

# High performance DMMs for single- and multi-channel applications

superior precision ■ superior throughput ■ bench and system use

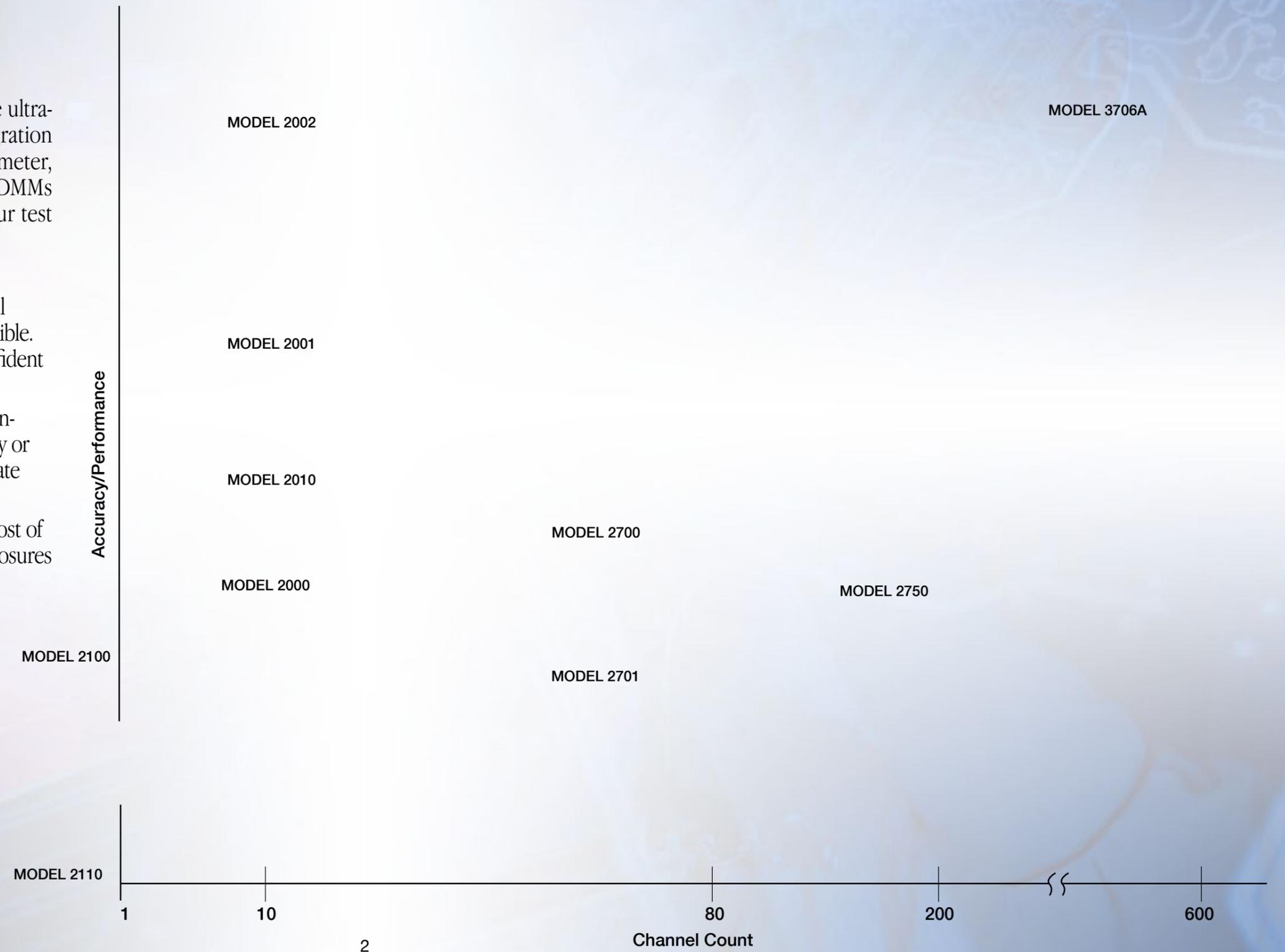


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# Ten digital multimeter options with maximum resolutions from 5½ to 8½ digits

Whether you need the affordability of the Model 2110, the ultra-high resolution of the Model 2002, the exceptional integration flexibility of our new Model 3706A System/Switch Multimeter, or something in between, Keithley's array of precision DMMs makes it simple to find one that's a perfect match for your test and measurement application.

- **Industry-leading accuracy, sensitivity, linearity, and noise performance.** Our patented ADC and signal conditioning circuitry makes this high performance possible. Comprehensive instrument specifications let you be confident of their measurement integrity before you buy.
- **Embedded intelligence.** Our newest models feature on-board TSP® (Test Script Processor) capabilities to simplify or even eliminate test programming, so you'll get the accurate results you need faster than ever.
- **Comprehensive test and measurement toolkits.** Most of our DMMs are packaged in convenient half-rack, 2U enclosures to save space on the bench or in the test rack.
- **Engineered for long-term reliability.** Our DMMs' reliability is backed up with affordable extended warranties that provide additional years of protection at a fraction of the cost of a repair.





Roll your cursor over the instrument for details on important functions and capabilities.



