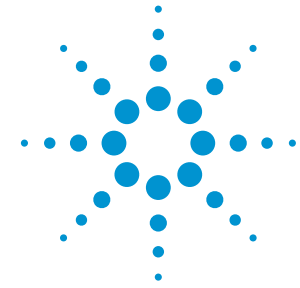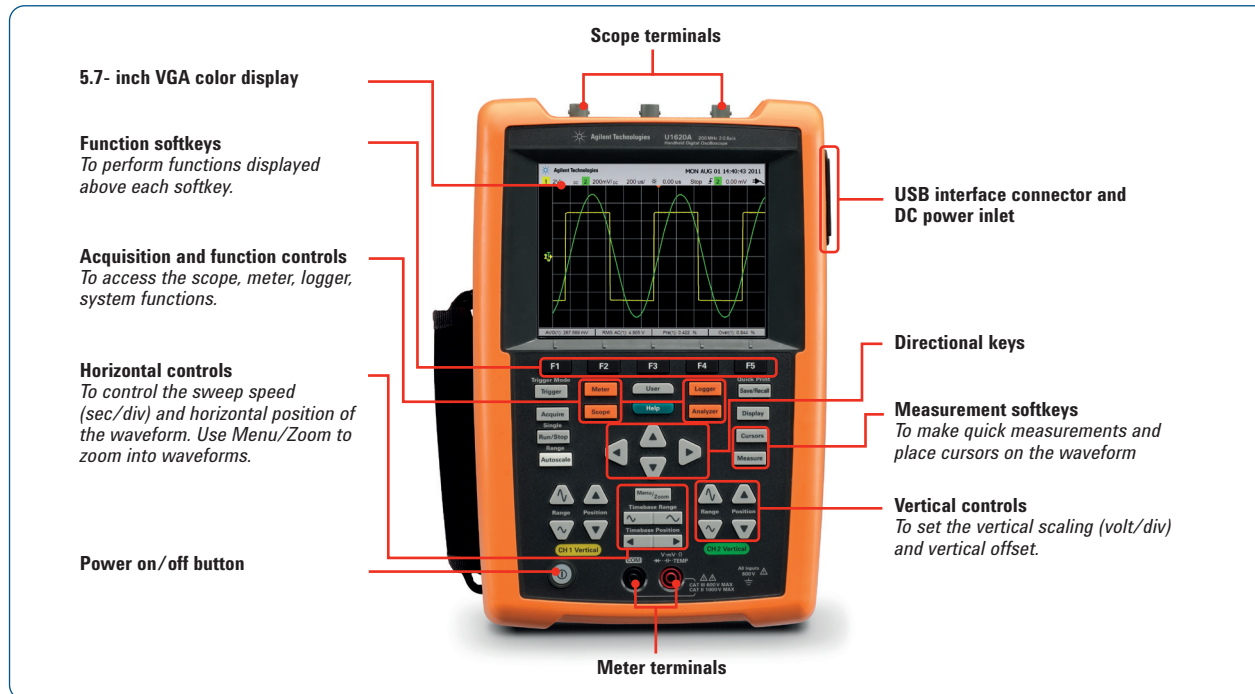# Agilent U1610A/U1620A Handheld Digital Oscilloscope

Retool your expectations in the world's first handheld scope with three viewing modes on a VGA TFT LCD display

Agilent's U1610A/U1620A oscilloscope takes troubleshooting and maintenance task to a whole new level by making waveforms viewable under all lighting conditions. Whether you're working in a poorly lit environment, or under the glaring sun, the revolutionary VGA TFT LCD display ensures that you can analyze waveforms effortlessly by selecting among 3 viewing modes (indoor, outdoor and night vision mode). Coupled with deep memory depth of 2 Mpts, it enables you to capture long, non-repeating signals with excellent zooming capabilities onto selective glitches. Further complementing your viewing experience is the 5.7 inch screen that allows signal overviews to be analyzed in more precision compared to other conventional scopes.

Front panel description

Scope terminals

5.7- inch VGA color display

Function softkeys
To perform functions displayed above each softkey.

USB interface connector and DC power inlet

Acquisition and function controls
To access the scope, meter, logger, system functions.

Horizontal controls
To control the sweep speed (sec/div) and horizontal position of the waveform. Use Menu/Zoom to zoom into waveforms.

Directional keys

Measurement softkeys
To make quick measurements and place cursors on the waveform

Vertical controls
To set the vertical scaling (volt/div) and vertical offset.

Power on/off button

Meter terminals

Key features

- 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 allows detailed analysis of captured glitches
- 100/200 MHz bandwidth with isolated channels
- 10,000-count resolution on display
- Channel-to-channel isolation with CAT III 600 V safety ratings
- Data logging capability and USB connectivity

Figure 1. Indoor viewing mode

Figure 2. Night vision viewing mode

Agilent Technologies

Quick Fact Sheet

Agilent U1610A/U1620A Handheld Digital Oscilloscope

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

Key specifications (continued)

Features	U1610A	U1620A
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
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/client	USB2.0 full speed host/client
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
Warranty	3 years	3 years

Recommended optional accessories

Part	Description
U1560B	Scope probe x1 CAT III 300 V
U1561B	Scope probe x10 CAT III 600 V
U1562B	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).

Recommended service options

Additional two years of Return-to-Agilent warranty
Additional two years of Return-to-Agilent calibrations
For more information go to **www.agilent.com/find/removealldoubt**

Agilent Technologies