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Data Sheet

August 15, 2026

ADVANTECH

Advantech PCL-81601 Data Acquisition System Card

The Advantech PCL-81601 is a modular data acquisition card built for industrial measurement and control in demanding environments. It combines a 16-bit ADC with 100 kHz sampling capability, 16 differential analog inputs, 16 digital I/O channels, and two expansion slots for functional modules. The metal-shielded A/D module and DB-37 connector deliver signal integrity critical to noise-sensitive applications. Typical Applications Multichannel industrial data logging, process control systems, environmental monitoring, laboratory instrumentation, and closed-loop control requiring high-resolution analog acquisition with synchronized digital signaling. Compatibility & Integration Supported by Windows DLL drivers and ActiveX controls. Compatible with Visual BASIC, Microsoft Visual C++, Borland C++, Delphi, and LabVIEW environments. Aumictech offers NIST-traceable calibration and repair for t



MODEL

Advantech PCL-81601

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

PCL-81601

LISTING

<https://aumictechlabs.com/products/pcl-81601-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Advantech PCL-81601 is a modular data acquisition card built for industrial measurement and control in demanding environments. It combines a 16-bit ADC with 100 kHz sampling capability, 16 differential analog inputs, 16 digital I/O channels, and two expansion slots for functional modules.

The metal-shielded A/D module and DB-37 connector deliver signal integrity critical to noise-sensitive applications.

Technical Specifications

Analog Input 16 differential channels, 16-bit resolution
Maximum sampling rate: 100 kHz
Conversion time: 8.5 μ sec
Software-programmable gains: 1, 2, 4, 8
Input ranges (bipolar): ± 10 V, ± 5 V, ± 2.5 V, ± 1.25 V
Input ranges (unipolar): 0–10 V, 0–5 V, 0–2.5 V, 0–1.25 V
Accuracy: $\pm 0.003\%$ ± 1 LSB
Input impedance: > 10 M Ω
Overvoltage protection: ± 15 V
Trigger modes: Software, pacer, external
Data transfer: Software, interrupt (IRQ 2–7), or DMA (channels 1 or 3)
Digital I/O 16 TTL-compatible input channels (0.8 V max. for logic 0; 2.0 V min. for logic 1)
16 TTL-compatible output channels (0.4 V max. @ 16 mA sink; 2.4 V min. @ 800 mA source)
20-pin flat cable connectors
Timer/Counter Intel 8254 programmable pacer clock 10 MHz time base
Maximum rate: 2.5 MHz
Minimum rate: 0.00023 Hz

Key Features

Metal-shielded A/D module for enhanced noise rejection
Flexible input range and gain selection via software
Two 64-pin piggyback connectors for expansion modules
Optional PCL-816-DA analog output module (2-channel 16-bit D/A, ± 10 V bipolar, 5 μ sec settling time)
DB-37 shielded connector for signal integrity

Typical Applications

Multichannel industrial data logging, process control systems, environmental monitoring, laboratory instrumentation, and closed-loop control requiring high-resolution analog acquisition with synchronized digital signaling.

Compatibility & Integration

Supported by Windows DLL drivers and ActiveX controls. Compatible with Visual BASIC, Microsoft Visual C++, Borland C++, Delphi, and LabVIEW environments.

PCL81601 Characteristics / Specifications

PARAMETER	VALUE
Model	PCL-81601
Base Family	PCL-816
Instrument Type	Modular high-resolution multifunction DAS card
Adc Resolution	16 bit
Sampling Rate	100 kS/s
Analog Input Channels	16 differential
Programmable Gains	1, 2, 4, 8
Digital Inputs	16
Digital Outputs	16
Input Range Modes	unipolar/bipolar
Bus Interface	ISA PC
Connector Analog	DB-37
Language Drivers	C/C++ Pascal BASIC
Shielding	metal-shielded A/D module
Dma	programmable DMA channel
Irq	programmable IRQ level
Channel Scanning	auto channel scanning circuit
Resolution Bits Ad	16
Sample Rate Ksps	100
Ai Channel Count	16
Di Channel Count	16
Do Channel Count	16
Gain Steps	4
Ordering Alias	PCL-816

PCL81601 Specifications

PARAMETER	VALUE
Applications	ISA PC industrial measurement needing shielded 16-bit differential acquisition.
Unipolar/bipolar input ranges	Optional PCL-816-DA two-channel 16-bit outputs
Technical Specifications	Model: PCL-81601
Notes	From Advantech PCL-816 product literature applied to queue SKU PCL-81601.

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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PARAMETER	VALUE
Model	PCL-81601
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Instrument Type	Modular high-resolution multifunction DAS card
Adc Resolution	16 bit
Sampling Rate	100 kS/s
Analog Input Channels	16 differential
Programmable Gains	1, 2, 4, 8
Digital Inputs	16
Digital Outputs	16
Optional Dac Module: PCL-816-DA	
Optional Dac Channels: 2	
Optional Dac Resolution: 16 bit double-buffered	
Specifications	
PARAMETER	VALUE
Input Range Modes	unipolar/bipolar
Bus Interface	ISA PC
Connector Analog	DB-37
Language Drivers	C/C++ Pascal BASIC
Shielding	metal-shielded A/D module
Dma	programmable DMA channel
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Do Channel Count	16
Gain Steps	4

Ordering Alias: PCL-816

Notes

From Advantech PCL-816 product literature applied to queue SKU PCL-81601.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

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

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.