## Superior functionality at a break-through price: Model 2110 5½-digit Dual-Display DMM

The Model 2110 5½-Digit Dual-Display Digital Multimeter combines a compelling price with a comprehensive set of capabilities, superior measurement accuracy, and high speed for a broad range of applications. It features 15 measurement functions and 7 math functions and has dual-line display capability, which allows it to display two different measurements concurrently. The Model 2110 is an unbeatable value for production, R&D, and test engineers, scientists, and students making a wide variety of measurements in portable, bench, and system applications.



### Want to learn more?

Data Sheet: **Model 2110**  
5-1/2-Digit Dual-Display Digital  
Multimeter

Application Notes:

**Using the Dual Measurement  
Functionality and Dual  
Measurement Display on the  
Model 2110**

**Overview of Two-Wire and Four-Wire (Kelvin)  
Resistance Measurements**

**Achieving High Reading Rates Using the Data Buffer  
with the Model 2110**

**Making Temperature Measurements with the Model 2110**

Send us your application question **or** join the discussion  
on our application forum.

### Model 2110 Features and Advantages

- Fully specified, NIST traceability (with included calibration certificate) on 15 measurement functions including capacitance and thermocouple measurements
- Dual-line display allows concurrent measurements, simplifying and reducing test time
- TMC-compliant USB remote interface allows simple connectivity with a PC, optional GPIB interface for production testing applications.
- High speed, up to 50,000 readings per second and on-board memory for storing up to 2000 readings.
- Front panel thermocouple input with cold junction compensation (CJC), allows quick access to temperature measurements

### Typical Model 2110 Applications

- General purpose benchtop testing such as research, development, and service
- Production testing of low cost electronic devices and modules
- Student labs for electronic circuit analysis or research



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## Low cost meets high functionality: Model 2100 6½-digit USB Digital Multimeter

The Model 2100 delivers 6½-digit resolution at a 5½-digit price and packs 11 measurement and 8 math functions into a compact, half-rack enclosure. It combines exceptional stability, accuracy, and speed with a simple-to-use interface. Rugged construction, front and rear removable rubber bumpers, and a sturdy carrying handle make the Model 2100 durable and portable enough for use in a wide range of test settings. All the accessories you need most, including start-up software, USB and power cables, and safety test leads, are included in this instrument's economical price.



### Want to learn more?

Data Sheet: [Model 2100 6½-Digit USB Digital Multimeter](#)

Send us your application question or join the discussion on our application forum.

### Model 2100 Features and Advantages

- 11 built-in measurement functions with fully specified accuracies on all functions for ISO-compliant results
- Support for 8 different math operations on measurement results: ratio, percentage, min/max, null, limits, mX+b, dB, and dBm
- TMC-compliant USB remote interface allows PC-based control and simplifies reuse of existing SCPI-based GPIB DMM programs
- Included KI-Tool application supports charting and graphing results without programming

### Typical Model 2100 Applications

- Manual and semi-automatic electrical functional test
- Electrical/electronic circuit and product validation
- Electronic product repair and calibration
- Electrical and physics research
- Electronic device and circuits experiments in student labs



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# As easy to operate as it is to afford: Model 2000 6½-digit Multimeter

The Model 2000 is a fast, accurate, and highly stable 6½-digit multimeter that's ideal for a variety of general-purpose applications because it combines broad measurement ranges, superior accuracy, and exceptional ease of use. All it takes to create a self-contained multipoint measurement system is plugging an optional scanner card into the built-in switch mainframe on the back panel. You can multiplex up to 10 differential input signals into the Model 2000 with none of the usual worries about triggering, timing, and processing complexities. This highly affordable, high performance multimeter is equally suitable for use in student labs and R&D environments.



## Model 2000 Features and Advantages

- 13 measurement functions in one half-rack instrument: DCV, ACV, DCI, ACI, 2WΩ, 4WΩ, temperature, frequency, period, dB, dBm, continuity measurement, and diode testing
- Math functions including Rel, Min/Max/Average/StdDev (of stored reading), dB, dBm, Limit Test, %, and mX+b allow making calculations on results without a computer controller
- Built-in limits testing function can be used to sort or grade components or assemblies in production test
- Up to 2000 readings/second at 4½-digit resolution
- Built-in RS-232 and IEEE-488 interfaces

## Typical Model 2000 Applications

- General-purpose benchtop test and measurement applications
- Rack-based production test
- Multipoint testing of up to ten test points
- Temperature monitoring



## Want to learn more?

Data Sheet: [Model 2000 6½-Digit Multimeter](#)  
 Application Note: [Determining Resistivity and Conductivity Type using a Four-Point Collinear Probe and the Model 6221 Current Source](#)  
 Send us your application question or join the discussion on our application forum.

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# Low noise performance for low resistance measurements: Model 2010 7½-digit Low Noise Autoranging DMM

The Model 2010 combines all the functions needed for characterizing the resistance, linearity, or isolation of contacts, connectors, switches, or relays in a single instrument. With a noise floor of just 100nV RMS, it's optimized for low voltage and resistance applications like testing the reliability of electrical connectors during development and stress testing. Capabilities like a low power ohms mode, dry circuit testing mode, offset-compensated ohms, and an extended 10Ω range make it ideal for developing, validating, or production testing of sensors, transducers, A/D and D/A converters, regulators, references, connectors, switches and relays.



