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Data Sheet
August 2, 2026

APEX EMBEDDED SYSTEMS

Apex Embedded Systems STX104 High-Rel PC/104 Advanced Analog I/O Module

Apex Embedded Systems STX104 High-Rel PC/104 Advanced Analog I/O Module The Apex Embedded Systems STX104 (STX104) isarugged PC/104-form-factor 16-bit analog I/O module withaone-million-sample FIFO for high-speed buffered acquisition in embedded and sustainment applications. It provides 16 single-ended or 8 differential analog input channels with aggregate sample rate up to 200 kS/s, software-selectable bipolar and unipolar ranges (±10 V through ±1.25 V and 0–10 V through 0–1.25 V), and gain settings ×1, ×2, ×4, ×8. Two 16-bit analog output channels and digital I/O are included. Designed for harsh environments with -40°C to +85°C operating range, single +5 V supply (under about 1.5 W), and MTBF about 664,780 hours (MIL-HDBK-217F ground benign, 25°C). Drop-in compatibility class with legacy DAS16jr/16, DAS1602/16, and Keithley DAS-16 series boards. The Apex Embedded Systems STX104 (STX104) isarugged PC/104-form-factor 16-bit analog I/O module withaone-million-sample FIFO for high-speed buffered acquisition in embedded and sustainment applications. It provides 16 single-ended or 8 differential analog input channels with aggregate sample rate up to 200 kS/s, software-selectable bipolar and unipolar ranges (±10 V through ±1.25 V and 0–10 V through 0–1.25 V), and gain settings ×1, ×2, ×4, ×8. Two 16-bit analog output channels and digital I/O are included. Designed for harsh environm

No photo

MODEL Apex Embedded Systems STX104	CALIBRATION N/A — off-catalog OEM datasheet
CONDITION See OEM documentation	STATUS Not listed on Aumictech inventory
RFQ / SKU STX104	LISTING Off-catalog — OEM dat asheet only

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

Features & description

From manufacturer datasheet

Features

• PC/104 16-bit analog I/O with 1M-sample FIFO • 16 SE or 8 differential ADC inputs • Aggregate sample rate 200 kS/s • Two 16-bit analog output channels • Eight input ranges; gains ×1, ×2, ×4, ×8 • Triggering subsystem (start/stop/sync events, delay timer) • Low noise: about 1.5 LSB RMS (about 0.6 LSB with averaging filter) • -40°C to +85°C operating temperature • Single +5 V; power under about 1.5 W • Drop-in class: DAS16jr/16, DAS1602/16, Keithley DAS-16 series

STX104 Characteristics / Specifications

PARAMETER	VALUE
Model	STX104 (STX104-1MFIFO-DAQ; STX104-ND no-DAC variant)
Manufacturer	Apex Embedded Systems
Instrument Type	PC/104 advanced analog I/O / data acquisition module
Form Factor	PC/104 (supports 8- or 16-bit data bus; 10- or 16-bit address decode)
Analog Inputs	16 single-ended or 8 differential; 16-bit resolution
Sample Rate	200 kS/s aggregate
Input Ranges	±10 V, ±5 V, ±2.5 V, ±1.25 V; 0–10 V, 0–5 V, 0–2.5 V, 0–1.25 V
Input Gains	×1, ×2, ×4, ×8 (software selectable)
FIFO Depth	1,000,000 samples
Analog Outputs	2 channels; 16-bit (STX104-1MFIFO-DAQ; omitted on STX104-ND)
Digital I/O	4 digital inputs; 4 digital outputs (driver class)
Power	+5 V at about 250 mA max at PC/104 connector
Operating Temperature	-40°C to +85°C
MTBF	about 664,780 hours (MIL-HDBK-217F, ground benign, 25°C) Standard Operating Conditions Configure base address via J6 jumpers; select differential mode via onboard jumper when needed. Provide convection cooling within rated ambient. Use Apex drivers for FIFO and triggering features on supported hosts.
Low noise	about 1.5 LSB RMS (about 0.6 LSB with averaging filter)
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General Specifications & Supplementary Characteristics

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Operating temperature	Single +5 V; power under about 1.5 W - Drop-in class: DAS16jr/16, DAS1602/16, Keithley DAS-16 series
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Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications

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Standard Operating Conditions
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Operational Notes
Confirm STX104 vs STX104-ND (no analog outputs). Linux IIO driver covers basic ADC/AO/DIO but not FIFO streaming–use OEM Windows drivers for full FIFO capability. Designed and assembled in USA (ISO 9001 class facility per OEM).

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: N/A — off-catalog OEM datasheet. See OEM documentation · Not listed on Aumictech inventory.

Request a quote: **sales@aumictech.com** · +1 (484) 841-9341

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NIST-traceable calibration · SAM registered · 30-day returns
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