

The V205 is a single width VXI module that provides up to 32 channels of 16-bit analog-to-digital conversion that offers exceptional dynamic range over a wide bandwidth.

This module offers an oversampling ratio of 2, 4 and 8, depending on the input bandwidth.

## APPLICATIONS

Radar systems

Sonar (hydroacoustic) systems

High-speed communications systems

High Energy Physics experiments

Instrumentation requiring high-bandwidth analog conversion

## V205 32-channel, 10 Msample/s, 16-Bit ADC



Sigma-delta converters with output rates to 10 MSa/s per channel

## FEATURES

- 8, 16 or 32 channels
- Simultaneous sampling at output rates up to 10 Msamples/s per channel
- External or programmable internal clock and trigger
- 1 megasample on-board buffer
- Multiple board synchronization
- Transient-mode data collection to on-board memory
- Pre- and post-trigger data collection (circular buffering)

The V205 is a single width VXI module that provides up to 32 channels of 16-bit analog-to-digital conversion that offers exceptional dynamic range over a wide bandwidth. Based on a new generation of ADC chip (Analog Devices AD9260), which combines Sigma-Delta and flash converter technologies, this module offers an oversampling ratio of 2, 4 and 8, depending on the input bandwidth. The anti-aliasing requirement is reduced due to the oversampling inherent in the AD9260.

The highest input sample rate is 20 MHz, with a corresponding output word rate of either 10 MSa/s, 5 MSa/s or 2.5 MSa/s for each channel, following digital lowpass filtering and decimation of either 2, 4 or 8. The higher the decimation the better is the S/N ratio. The S/N ratios for 8X operation is 82 dB. The V205 is available in 8, 16 and 32 channels versions. The 8, 16 and 32 channel version support operation up to 10 MSa/s/channel. (-3 dB BW of up to 4.5 MHz), 5 MSa/s/channel. (-3 dB BW of up to 2.3 MHz) and 2.5 MSa/s/channel. (-3 dB BW of up to 1.2 MHz), respectively. The maximum output rate is 10 MSa/s/channel with 8 active channels, 5 MSa/s/channel with 16 active channels and 2.5 MSa/s/channel with 32 active channels. This module is ideal for applications in radar, communications, instrumentation and sonar systems, which require a large number of high frequency analog inputs.

ITEM	SPECIFICATION
Input Channels Number Full Scale Range Input Bandwidth (-0. 1dB point)	8, 16 or 32 ±1 V 1.074 xFs/20 for F0 = Fs/8 2.049 xFx/20 for F0 = Fs/4 3.231 xFs/20 for F0 = Fs/2 [F0 is the output rate; Fs is the sample rate.]
Input Impedance	500 Ohms
Signal to (Noise + Distortion + Crosstalk)	>82 dB for F0 = Fs/8 >TBD dB for F0 = Fs/4 >TBD dB for F0 = Fs/2
Sample Clock  Maximum Rate  Minimum Rate Selection Internal Clock Programmable Steps	20 MHz (F0 =10 megasamples per second, maximum) 24 kHz (F0 = 3000 samples per second, minimum) Internal/external <500 Hz at outputrate (x8 oversampling) <1000 Hz at output rate (x4 oversampling) <2000 Hz at output rate (x2 oversampling)
Trigger Selection	Internal/external
Total Onboard Storage	1 megasample
Available Memory per Channel (All channels active)	32-channel module: 32 ksamples 16-channel module: 64 ksamples 8-channelmodule: 128 ksamples
RC Filters	Single-pole, lowpass

## ORDERING INFORMATION

MODEL	DESCRIPTION
V205-AA11	8-channel, 10 MSa/s, 16-bit ADC
V205-BA11	16-channel, 10 MSa/s, 16-bit ADC
V205-CA11	32-channel, 10 MSa/s, 16-bit ADC

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