

ELECTRONICS & IOT UNIT



Keithley DMM6500 Bench Digital Multimeter

Feature:

- 15 measurement functions including capacitance, temperature, and digitizing
- Expanded measurement ranges include 10 pA to 10 A and 1 mΩ to 100 MΩ
- Large 5-inch (12.7 cm) multi-touch capacitive touchscreen with graphical display
- Large internal memory; store up to 7 million readings
- Multiple language modes: SCPI, TSP® scripting, Keithley 2000 SCPI emulation, Keysight 34401A SCPI emulation
- Two-year specifications allow for longer calibration cycles
- Standard USB-TMC and LXI/Ethernet communication interfaces
- Optional user-installable communication interfaces including: GPIB, TSP-Link®, and RS-232
- Capture voltage or current transients with 1 MS/sec digitizer




Tektronix AFG1062 Arbitrary / Function Generator: 2Channels, 300MS/s Sample Rate, 1 Mpts, 14-bit




Feature:

- Continuous, sweeping, burst, and modulation modes (AM, FM, PM, ASK, FSK, PSK, PWM) covers most requirements for students and other users to get the experiments/test job done



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	<ul style="list-style-type: none">• 64-MByte internal non-volatile memory for arbitrary waveform storage• Built-in 200 MHz counter with 6-digit resolution offers an easy and precise way of frequency/period/pulse width/duty cycle measurement• Standard USB host/device for memory expansion and remote control• Free ArbExpress makes user defined waveforms editing extremely easy through an external USB memory stick
 A black PCB Prototyping CNC Machine with a silver work surface and a flexible extraction arm. The machine has a black base with a silver work surface. A black flexible extraction arm is mounted on top, with a black nozzle at the end. The machine is labeled 'ADQUINATE 600' on the front.	<p>PCB Prototyping CNC Machines</p> <ul style="list-style-type: none">• Automatic or manual (semiautomatic) tool change• Precise depth penetration control, fully programmable• High precision positioning system with servo motors and pre-calibrated screw-motor assemblies.• Temperature compensation for the axes and material• Automatic fiducial registration and video inspection• High speed 62K / 100K rpm spindle• Spindle drive with vector control, ensuring high performance and high torque at any speed• Simple, fast, smart, stable and easy-to-use software. The best gerber

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	<p>interpretator on the market!</p> <ul style="list-style-type: none"> • Peck mode (automatic incremental multipass machining) • Vacuum table option • Acoustic cabinet option • Processing of oversized projects along X axis
 <p>The image shows a Rohde & Schwarz NGE100 Power Supply Series unit. It is a white, rack-mountable device with a large color display on the left showing two channels of output: Channel 1 at 32.00 V and 0.960 A, and Channel 2 at 5.00 V and 2.340 A. The display also shows various status indicators and limits. To the right of the display is a control panel with buttons for Mode, Voltage, Current, Track, Menu, Power, Stop, and Enter, along with a large rotary knob. At the bottom, there are two sets of output terminals labeled Ch 1 and Ch 2.</p>	<p>R&S NGE100</p> <p>Feature</p> <p>NGE100 power supply series consists of robust, high-performance, affordable instruments. They offer high efficiency combined with low ripple plus a variety of comfort functions that are not usually found in this class of power supplies.</p>
 <p>The image shows a Siglent SSA3000X Series oscilloscope. It is a white, rack-mountable device with a large color display on the left showing a waveform. The display also shows various measurement parameters and settings. To the right of the display is a control panel with buttons for various functions and a large rotary knob. At the bottom, there are two sets of input terminals labeled Ch 1 and Ch 2.</p>	<p>Siglent's SSA3000X Series</p> <p>Feature</p> <ul style="list-style-type: none"> • Standard Preamplifier • Standard Tracking Generator Kit (Included) • Reflection/VSWR Measurement Kit (Opt.*) • Advanced Measurement Kit/Waterfall Chart (Opt.*) • EMI Pre-compliance Measurements Kit (Opt.*) • 10.1 Inch WVGA (1024 x 600) Display
 <p>The image shows a Keysight B2901A Precision Source/Measure Unit. It is a grey, benchtop device with a large color display on the left showing two channels of output: Channel 1 at +210.0000 V and Channel 2 at +00.00001 nA. The display also shows various status indicators and limits. To the right of the display is a control panel with buttons for various functions and a large rotary knob. At the bottom, there are two sets of output terminals labeled Ch 1 and Ch 2.</p>	<p>B2901A Precision Source/Measure Unit, 1 ch, 100 fA, 210 V, 3 A DC/10.5 A Pulse</p> <p>The Keysight B2901A precision source / measure unit (SMU) is a 1-channel, compact, and cost-effective benchtop SMU with the capability to source and measure both voltage and current. It is versatile to easily perform</p>

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	<p>current versus voltage (I/V) measurement with high accuracy.</p>
 <p>A white Hioki LCR Meter IM3536 with a digital display showing measurement results for capacitance, inductance, and resistance.</p>	<p>LCR METER IM3536</p> <p>General-Purpose LCR Meters with Measurement Frequency from DC, 4 Hz to 8 MHz</p> <p>Feature:</p> <ul style="list-style-type: none"> • Measuring the Capacitance of Electrolytic Capacitors with Hioki LCR Meters • Measuring the Capacitance of Ceramic Capacitors with Hioki LCR Meters • Measuring the Inductance of Inductors or Coils with Hioki LCR Meters • Measuring the Frequency Characteristics of Inductors on Hioki LCR Meters
 <p>Two photographs showing 3V Technix equipment. The top photo shows a stack of four units labeled 3V2400, 3V2400A, 3V2400B, and 3V2400C. The bottom photo shows a larger 3V2400A unit, a 3V2400B unit, and a 3V2400C unit, along with a 3V2400A unit in the foreground.</p>	<p>3V Technix provides specialized solution for Plated Through Hole (PTH) System</p> <p>3V2400A which is essential for making two-layer PCBS. Printed Circuit Board (PCB) is core of any Electronic System. Tracks on PCB act as conductive path for interconnection between various components</p>

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	<p>on the board and power source.</p> <p>Large number of components on board increases board connection complexity and also track routing length results in increased tracking resistance. PCB complexity can be reduced by making tracks on both sides of board. A conductive hole can make connection from top to bottom side of board. Technique used is Plated Through Hole (PTH).</p> <p>The System 3V2400A includes chemicals with chemical mixer to make thin conductive layer inside holes. Digitally controlled process comprises of a PTH Tank to increase thickness of thin layer inside hole which makes it more rigid. The system supports all kind of PCBs such as FR4, Bakelite, Paper Phenolic, Roger, Flexi PCB etc. for making through holes conductive. The system is easy to operate and complete in every sense.</p>
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Electronic Components

Arduino UNO R3 DIP IC with compatible cable, Arduino Mega with compatible cable, ESP32 development board, Node MCU, ESP-01 Serial WIFI Module, Raspberry Pi 4, Jumper cable – , Capacitive touch module, IR sensors, Obstacle avoider sensor module, Triple axis magnetometer, Ultrasonic Sensor Module HC-SR-04, Three Axis Accelerometer, PIR Motion Detector Module, Pulse Heart Rate Sensor, Fingerprint Identification Module etc.