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Data Sheet

August 13, 2026

KEITHLEY

Keithley 2701 Ethernet Multimeter System

Keithley 2701 Ethernet Multimeter Data Acquisition System The Keithley 2701 is the Ethernet member of the Integra Series 6.5-digit DMM / data acquisition / datalogging mainframes. Two expansion slots accept 77XX plug-in modules for up to 80 differential channels (or 96 crosspoints class). A built-in 10/100BaseTX Ethernet TCP/IP interface plus RS-232 support distributed measurement without a GPIB card. Nonvolatile buffer holds 450,000 readings with timestamp. Front-panel inputs and module channels share DCV, ACV, ohms, temperature, frequency/period, and continuity functions. Scan rates reach 500 channels/s into memory with suitable modules. The Keithley 2701 is the Ethernet member of the Integra Series 6.5-digit DMM / data acquisition / datalogging mainframes. Two expansion slots accept 77XX plug-in modules for up to 80 differential channels (or 96 crosspoints class). A built-in 10/100BaseTX Ethernet TCP/IP interface plus RS-232 support distributed measurement without a GPIB card. Nonvolatile buffer holds 450,000 readings with timestamp. Front-panel inputs and module channels share DCV, ACV, ohms, temperature, frequency/period, and continuity functions. Scan rates reach 500 channels/s into memory with suitable modules. Distributed Ethernet plant and lab monitoring



MODEL

Keithley 2701

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

2701

LISTING

<https://aumictechlabs.com/products/2701-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keithley 2701 Ethernet Multimeter System integrates digital multimeter, signal routing, and data logging functions into a single half-rack instrument. It delivers true 6½-digit resolution across voltage, current, resistance, and temperature measurements while simultaneously managing up to 200 differential input channels and 96 matrix crosspoints. The system supports scan rates to 500 channels/second or 3500 readings/second on a single channel, with 450,000-reading battery-backed memory for extended data capture. Ethernet connectivity via 10/100BaseTX enables remote operation and configuration through a built-in diagnostic web interface.

Technical Specifications

Measurement Resolution & Accuracy

True 6½-digit (22-bit) resolution

DC Voltage (100 mV range): 0.1 µV resolution; 15 ppm of reading + 30 ppm of range (24-hour accuracy)

Resistance (10 MΩ range): 15 ppm of reading + 6 ppm of range (24-hour accuracy); 100 µΩ resolution

Temperature coefficient for DC voltage: (1 + 5)/°C; resistance: (1 + 1)/°C

Data Acquisition

Maximum scanning rate: 500 channels/second

Single-channel rate: 3500 readings/second

Internal trigger rate (max): 2800/s

External trigger rate (max): 2000/s

Memory buffer: 450,000 readings (battery-backed)

System Architecture

Input channels: Up to 200 differential (2-pole configuration)

Matrix crosspoints: 96 maximum

Plug-in slots: 2 for switch/control modules

DC voltage protection: 1000 V

Power Requirements

Selectable input: 100 V / 120 V / 220 V / 240 V

AC Line frequency: 45–66 Hz, 360–400 Hz

Power rating: 80 VA max at 50/60/400 Hz

Physical

Half-rack width, 2U height

Key Features

Measurement functions: DCV, ACV, DCI, ACI, 2-wire/4-wire resistance with offset compensation, temperature (thermocouple/RTD/thermistor), frequency/period, continuity, event counting, digital I/O

Ethernet: 10/100 Mbits/sec; RJ45; TCP/IP socket interface; 100 m maximum hardwired distance

Secondary interfaces: RS-232 (9-pin D-Sub), GPIB (configuration varies), digital I/O (9-pin D-Sub)

Rack-mount or benchtop configuration with front-panel probe access

Typical Applications

Automated test equipment (ATE), research and development, industrial monitoring, and applications requiring simultaneous multi-channel measurement and signal routing.

Compatibility & Integration

Ethernet control supports remote access and instrument diagnostics. GPIB and RS-232 interfaces provide legacy system integration. Plug-in module architecture enables customized switch configurations.

2701 Characteristics / Specifications

PARAMETER	VALUE
Model	2701
Manufacturer	Keithley Instruments (Tektronix)
Instrument Type	Ethernet multimeter / data acquisition / datalogging system
Alias	2701; Integra 2701
Resolution	6.5 digit (22 bit class); 28 bit readings over Ethernet or RS-232
Expansion Slots	2
Maximum Differential Channels	80 (module dependent)
Maximum Crosspoints Class	96
Reading Buffer	450000 readings nonvolatile with timestamp
Scan Rate Maximum	500 channels/s (module dependent, into memory)
Single Channel Speed Class	up to 3500 readings/s
DCV Basic Accuracy 10 V 1 Year	30 ppm of reading plus 5 ppm of range (23 C plus/minus 5 C, MED 1 PLC)
DCV Ranges	100 mV, 1 V, 10 V, 100 V, 1000 V
DCV Best Resolution	0.1 uV on 100 mV
Ohms Best Accuracy 1 Year Class	100 ppm of reading plus 6 ppm of range on 1 kohm to 10 kohm class
Ohms Ranges	100 ohm to 100 Mohm
DCI Ranges	20 mA, 100 mA, 1 A, 3 A
ACV Ranges	100 mV to 750 V true RMS
Frequency Period	3 Hz to 300 kHz class
Thermocouple Types	J, K, N, T, E, R, S, B (ITS-90)
RTD Range	minus 200 C to 630 C (100 ohm platinum class)
Thermistor Range	minus 80 C to 150 C (2.2 kohm, 5 kohm, 10 kohm)
Ethernet	RJ-45, TCP/IP, autosense 10BaseT or 100BaseTX
RS2	yes
IP Configuration	static or DHCP

PARAMETER	VALUE
Password Protection	up to 11 characters
Digital IO	2 inputs (trigger, interlock); 5 outputs (limits), sink 250 mA diode clamped to 40 V
Power Supply	100 / 120 / 220 / 240 V
Line Frequency	50 to 60 Hz and 400 Hz autosensed
Power Consumption	80 VA
Warmup	2 hours to rated accuracy
Operating Temperature	0 C to 50 C
Rack Dimensions	89 mmHby 213 mmWby 370 mmDBench Dimensions: 104 mmHby 238 mmWby 370 mmDShipping Weight: 4.75 kg (10 lb)
Battery Backup Buffer	Lithium ion, 30 days storage at 23 C after greater than 4 hour charge
Related Mainframes	2700 (GPIB, 2 slots); 2750 (5 slots)

General Specifications & Supplementary Characteristics

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Related Mainframes	2700 (GPIB, 2 slots); 2750 (5 slots) Notes Specs from Keithley Series 2700 / 2701 Integra datasheet and 2701 technical data. Confirm installed 77XX modules for channel count and scan speed. Ethernet distinguishes 2701 from GPIB-centric 2700.

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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Notes

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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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

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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.