## Model 2010 Features and Advantages

- 15 measurement functions, including DCV, ACV, DCI, ACI, 2WΩ, 4WΩ, dry circuit resistance, temperature (with either thermocouples or RTDs), frequency, period, ratio, continuity measurement, and diode testing.
- Selectable speeds up to 2000 readings/second
- Dry circuit test mode clamps the open circuit voltage at 20mV to prevent punctures in any oxides or films that may have formed on contacts and connectors. Measurement results reflect the “in use” resistance
- Offset compensated ohms function eliminates errors due to cables and connectors
- Low-power ohms measurement mode lets you measure resistance with source current as low as 100μA, minimizing device self-heating
- Built-in scanner mainframe

## Typical Model 2010 Applications

- Benchtop testing, calibration, characterization of low voltage and resistance devices
- Production testing of electronic devices such as precision sensors, transducers, A/D and D/A converters, regulators, references, connectors, switches, and relays
- Multipoint scan/measure applications with optional plug-in cards
- Low channel count temperature monitoring



## Want to learn more?

Data Sheet: [Model 2010  
7½-Digit Low Noise Autoranging Multimeter](#)

Application Note: [Solutions for Production Testing of  
Connectors](#)

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# Everything you never expected to find in a DMM: Model 2001 7½-digit Multimeter

The Model 2001 7½-digit DMM is designed for applications that demand exceptional resolution, accuracy, and sensitivity combined with high throughput. It does more than deliver performance specifications usually associated only with instruments that cost thousands more: it provides a broad range of functions and capabilities that general-purpose instruments like DMMs typically can't offer.

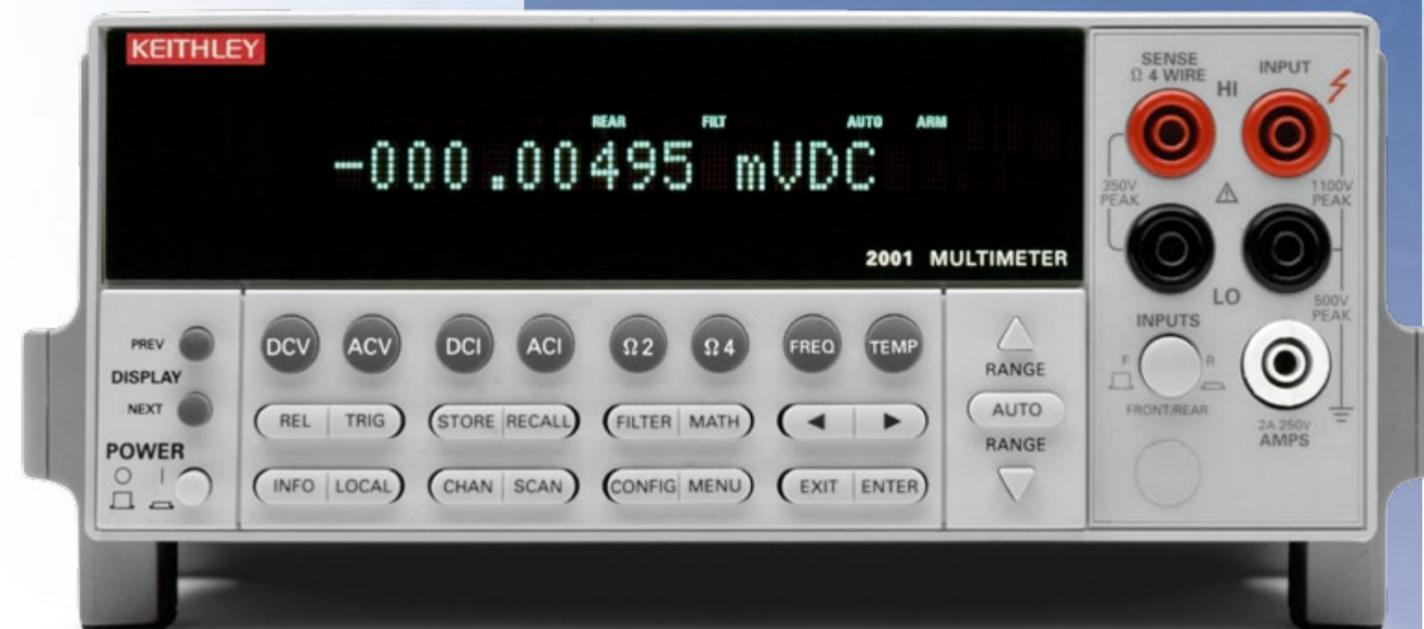
## Model 2001 Features and Advantages

- Exceptional DC measurement integrity, high speed, plus high accuracy AC measurements such as TRMS AC, average AC, peak AC, AC+DC, and crest factor
- Wide dynamic range supports measuring from 1µV to 20V on a single range, eliminating range-shift errors

