs

- ▶ Resolution : 10 to 14 bits
- ▶ Sampling rates : 125 to 750 Msps
- ▶ Supply voltages : 1.8 / 3.3 V
- ▶ Low power dissipation
- ▶ Excellent SFDR ratings
- Interpolation : 2x, 4x, 8x
- ▶ JESD204A and other digital interfaces
- ▶ Packages: HVQFN, HTQFP, LQFP



Many of the world's most creative innovators have benefited from our best-in-class data converters. We now offer that same industry-leading performance to the general market. These highly competitive ADCs and DACs build on NXP's long heritage of innovation in High Performance Analog, and join NXP's other leading portfolios, including RF, power management, and signal-processing technologies, for consumer and industrial applications.

The ADC family uses either a folding or pipeline architecture to provide best-in-class dynamic performance at the lowest possible power dissipation. There are options that support the high speeds and high bandwidth needed for Flash architecture, versions that provide the low bandwidth/high resolution combination required for Sigma-Delta architectures, and general-purpose options that meet the needs of Success Approximation Register architectures.

Our new single- and dual-channel ADCs portfolio comprises some fifty models with resolutions of 10, 11, 12, 14 and 16 bits, optional input buffer, input sample rates of 65, 80, 105, 125 Msps, and low-voltage CMOS, LVDS DDR and JEDEC JESD204A compliant CGV™ digital outputs. Typical performance ranges from 84 dBc SFDR at $F_{in} = 170$ MHz and $F_{clk} = 125$ Msps input sample rate.

Type	Related demoboard	Description
ADC1215S series	ADC1215S065/DB	ADC1215S065 demo board; both CMOS and LVDS
	ADC1215S080/DB	ADC1215S080 demo board; both CMOS and LVDS
	ADC1215S105/DB	ADC1215S105 demo board; both CMOS and LVDS
	ADC1215S125/DB	ADC1215S125 demo board; both CMOS and LVDS
ADC1410S series	ADC1410S065/DB	ADC1410S065 demo board; both CMOS and LVDS
	ADC1410S080/DB	ADC1410S080 demo board; both CMOS and LVDS
	ADC1410S105/DB	ADC1410S105 demo board; both CMOS and LVDS
	ADC1410S125/DB	ADC1410S125 demo board; both CMOS and LVDS
ADC1413D series	ADC1413D065W1/DB	ADC1413D065 demo board; VIRTEX 5 FPGA on board
	ADC1413D065WO/DB	ADC1413D065 demo board; compliant with external FPGA boards through specific connectors
	ADC1413D080W1/DB	ADC1413D080 demo board; VIRTEX 5 FPGA on board
	ADC1413D080WO/DB	ADC1413D080 demo board; compliant with external FPGA boards through specific connectors
	ADC1413D105W1/DB	ADC1413D105 demo board; VIRTEX 5 FPGA on board
	ADC1413D105WO/DB	ADC1413D105 demo board; compliant with external FPGA boards through specific connectors
	ADC1413D125W1/DB	ADC1413D125 demo board; VIRTEX 5 FPGA on board
	ADC1413D125WO/DB	ADC1413D125 demo board; compliant with external FPGA boards through specific connectors
ADC1415S series	ADC1415S065/DB	ADC1415S065 demo board; both CMOS and LVDS outputs
	ADC1415S080/DB	ADC1415S080 demo board; both CMOS and LVDS outputs
	ADC1415S105/DB	ADC1415S105 demo board; both CMOS and LVDS outputs
	ADC1415S125/DB	ADC1415S125 demo board; both CMOS and LVDS outputs
ADC1613D series	ADC1613D065W1/DB	ADC1613D065 demo board; VIRTEX 5 FPGA on board
	ADC1613D065WO/DB	ADC1613D065 demo board; compliant with external FPGA boards through specific connectors
	ADC1613D080W1/DB	ADC1613D080 demo board; VIRTEX 5 FPGA on board
	ADC1613D080WO/DB	ADC1613D080 demo board; compliant with external FPGA boards through specific connectors
	ADC1613D105W1/DB	ADC1613D105 demo board; VIRTEX 5 FPGA on board
	ADC1613D105WO/DB	ADC1613D105 demo board; compliant with external FPGA boards through specific connectors
	ADC1613D125W1/DB	ADC1613D125 demo board; VIRTEX 5 FPGA on board
	ADC1613D125WO/DB	ADC1613D125 demo board; compliant with external FPGA boards through specific connectors

DAC Demo Boards

Type	Related demoboard	Description
DAC1001D125	DAC1001D125/DB	DAC1001D125 demo board
DAC1003D160	DAC1003D160/DB	DAC1003D160 demo board
DAC1005D series	DAC1005D650/DB	DAC1005D650 demo board
	DAC1405D750/DB	DAC1405D750 demo board
DAC1201D125	DAC1201D125/DB	DAC1201D125 demo board
DAC1203D160	DAC1203D160/DB	DAC1203D160 demo board
DAC1401D125	DAC1401D125/DB	DAC1401D125 demo board
DAC1403D160	DAC1403D160/DB	DAC1403D160 demo board
DAC1405D series	DAC1405D650/DB	DAC1405D650 demo board
	DAC1405D750/DB	DAC1405D750 demo board
DAC1205D series	DAC1205D650/DB	DAC1205D650 demo board
	DAC1405D750/DB	DAC1405D750 demo board
DAC1408D series	DAC1408D650W0/DB	DAC1408D650 demo board
	DAC1408D650W1/DB	DAC1408D650 demo board with Virtex 5 FPGA
	DAC1408D750W0/DB	DAC1408D750 demo board
	DAC1408D750W1/DB	DAC1408D750 demo board with Virtex 5 FPGA
DAC1208D series	DAC1208D650W0/DB	DAC1208D650 demo board
	DAC1208D650W1/DB	DAC1208D650 demo board with Virtex 5 FPGA
	DAC1208D750W0/DB	DAC1208D750 demo board
	DAC1208D750W1/DB	DAC1208D750 demo board with Virtex 5 FPGA
DAC1008D series	DAC1008D650W0/DB	DAC1008D650 demo board
	DAC1008D650W1/DB	DAC1008D650 demo board with Virtex 5 FPGA
	DAC1008D750W0/DB	DAC1008D750 demo board
	DAC1008D750W1/DB	DAC1008D750 demo board with Virtex 5 FPGA

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