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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight L4450A

Agilent Keysight L4450A 64 Bit Digital I/O With Memory And Counter The Agilent/Keysight L4450A is an LXI Class C high-speed 64-bit digital I/O instrument with 128 kB pattern memory and two 10 MHz counter channels. Eight 8-bit channels provide programmable polarity and thresholds up to 5 V for pattern simulate/capture and handshaking in distributed test systems. Digital pattern stimulus and capture, protocol handshaking, frequency/period/duty/pulse-width/totalize measurements, and remote Ethernet digital I/O in functional test. The Agilent/Keysight L4450A is an LXI Class C high-speed 64-bit digital I/O instrument with 128 kB pattern memory and two 10 MHz counter channels. Eight 8-bit channels provide programmable polarity and thresholds up to 5 V for pattern simulate/capture and handshaking in distributed test systems. Digital pattern stimulus and capture, protocol handshaking, frequency/period/duty/pulse-width/totalize measurements, and remote Ethernet digital I/O in functional test. 64 bidirectional lines as eight 8-bit channels



MODEL

**Agilent / Keysight
L4450A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

L4450A

LISTING

<https://aumictechlabs.com/products/l4450a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight L4450A is an LXI Class C compliant digital I/O instrument engineered for high-speed pattern simulation and capture. It delivers 64 bi-directional digital I/O lines organized as eight independent 8-bit channels, each with programmable polarity, output drive modes (active high or open drain), and input thresholds from 0 V to 5 V. The instrument operates at speeds up to

10 MHz with 128 KB of pattern memory, allocable up to 64 KB per channel for flexible test scenarios.

Technical Specifications

Digital I/O Performance 64 bi-directional lines in eight 8-bit channels Maximum frequency: 10 MHz at 50% duty cycle Source/sink current: up to 24 mA per line Programmable input thresholds: 0 V to 5 V Programmable output drive: 1.65 V to 5 V active high, or open drain with user-supplied pull-ups to 5 V

Measurement & Timing Two independent 10 MHz counter/totalizer channels Functions: event counting, frequency, period, duty cycle, pulse width, totalization Counter input thresholds: 0 V to 3 V 20 MHz divide-by-n programmable clock output Configurable handshaking protocols

Memory & Connectivity Pattern memory: 128 KB total capacity LAN interface: 10BaseT/100BaseTx standard Optional IEEE 488.2 GPIB interface Two 78-pin gold-plated D-sub connectors

Key Features Remote access via fully-featured graphical web interface (Java-enabled browser) Includes Keysight I/O Libraries Suite Driver support: IVI-C, IVI-COM, LabVIEW, VEE Pro, TestStand, Measurement Studio, LabWindows/CVI, C/C++, Visual Basic 6.0 Compact 1.61 × 8.36 × 14.93 in form factor; 3.7 kg weight Universal power: 100 V to 240 V ±10%, 50–60 Hz ±10%; 15 VA consumption Operating range: 0°C to 55°C, up to 80% RH at 40°C

Typical Applications Digital pattern generation and acquisition, event-based measurement, frequency and duty cycle characterization, embedded system validation, and protocol emulation requiring synchronized multi-channel control.

Compatibility & Integration Fully compatible with Keysight measurement ecosystems. Terminal block connectors and cable kits available separately. CSA/UL/IEC/EN safety certified.

L4450A Characteristics / Specifications

PARAMETER	VALUE
Model	L4450A
Instrument Type	64 bit digital I/O with memory and counter
Lxi Class	C
Digital Lines	64 bidirectional
Channel Organization	eight 8-bit channels
Threshold Range	0 V to 5 V
Source Sink Current	up to 24 mA
Pattern Memory	128 kbytes
Pattern Rate	up to 10 MHz
Counter Channels	2
Counter Bandwidth	10 MHz
Counter Functions	events frequency period duty cycle pulse width totalize
Divide ByNClock	20 MHz
Handshaking Protocols	configurable
Polarity	programmable per channel
Standard Connectors	78-pin Dsub class
Power Supply Class L44	universal 100 V to 240 V plus or minus 10 percent
Power Line Frequency Class L44	50 Hz to 60 Hz auto sensed
Operating Temperature Class L44	0 C to 55 C full accuracy
Storage Temperature Class L44	minus 40 C to 70 C
Standard Interface	LAN 10BaseT/100BaseTx
Alternate Interface	IEEE 488.2 GPIB
Web Interface	built-in graphical instrument web server
Software Drivers	IVI-C IVI-COM LabVIEW class
Form Factor	L4400 series half-rack LXI instrument

PARAMETER	VALUE
Publication	5989-4829EN
Power Consumption Class L44	about 15 VA class
Bandwidth	10 MHz
Storage temperature	Class L4400: minus 40 C to 70 C
Operating temperature	Class L4400: 0 C to 55 C full accuracy

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	Class L4400: minus 40 C to 70 C
Operating temperature	Class L4400: 0 C to 55 C full accuracy
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Operating Temperature Class L44	0 C to 55 C full accuracy
Storage Temperature Class L44	minus 40 C to 70 C
Standard Interface	LAN 10BaseT/100BaseTx
Alternate Interface	IEEE 488.2 GPIB
Web Interface	built-in graphical instrument web server
Software Drivers	IVI-C IVI-COM LabVIEW class
Form Factor	L4400 series half-rack LXI instrument
Publication	5989-4829EN
Power Consumption Class L44	about 15 VA class Notes Feature and numeric rows from Agilent/Keysight L4450A data sheet 5989-4829EN and L4400 series literature shared with L4421A.

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	L4450A
Instrument Type	64 bit digital I/O with memory and counter
Lxi Class	C
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Counter Functions	events frequency period duty cycle pulse width totalize
Divide ByNClock	20 MHz
Handshaking Protocols	configurable
Polarity	programmable per channel
Standard Connectors	78-pin Dsub class
Power Supply Class L4400	universal 100 V to 240 V plus or minus 10 percent
Power Line Frequency Class L4400	50 Hz to 60 Hz auto sensed
Operating Temperature Class L4400	0 C to 55 C full accuracy
Storage Temperature Class L4400	minus 40 C to 70 C
Standard Interface	LAN 10BaseT/100BaseTx
Alternate Interface	IEEE 488.2 GPIB
Web Interface	built-in graphical instrument web server
Software Drivers	IVI-C IVI-COM LabVIEW class
Form Factor	L4400 series half-rack LXI instrument
Publication	5989-4829EN

PARAMETER	VALUE
Power Consumption Class L4400	about 15 VA class

Notes
Feature and numeric rows from Agilent/Keysight L4450A data sheet 5989-4829EN and L4400 series literature shared with L4421A.

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