- Multiple-measurement displays let you view multiple results from a single measurement connection simultaneously
- Measure AC peak value, average, and true rms directly to characterize signals thoroughly
- Bar-graph display function indicates data as a percentage of the selected range
- Internal peak detector can catch power supply spikes and transients, AC line power surges, and short-duration dropouts on components
- Measure DC in-circuit current; no need to cut into the circuit to insert a current meter
- Built-in AC crest factor measurement helps ensure AC measurement accuracy with no need for an external oscilloscope
- Built-in scanner mainframe
- 8K reading memory standard, 32K and 128K optional

## Typical Model 2001 Applications

- General-purpose benchtop test and measurement
- High accuracy production test, design verification, and metrology
- Rack-based production test
- Multipoint testing for up to ten test points
- Low channel count temperature monitoring



## Want to learn more?

Data Sheet: [Model 2001 7½-Digit and Model 2002 8½-Digit High Performance Multimeters](#)

Application Notes:

[Peak Detection with the Model 2001 DMM](#)

[Production Testing of Thermistors Using the 2400 Digital SourceMeter](#)

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# When the application demands high precision and high throughput: Model 2002 8½-digit Multimeter

The Model 2002 is Keithley's highest resolution DMM, offering the same advanced features and functions as the 7½-digit Model 2001 while adding a decade of resolution and broader DC voltage, temperature, and resistance ranges. Because its performance is specified for a  $\pm 5^\circ\text{C}$  environment and no daily recalibration is required to stay in spec, it's ideal for production test applications that demand ultra-high precision. Built-in digital I/O capabilities and a pass/fail testing function simplify connecting the Model 2002 to a variety of parts handlers for fast, efficient device binning and sorting of electronic components.

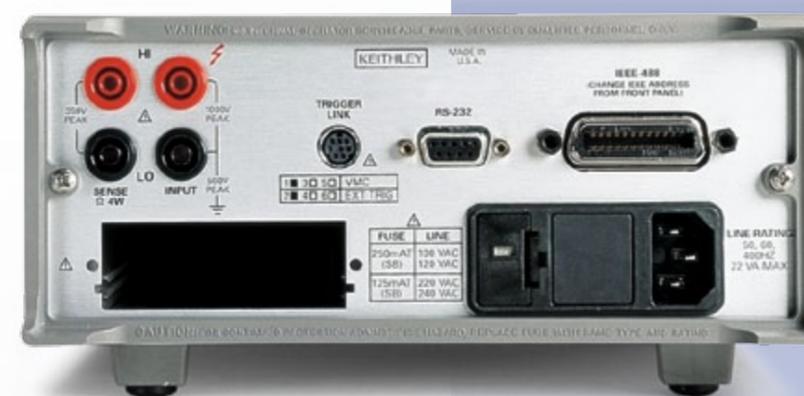
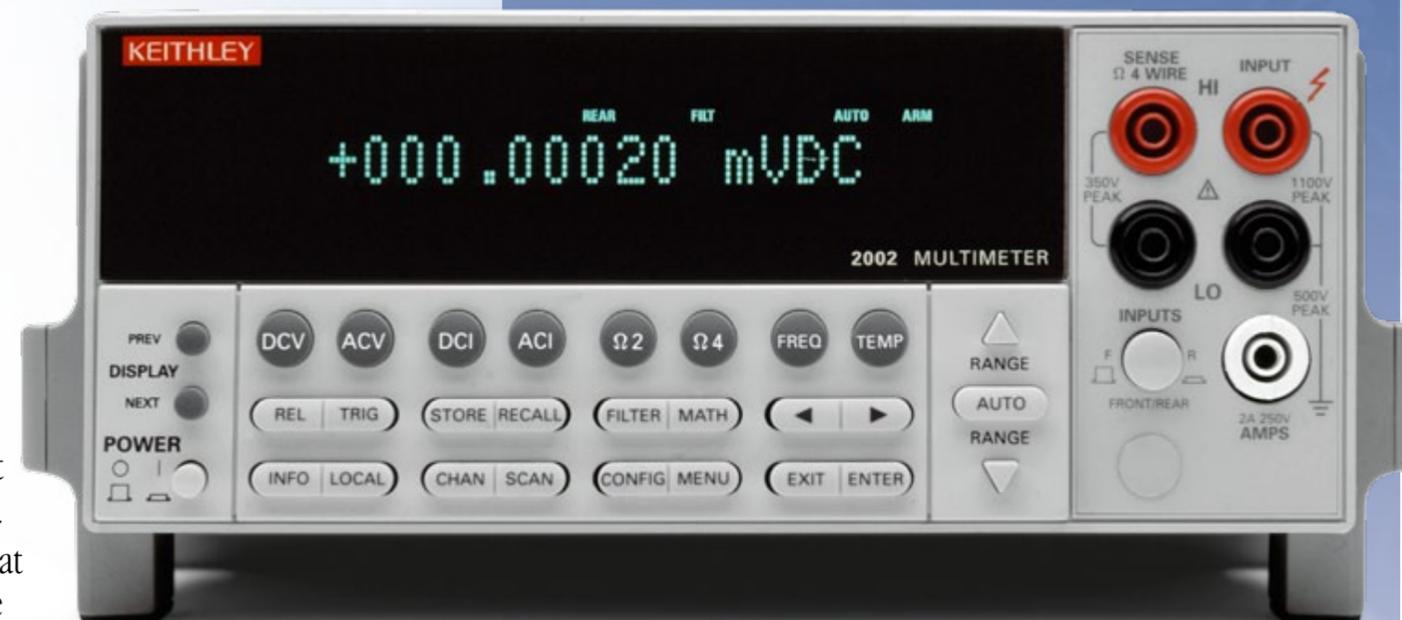


