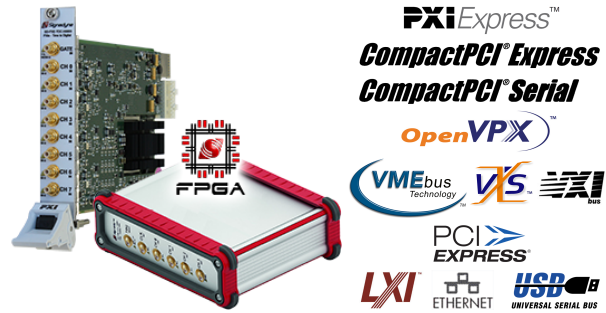


## 4/40/200 MHz, 10/100/500 MSPS, 14/16 Bits, 2/4/8 Ch, Analog In / Digitizer with FPGA Option



### Features

- 2 / 4 / 8 analog input channels
- DC to 4 / 40 / 200 MHz input frequency
- 10 / 100 / 500 MSPS per channel (simultaneous sampling)
- 4 / 40 / 200 MHz real-time bandwidth
- 14 / 16-bit resolution
- Up to 200 V<sub>pp</sub> input voltage
- Selectable 50 Ω / 1 MΩ input impedance
- Selectable voltage range (1 MΩ input impedance): ±100V, ±50V, ±20V, ±10V, ±3V, ±1V, ±500mV, ±300mV, ±150mV, ±50mV
- Selectable voltage range (50 Ω input impedance): ±3V, ±1.5V, ±500mV, ±300mV, ±150mV
- Feature-rich Data Acquisition system (DAQ)
  - Advanced triggering (HW trigger, HVI trigger, SW trigger)
  - Programmable cycles and data bursts to avoid PC saturation
- 16 MB, 128 MB or 1 GB of RAM
- Hardware programming using Signadyne HVI Technology
  - User-friendly flowchart-style programming (no VHDL needed)
  - Ultra-fast real-time execution & decision making by hardware
  - Built-in inter-module synchronization & data exchange
  - Complete robustness, PC-independent execution without OS
- Onboard user-programmable FPGA (F models):
  - Xilinx Kintex-7 160T/325T
- Mechanical/Interface:
  - 1 slot 3U/6U (modular standards)
  - Up to 350 MB/s transfer speed with P2P communication
  - Independent DMA channels for fast and efficient data transfer

### Programming Tools and Application Software

- Off-the-shelf functionalities:
  - Software execution: programming libraries for most common languages, e.g. C, C++, C#, VB, LabVIEW, MATLAB, etc.
  - Hardware execution: real-time HVI technology with Signadyne ProcessFlow, a flowchart-style programming environment
- Signadyne VirtualKnob: software front panels

### Applications

- General purpose data acquisition
- Hardware-In-the-Loop (HIL) / ATE (Automated Test Equipment)
- R&D / Scientific research equipment
- OEM for industrial machinery
- Aerospace & defense COTS equipment

### General Description

The SD AIN-H3200/H3200F Series are FPGA-based high-performance measurement modules. They provide simultaneous sampling for fast measurements, and high-precision 16-bit converters. Thanks to their advanced off-the-shelf features, these powerful devices simplify the development of the most demanding applications. Signadyne's HVI technology allows the user to develop real-time applications without the need to program VHDL. In addition, users can also program custom FPGA code for onboard real-time digital signal processing (F models).

### Product Table

Product	Analog Outputs					Analog Inputs					FPGA Programming
	Freq. (MHz)	Speed (MSPS)	Bits	Ch	DUC / IQ with ODSP <sup>1</sup>	Freq. (MHz)	Speed (MSPS)	Bits	Ch	DDC / IQ with ODSP <sup>1</sup>	
AIN-H3244(F)	-	-	-	-	-	DC-200	500	14	4	-	✓ <sup>2</sup>
AIN-H3243(F)	-	-	-	-	-	DC-200	500	14	2	-	✓ <sup>2</sup>
AIN-H3234(F)	-	-	-	-	-	DC-40	100	14	8	-	✓ <sup>2</sup>
AIN-H3233(F)	-	-	-	-	-	DC-40	100	14	4	-	✓ <sup>2</sup>
AIN-H3224(F)	-	-	-	-	-	DC-4	10	16	8	-	✓ <sup>2</sup>
AIN-H3223(F)	-	-	-	-	-	DC-4	10	16	4	-	✓ <sup>2</sup>
<b>Related Products</b>											
AIO-H3333/34	DC-40	100	14	4 / 8	-	DC-40	100	14	4 / 8	-	✓ <sup>2</sup>
AOU-H3323/24	DC-40	100	14	4 / 8	-	-	-	-	-	-	✓ <sup>2</sup>
AIO-H3363/64	DC-40	100	14	4 / 8	-	1-550	100	14	4 / 8	✓	✓ <sup>2</sup>
AIN-H3423/24	-	-	-	-	-	DC-40	100	14	4 / 8	✓	✓ <sup>2</sup>
AIN-H3433/34	-	-	-	-	-	DC-200	500	14	2 / 4	✓	✓ <sup>2</sup>
AIO-H5323/24	DC-40	100	14	2 / 4	✓	DC-40	100	14	2 / 4	✓	✓ <sup>2</sup>

<sup>1</sup> Digital Up/Down Converter (DUC/DDC), IQ modulator/demodulator with Onboard Digital Signal Processing (ODSP)

<sup>2</sup> F model