

ACCES I/O Products Announces M.2 Multifunction High-Speed Analog I/O Cards

Flagship M.2-ADIO16-8FDS, 16-bit multifunction analog I/O can sample at speeds up to 1MHz for the board's eight single-ended or four differential analog inputs

SAN DIEGO, CA, UNITED STATES, July 23, 2024 /EINPresswire.com/ -- <u>ACCES</u> <u>I/O Products</u> announces the immediate release of a new family of M.2



The ACCES I/O M.2-ADIO16-8FDS can sample at speeds up to 1MHz for the board's eight single-ended or four differential analog input channels.

multifunction analog I/O cards— the M.2-ADIO Family. This innovative line of 12 and 16-bit M.2 models starts with its flagship model, the <u>M.2-ADIO16-8FDS</u>. This high-speed, 16-bit multifunction analog input/output board is ideal for precision measurement, analysis, monitoring, and control in countless embedded applications. The M.2-ADIO16-8FDS can sample

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"Our M.2 multifunction analog I/O cards are the product of ACCES I/O's decades of experience in providing high quality products designed for mPCIe, PCI Express, PCIe/104, USB, PCI and many others"

Chris Persidok, Marketing Communications Director at speeds up to 1MHz for the board's eight single-ended or four differential analog input channels. Standard features in the M.2-ADIO Family include four 16-bit analog outputs and 16 high-current digital I/O lines—all in the ultra-small M.2 2260/2280 embedded form factor (NVME compatible). Striking an excellent price/performance value, this family of boards also includes models with slower A/D speeds, no analog outputs, and a group of 12-bit modules for less demanding applications.

The M.2-ADIO Family includes over a dozen models with list prices ranging from only \$249 to \$669, an unprecedented value. The cards feature seven softwareselectable per-channel analog voltage input ranges,

including 4-20 and 10-50mA current inputs (factory options). This channel-by-channel programmable gain feature enables measurement of an assortment of large and small signals in one scan—all under software control at up to 1MHz. 4 kSample FIFO+DMA-driven data is optimum where high data rates must be sustained for short—or long— periods of time.

The four analog outputs each have five software selectable ranges and can drive loads up to

10mA. The flagship FDS model adds hardware-paced 8 kSample FIFO+DMA-driven Streaming Waveform Playback on one, two, three, or all four DACs, at any aggregate rate up to 1Msps.

The 16 digital I/O lines can be used independently as simple input or output, external ADC trigger, ADC start conversion, DAC trigger (LDAC), watchdog status output, and more.

The cards are designed for use in harsh and rugged environments, including military and defense, as well as commercial and industrial applications like medical devices, point of sale systems, kiosk design, retail, hospitality, automation, and gaming.

Key features of the M.2-ADIO Family include:

- M.2 Type B/M 2260/2280, with latching I/O connector
- 16-bit, bipolar, differential, A/D converter sampling at up to 1MHZ
- Software selectable as 8 single-ended or 4 differential inputs
- Seven channel-by-channel Programmable differential input ranges from ±0.3125V up to ±12V
- A/D starts via software, external input, or periodic timer
- A/D "scan start" mode optimizes inter-channel timing, reducing skew
- High Impedance, 8-channel input: 500 M Ω
- 32K FIFO plus DMA for efficient, robust data streaming
- 16 digital I/O; 8 individually configurable for input or output
- Four 16-bit analog outputs with optional 8 kSample FIFO+DMA Waveform Streaming
- 5 per-channel programmable ranges: 0-5V, 0-10V, ±2.5V, ±5V, ±10V
- Outputs drive ±10mA
- Onboard watchdog with status output
- RoHS compliant standard

All ACCES M.2 cards offer high retention latching connectors for shock and vibration mitigation as well as an optional extended operating temperature of -40°C to +85°C. The small size (M.2 2260/2280: 22mm x 60mm/80mm) allows for maximum performance in applications where space is a valuable resource. The newer M.2 form factor provides a small footprint for embedded applications where compact size is critical. This M.2 card is compatible with standard NVME sockets, common on all modern motherboards.

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