## Model 2002 Features and Advantages

- More than 2000 readings/second at 4½-digit resolution; at 7½-digits it maintains full rated accuracy at up to 44 readings/second on DCV and ohms.
- Low trigger latency enhances test throughput
- "Open lead" detection function helps prevent passing components that should have failed a test
- Single-phase method for 4-wire resistance eliminates errors due to changing lead resistances that can result from fast test handlers and makes the Model 2002 twice as fast for a given power line cycle rate
- Built-in peak detector operates up to 1MHz for repetitive signals or down to 1μs for a single spike.
- Built-in scanner mainframe
- 8K reading memory standard, 32K and 128K optional

## Typical Model 2002 Applications

- High precision production test, design verification, and metrology tasks
- High speed resistance measurements
- High precision benchtop testing
- Multipoint scan/measure solutions with optional plug-in cards



## Want to learn more?

Data Sheet: **Model 2001 7½-Digit and Model 2002 8½-Digit High Performance Multimeters**

Application Note: **Optimizing Switch/Read Rates with Series 2000 DMMs and 7001/7002 Switch Systems**

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# High performance multi-channel DMM: Series 3700A System Switch/Multimeter and plug-in cards

Keithley's newest integrated test solution combines a high performance 7½-digit multimeter with a six-slot switch mainframe for creating scalable multi-channel measurement solutions economically. The Model 3706A's compact 2U high, full-rack enclosure easily handles applications involving hundreds of channels for unrivaled density and low per-channel costs. The built-in multimeter can stream more than 14,000 readings/second to memory at 3½-digits for high speed data acquisition. Embedded Test Script Processor (TSP) technology makes the Model 3706A a "smart" instrument that's optimized for distributed processing and control at the instrument level with no need for an external controller.



## Model 3706A Features and Advantages

- 13 built-in measurement functions: DCV, ACV, DCI, ACI, frequency, period, 2-wire ohms, 4-wire ohms, 3-wire RTD temperature, thermocouple temperature, thermistor temperature, and continuity
- Embedded Web-based tools for controlling and monitoring installed switching cards and the DMM; support for real-time data trending and analysis
- Extended low ohms ( $1\Omega$ ) and low current ( $10\mu A$ ) ranges
- LXI/Ethernet, GPIB, and USB interfaces
- Compatible with an expanding line of multiplexer, matrix, and I/O cards
- High speed TSP-Link® expansion interface can connect multiple 3706A mainframes as well as other TSP-Link enabled instruments (including Series 2600B System SourceMeter instruments) into a high speed integrated test system. All TSP-Link-connected instruments can be controlled by a single master unit.
- 14 programmable digital I/O lines allow controlling external devices like component handlers

## Typical Model 3706A Applications

- Integration and control of larger systems for automated testing of electronic products and components
- Design validation
- Accelerated stress testing
- Data acquisition
- Functional test



## Want to learn more?

Data Sheet: [Series 3700A System Switch/Multimeter](#)

Application Notes:

[High Speed Testing of High Brightness LEDs](#)

[LLCR Pin Socket Testing with the Model 3732 High Density Matrix Card](#)

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# Compact, cost-effective multi-channel DMM: Series 2700 Multimeter/Data Acquisition/Switch systems

All three Series 2700 Integra systems combine a precision 6½-digit multimeter, data acquisition system, and switching capabilities in a single, tightly integrated 2U enclosure for either rack-mounted or benchtop applications. These cost-effective solutions are affordable alternatives to building systems from separate instruments or chassis. For many applications, they can perform complex test sequences without the expense of a dedicated PC controller. The Model 2700 and Model 2701 80-channel two-slot mainframes offer a low per-channel cost for medium channel count applications. A built-in Ethernet interface in the Model 2701 makes it a good choice for distributed data acquisition tasks. With a total of five switch module slots, the Model 2750 simplifies configuring solutions for applications up to 200 hundred channels per mainframe using a common switch card library across all three Integra models.



## Series 2700 Features and Advantages

- Built-in measurement functions include DC volts, AC volts, DC current, AC current resistance (2- or 4-wire offset compensation selectable), temperature (with T/Cs, RTDs, or thermistors), frequency, and period
- “Servo” front end eliminates zero drift—increasing measurement speed by eliminating the wasted time usually required to check zero
- Scan rates of up to 500 channels/second (up to 3500 readings/second on a single channel)
- Dry circuit ohms capability (Model 2750) protects sensitive devices from damage and prevents self-heating errors
- Expanded resistance measurement ranges (Model 2750) address production test applications that would often require a separate micro-ohmmeter
- Free LabVIEW®, LabWindows/CVI, Visual Basic, and C/C++ drivers (IVI style)
- Free ExceLINX™-1A datalogging software
- 12 different measurement and control modules simplify mixing, matching, and changing input signals or control lines

## Typical Series 2700 Applications

- Production test of electronic products and devices
- Accelerated stress testing (AST)
- Process monitoring and control
- Device characterization/R&D
- Low ohms, multichannel measurements



## Want to learn more?

Data Sheet: [Models 2700, 2701, 2750  
Multimeter/Data Acquisition/Switch Systems](#)

Application Notes: [Burn-in Testing Techniques for  
Switching Power Supplies](#)

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# Extend the capabilities of your Keithley Series 2000 multimeter with switching options

Slide one of Keithley's three Series 2000 plug-in scanner cards into the option slot on the meter's back panel and you'll combine scanning and measurement in a single instrument.



