Keysight U1610A/U1620A Handheld Digital Oscilloscope

Retool your expectations in the world's first VGA display handheld oscilloscopes with two isolated channels

Front panel description



The Keysight Technologies, Inc. U1610A/U1620A is the world's first handheld oscilloscope with a VGA display. This 100/200 MHz handheld oscilloscope offers a floating measurement capability with two CAT III 600 V isolated channels. With up to 2 GSa/s sampling rate and 2 Mpts memory depth, it captures more waveforms from signals such as pulse width modulated circuit, in-rush, transient, and motor start up sequences. Engineered with a benchtop-like display and dual window zoom function, it easily identifies problem areas and zoom in for more detailed analysis. With these, you can now view signals in detail and detect glitches easily.

Key features

- 100/200 MHz bandwidth with isolated channels
- 5.7-inch VGA TFT LCD display with 3 selectable
- viewing modes (indoor, outdoor and night vision)
- 2 Mpts memory depth and 2 GSa/s sampling rate
- allow detailed analysis of captured glitches
- 10,000-count resolution on DMM display
- Channel-to-channel isolation with CAT III 600 V safety ratings
- Data logging capability and USB connectivity
- Up to 10 selectable languages offered on the User Interface (UI) system



Figure 1. Indoor viewing mode



Figure 2. Night vision viewing mode

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Key specifications

Features	U1610A	U1620A
3-in-1 function: Scope, DMM, Data-logger	Yes	Yes
Display	5.7" VGA TFT LCD Color (sunlight viewable)	5.7" VGA TFT LCD Color (sunlight viewable)
Oscilloscope channel count	2	2
Isolated channels	Yes (CAT III 600 V)	Yes (CAT III 600 V)
Bandwidth	100 MHz	200 MHz
Maximum sampling rate	1 GSa/s, 500 MSa/s each channel	2 GSa/s, 1 GSa/s each channel
Maximum recording length	120 Kpts, 60 Kpts each channel	2 Mpts, 1 Mpts for each channel
Cursor and zoom functions	Yes	Yes
Dual waveform math	CH1 + CH2, CH1 – CH2, CH2 – CH1, CH1 × CH2, CH1/CH2, CH2/CH1, d/dt (CH1), d/dt (CH2), ∫(CH1)dt, ∫(CH2)dt	CH1 + CH2, CH1 – CH2, CH2 – CH1, CH1 × CH2, CH1/CH2, CH2/CH1, d/dt (CH1), d/dt (CH2), ∫(CH1)dt, ∫(CH2)dt
FFT	Yes	Yes
Internal scope storage	Up to 10 setups and traces	Up to 10 setups and traces
Scope measurements	Up to 24 measurements	Up to 24 measurements
Coupling	DC, AC, HF-Reject & LF-Reject	DC, AC, HF-Reject & LF-Reject
Rise time	3.5 ns (typical)	1.75 ns (typical)
Horizontal range	5 ns/div to 50 s/div	2 ns/div to 50 s/div
Horizontal resolution	100 ps for 5 ns/div	40 ps for 2 ns/div
Input impedance	1 MΩ ± 1% ≈ 22 pF ± 3 Pf	1 MΩ ± 1% ≈ 22 pF ± 3 Pf
Triggering	Edge, Glitch, TV, Nth Edge, CAN, LIN	Edge, Glitch, TV, Nth Edge, CAN, LIN
Trigger modes	Normal, Single, Auto	Normal, Single, Auto
Standard scope probes	Yes	Yes
Standard DMM probes	Yes	Yes
Digital multimeter resolution count	10,000	10,000
DC voltage, True RMS AC Voltage	CAT II 1000 V, CAT III 600 V	CAT II 1000 V, CAT III 600 V

Key specifications (continued)

Features	U1610A	U1620A
Resistance	Max 100 MΩ	Max 100 MΩ
Capacitance	Max 10 mF	Max 10 mF
Source	Digital multimeter measurements	Digital multimeter measurements
USB host capability for external memory	Yes	Yes
Connectivity	USB2.0 full speed host/device	USB2.0 full speed host/device
Battery	Li-Ion rechargeable battery pack, 10.8 V	Li-Ion rechargeable battery pack, 10.8 V
Operating time	Up to 3 hours	Up to 3 hours
Safety compliance	IEC, CSA, ANSI	IEC, CSA, ANSI

Recommended optional accessories

Part	Description
U1560A	Scope probe x1 CAT III 300 V
U1561A	Scope probe x10 CAT III 600 V
U1562A	Scope probe x100 CAT III 600 V
U1572A	Li Polymer battery pack
U1573A	Desktop charger & Li Polymer battery pack
U1574A	AC/DC adapter
U1575A	Desktop charger
U1577A	USB 2.0 cable (Type-A Plug to Type-A Plug)
U1591A	Soft carrying case

Standard shipped accessories

Quick start guide, power adapter, Li-Ion battery pack, USB cable, test lead, 10:1 probe (2 sets), Certificate of Calibration (CoC).

Learn more at: www.keysight.com

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