**Series 7000 switching solutions** complement Series 2000 DMMs when building larger multi-point test systems. The 80-channel Model 7001 High Density Switch System will accept a wide variety of switching cards for signals up to 2GHz. Similarly, the Model 7002 Switch Mainframe will support up to 400 channels or crosspoints, with a unique interactive channel status display. Both mainframes are compatible with Keithley's line of more than 40 Series 7000 Switching Cards. [Learn more.](#)



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CARD MODEL	WORKS WITH THESE SERIES 2000 DMMs	FUNCTION
<a href="#">2000-SCAN 10-Channel Scanner Card</a>	2000, 2010, 2001, and 2002	<ul style="list-style-type: none"> <li>Supports multiplexing one of ten 2-pole or one of five 4-pole signals into the DMM and/or any combination of 2- or 4-pole signals (all models)</li> </ul>
<a href="#">2001-SCAN Scanner Card</a>	2000, 2010, 2001, and 2002	<ul style="list-style-type: none"> <li>Transforms your meter into a high accuracy, high speed 10-channel datalogger for a variety of mixed-signal applications (all models)</li> <li>Two high speed solid-state card channels for calculation of ratio and delta (2001, 2002, 2010)</li> </ul>
<a href="#">2001-TCSCAN Thermocouple Scanner Card</a>	2001, 2002, and 2010	<ul style="list-style-type: none"> <li>Provides up to nine channels of cold-junction compensated temperature measurements and/or voltage, resistance, and frequency measurements (all models)</li> <li>Linearizes Type J, K, E, R, S, B, and T thermocouples automatically (2001 and 2002)</li> <li>Allows measuring temperature directly using 2- or 4-wire RTDs (2001, 2002, 2010)</li> </ul>

# Series 2700 Plug-in Module Selector Guide

Up to five modules can be installed at a time in the Model 2750 mainframe or two modules in the Model 2700 or 2701 mainframe. Modules can be disconnected from the internal DMM for routing external signals.

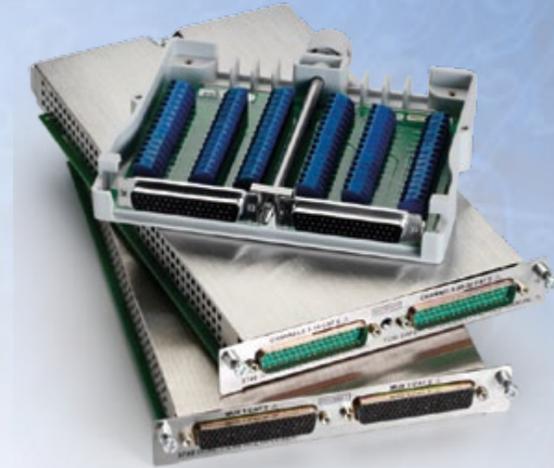


Module	# Analog Inputs	Configuration	Type of Connector	Max. Voltage	Max. Switched Current	Bandwidth	Contact Life <sup>1</sup>	Switch Speed	Other
7700	20	Multiplexer w/CJC 1x20 or two 1x10	Screw terminals	300 V	1 A	50 MHz	108	3 ms	Maximum power = 125VA. 2 current measure channels.
7701	32	Multiplexer 1x32 or two 1x16	D-sub	150 V	1 A	2 MHz	108	3 ms	Maximum power = 125VA.
7702	40	Multiplexer 1x40 or two 1x20	Screw terminals	300 V	1 A	2 MHz	108	3 ms	Maximum power = 125VA. 2 current measure channels.
7703	32	Multiplexer 1x32 or two 1x16	D-sub	300 V	500 mA	2 MHz	108	1 ms	Reed relays.
7705	40	Independent SPST N/A	D-sub	300 V	2 A	10 MHz	108	3 ms	Maximum power = 125VA.
7706	20	Multiplexer w/CJC 1x20 or two 1x10	Screw terminals	300 V	1 A	2 MHz	108	3 ms	2 analog outputs. 16 digital outputs. Maximum power = 125VA.
7707	10	Digital I/O/ Multiplexer 1x10 or two 1x5	D-sub	300 V	1 A	2 MHz	108	3 ms	32 digital I/O. Maximum power = 125VA.
7708	40	Multiplexer w/CJC 1x40 or two 1x20	Screw terminals	300 V	1 A	2 MHz	108	3 ms	Maximum power = 125VA.
7709	48	Matrix 6x8	D-sub	300 V	1 A	2 MHz	108	3 ms	Connects to internal DMM. Daisy chain multiple cards for up to a 6x40 matrix. Maximum power = 125VA.
7710	20	Multiplexer w/CJC 1x20 or two 1x10	Removable screw terminals	60 V	0.1 A	2 MHz	1010	0.5 ms	Solid state relays, 60V max. 500 channels/second scan rate.
7711	8	Multiplexer Dual 1x4	SMA	60 V	0.5 A	2 GHz	106	10 ms	Insertion loss <1.0dB @ 1GHz. VSWR <1.2 @ 1GHz.
7712	8	Multiplexer Dual 1x4	SMA	42 V	0.5 A	3.5 GHz	106	10 ms	Insertion loss <1.1dB @ 2.4GHz.

1. No load contact life. See card data sheet for additional specifications.

# Series 3700A Cards Selector Guide

The Model 3706A is compatible with a growing line of multiplexer, matrix, and I/O cards. Check our website ([www.keithley.com](http://www.keithley.com)) for the latest additions to this list.



Specifications for Plug-In Cards Additional Series 3700 cards are currently in development. For a current list of cards and specifications, visit [www.keithley.com](http://www.keithley.com).

Model	3720	3721	3722	3723	3724	3730	3731	3732	3740	3750
No. of Channels	60 (dual 1x30)	40 (dual 1x20)	96 (dual 1x48)	60 (dual 1x30) or 120 single pole (dual 1x60)	60 (dual 1x30)	6x16	6x16	448 crosspoints (Quad 4x28)	32	40 digital I/O, 4 counter/totalizers, and 2 isolated analog outputs
Card Config.	Multiplexer	Multiplexer	Multiplexer	Multiplexer	Multiplexer	Matrix	Matrix	Matrix	Independent	Independent
Type of Relay	Latching electromechanical	Latching electromechanical	Latching electromechanical	Dry reed	FET solid-state	Latching electromechanical	Dry reed	Dry reed	Latching electromechanical	N/A
Contact Configuration	2 Form A	2 Form A	2 Form A	1 Form A	2 Form A	2 Form A	2 Form A	1 Form A	28 Form C, 4 Form A	N/A
Max. Voltage	300 V	300 V (ch 1-40), 60 V (ch 41-42)	300 V	200 V	200 V	300 V	200 V	200 V	300 VDC/250 VAC (Form A)	N/A
Max. Current Switched	1 A	2 A (ch 1-40), 3 A (ch 41-42)	1 A	1 A	0.1 A	1 A	1 A	0.75 A	2 A (Form C), 7 A (Form A)	N/A
Comments	2 independent 1x30 multiplexers. Automatic temperature reference when used with screw terminal accessory (Model 3720-ST)	2 independent 1x20 multiplexers. Automatic temperature reference when used with screw terminal accessory (Model 3721-ST)	2 independent 1x48 multiplexers	2 independent 1x30 multiplexers	2 independent 1x30 multiplexers. Automatic temperature reference when used with screw terminal accessory (Model 3724-ST)	Columns can be expanded through the backplane or isolated by relays	Relay actuation time of 0.5ms. Columns can be expanded through the backplane or isolated by relays	Banks can be connected together via bank configuration relays to create a single 4x112 or dual 4x56 matrix. Analog backplane relays also included for card to card expansion. Row expansion with 3732-ST-R accessory to create a dual 8x28 or single 16x28 matrix.	32 general purpose independent channels.	All-in-one card design. 40 bidirectional I/O. Four 32-bit counter/totalizers. 2 programmable analog (V or I) outputs.

## Plug-in Card Accessories

Model	3720	3721	3722	3723	3724	3730	3731	3732	3740	3750
Cables	3720-MTC-1.5, 3720-MTC-3	3721-MTC-1.5, 3721-MTC-3	3722-MTC-1.5, 3722-MTC-1.5/MM, 3722-MTC-3, 3722-MTC-3/MM	3720-MTC-1.5, 3720-MTC-3	3720-MTC-1.5, 3720-MTC-3	3721-MTC-1.5, 3721-MTC-3	3721-MTC-1.5, 3721-MTC-3	3720-MTC-1.5, 3720-MTC-3	3721-MTC-1.5, 3721-MTC-3	3721-MTC-1.5, 3721-MTC-3
Screw Terminal Block	3720-ST	3721-ST		3723-ST, 3723-ST-1	3724-ST	3730-ST	3731-ST	3732-ST-C, 3732-ST-R	3740-ST	3750-ST
Connector Kits	3791-KIT78-R	3790-KIT50-R	3792-KIT104-R, 3792-KIT104-R/F	3791-KIT78-R	3791-KIT78-R	3790-KIT50-R	3790-KIT50-R	3791-KIT78-R	3790-KIT50-R	3790-KIT50-R
Tools	3791-CIT		3791-CIT	3791-CIT	3791-CIT			3791-CIT		

# DMM Selector Guide

Model	2110	2100	2000	2010	2001	2002	3706	2700	2701	2750
Digits	5½	6½	6½	7½	7½	8½	7½	6½	6½	6½
Expansion Channels	N/A	N/A	10	10	10	10	576	80	80	200
<b>DC Volts</b>										
Sensitivity	0.1 µV	0.1 µV	100 nV	10 nV	10 nV	1 nV	10 nV	100 nV	100 nV	100 nV
Maximum Reading	1000 V	1000 V	1000 V	1000 V	1100 V	1100 V	300 V	1000 V	1000 V	1000 V
Basic Accuracy	0.0012%	0.0038%	0.002%	0.0018%	0.0018%	0.0006%	0.002%	0.002%	0.002%	0.002%
Ratio	•	•		•	Option	Option		w/MUX card	w/MUX card	w/MUX card
DC Peak Spikes					•	•				
<b>AC Volts (TRMS)</b>										
Sensitivity	1 µV	0.1 µV	100 nV	100 nV	100 nV	100 nV	100 nV	100 nV	100 nV	100 nV
Maximum Reading	750 V	750 V	750 V	750 V	775 V (1100 V pk)	775 V (1100 V pk)	300 V	750 V	750 V	750 V
Basic Accuracy	0.12%	0.08%	0.05%	0.05%	0.03%	0.02%	0.05%	0.06%	0.06%	0.06%
Bandwidth	10 Hz-300 kHz	3 Hz-300 kHz	3 Hz-300 kHz	3 Hz-300 kHz	1 Hz-2 MHz	1 Hz-2 MHz	3 Hz-300 kHz	3 Hz-300 kHz	3 Hz-300 kHz	3 Hz-300 kHz
dB, dBm		•	•	•	•	•	•	•	•	•
Frequency, Period	•	•	•	•	•	•	•	•	•	•
THD, Harmonics										
Spectrum Peaks										
Sine Source										
Peak/Avg/RMS	RMS	RMS			•	•				
AC, AC + DC	AC	AC			•	•				
<b>Ohms (2/4 Wire)</b>										
Sensitivity	1 mΩ	100 µW	100 µW	1 µW	1 µW	100 nW	100 nW	100 µW	100 µW	1 µW
Maximum Reading	100 mΩ	100 MW	120 MW	120 MW	1 GW	1 GW	100 MW	120 MW	120 MW	120 MW
Basic Accuracy	0.02%	0.015%	0.008%	0.0032%	0.0032%	0.0007%	0.004%	0.008%	0.008%	0.008%
Continuity Test	•	•	•	•			•	•	•	•
Diode Test	•	•	•	•						
Offset Compensation				•	•	•	•	•	•	•
Dry Circuit				•			•			•
Constant Current	•	•	•	•	•	•	•	•	•	•
Open Source Detect						•				
<b>DC Amps</b>										
Sensitivity	0.1 µA	10 nA	10 nA	10 nA	10 pA	10 pA	1 pA	10 nA	10 nA	10 nA
Range Span	10 mA-10 A	10 mA-3 A	10 mA-3 A	10 mA-3 A	200 µA-2 A	200 µA-2 A	10 µA-3 A	20 mA-3 A	20 mA-3 A	20 mA-3 A
Basic Accuracy	0.15%	0.055%	0.03%	0.03%	0.03%	0.027%	0.03%	0.03%	0.03%	0.03%
In Circuit Current					•	•				
<b>AC Amps (TRMS)</b>										
Sensitivity	10 µA	1 µA	1 µA	1 µA	100 pA	100 pA	1 nA	1 µA	1 µA	1 µA
Range Span	1 A-10 A	1 A-3 A	1 A-3 A	1 A-3 A	200 µA-2 A	200 µA-2 A	1 mA-3 A	1 A-3 A	1 A-3 A	1 A-3 A
Basic Accuracy	0.3%	0.15%	0.1%	0.1%	0.1%	0.1%	0.08%	0.15%	0.16%	0.15%
Bandwidth	10 Hz-5 kHz	3 Hz-5 kHz	3 Hz-5 kHz	3 Hz-5 kHz	20 Hz-100 kHz	20 Hz-100 kHz	3 Hz-10 kHz	3 Hz-5 kHz	3 Hz-5 kHz	3 Hz-5 kHz
<b>General Features</b>										
Interface	USB, GPIB (opt.)	USB	GPIB, RS-232	GPIB, RS-232	GPIB	GPIB	GPIB, LXI/Ethernet, USB	GPIB, RS-232	Ethernet, RS-232	GPIB, RS-232
Reading Hold	•	•	•	•				•	•	
Digital I/O	Trigger In/Out	•			•	•	14	2 in/5 out (TTL)		
Reading Memory	2000 rdg.	2000 rdg.	1024 rdg.	1024 rdg.	Opt to 30,000	Opt to 30,000	650,000 rdg.	55,000 rdg.	450,000 rdg.	110,000 rdg.
Maximum Speed	50K rdg/s	2000 rdg/s	2000 rdg/s	2000 rdg/s	2000 rdg/s	2000 rdg/s	>14,000 rdg/s	2000 rdg/s	3500 rdg/s	2500 rdg/s
Temperature Meas.	T/C, RTD, Thermistor	RTD	T/C	T/C, RTD	T/C, RTD	T/C, RTD	T/C, RTD, Thermistor	T/C, RTD, Thermistor	T/C, RTD, Thermistor	T/C, RTD, Thermistor
Language Emulation		34401A	8840/42, 196/199	196/199		HP 3458				

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