

Infiniium UXR-B Series Real-Time Oscilloscopes

Experience a new level of speed with the world's most advanced oscilloscope

Models from 5 to 110 GHz of full bandwidth

Keysight's Infiniium UXR-Series real-time oscilloscopes offer the industry's widest range of models, from 5 GHz to 110 GHz of full bandwidth on up to four channels per frame, with sample rates as high as 256 GSa/s. They are undeniably the fastest, highest-bandwidth, lowest-noise, best signal fidelity, and most powerful oscilloscopes in the world. With the recent introduction of hardware and software enhancements, they now facilitate compliance testing up to three times faster and expedite NRZ/PAM testing by the same factor.

Key benefits of the Infiniium UXR-B Series oscilloscopes

Hardware-accelerated with software-optimized analysis

- 10x faster application compliance testing (with D9010AGGC Disaggregation)
- 50x faster mmWave analysis with standard 160 MHz DDC
- Up to 40x faster NRZ Eye Contour and PAM4 Jitter Extrapolation/SNDR
- 40% more throughput with remote programs (through SCPI)

More accurate

- 4x more vertical resolution with 10-bit ADC
- Best signal integrity high-performance oscilloscope (lowest-noise, highest ENOB)
- Best noise compensation for PAMn SNDR and waveform noise reduction
- Lowest jitter measurement floor and full bandwidth edge trigger in the industry

Multipurpose

- MultiScope support up to 40 channels in single GUI
- MultiDomain analysis
- Industry's best wideband EVM results (with ccEVM)
- Fully upgradable and expandable



Infiniium UXR-B Series Oscilloscope

- Hardware Acceleration
- Enhanced Computing with Software Optimization
- 500 Mpts per channel
- 160 MHz DDC/RTSA
- InfiniiSim Basic
- PrecisionProbe/PrecisionCable



Up to 2X faster for NRZ measurement



Up to 3X faster for PAMn measurement



Standard 160 MHz DDC/RTSA to speed up wireless testing



Up to 2X faster for compliance test



40% more throughput with SCPI remote control/program



Spec/criteria			
Input connector	3.5 mm AutoProbe II	1.85 mm AutoProbe III	1 mm Ruggedized AutoProbe III
Number of channels	4	2 or 4	1, 2 or 4
Bandwidth	10, 13, 16, 20, 25, 33 GHz	40, 50, 59, 70 GHz	5, 25, 40, 59, 70, 80, 100, 110 GHz
Frequency interleaving	No		
Bandwidth upgradeability	License only — to 33 GHz w/ HW — up to 110 GHz	License only — to 70 GHz w/ HW — up to 110 GHz	License only — up to 110 GHz
Additional upgradability	Memory, DDC, BW extension	Channels, memory, DDC, BW extension	
Max sampling rate	128 GSa/s	256 GSa/s (2 ch and 4 ch)	
ADC / vertical resolution	10 bits (≥ 14 bits with averaging)		
Max high-resolution bits	Up to 16 bits		
Standard Memory/DDC/RTSA	500 Mpts per channel and 160 MHz DDC/RTSA		
Hardware acceleration	Yes		
Hardware sensitivity (full scale)	40 mV to 8 V	60 mV to 4 V	60 mV to 4 V
Vertical sensitivity (w/ zoom)	1 mV to 4 V full scale		
Minimum rise / fall time	33.8 ps to 13.3 ps (10–90%)	11 ps to 6.3 ps (10–90%)	17.6 ps to 4.0 ps (10–90%)
Noise floor (50 mV / div)	1.48 mV rms @ 33 GHz	2.2 mV rms @ 70 GHz	2.9 mV rms @ 110 GHz
Noise density (10 mV / div)	-161 dBm / Hz @ 25 GHz	-160 dBm / Hz @ 25 GHz	-160 dBm / Hz @ 25 GHz
ENOB	> 6 bits @ 33 GHz (40 mV / div)	> 5.4 bits @ 70 GHz (40 mV / div)	> 5 bits @ 100 GHz (40 mV / div)
DC gain accuracy	±1.5% of full scale (typical: < 1%)	±2% of full scale (typical: ±1%)	
Timebase accuracy	25 ppb		
Intrinsic jitter (< 10 μs duration)	25 fs rms		
Max waveform plot rate	> 1,000,000 wfm/s		
Power	1,350 W (4-channel) 100 to 240 VAC	1,460 W (2-channel) / 2,620 W (4-channel) 110 to 240 VAC (2-channel) / 200 to 240 VAC (4-channel)	
Dimension	17.1" W x 12.24" H x 22.05" D		

Industry-best specifications empower deeper insights

Largest breadth of tools

- PCIe, USB, TBT, DDR, PAM4, HDMI, DP, MIPI®

Visibility into design margins

- Noise from 50 μVRMS
- ENOB of 6.8 and > 5.0 at 110 GHz
- Jitter < 25 fs RMS

Faster capture and analysis

- Full bandwidth triggering
- 20x faster eye plotting
- 7x faster equalization
- 50x faster mmWave analysis with DDC

EVM-rivaling signal analyzers

- 0.77% for OTA 5G NR MIMO @ 28 GHz
- Support ccEVM (cross-correlated)



Infiniium UXR-B Series' superior signal integrity makes it the only real-time oscilloscope capable of 100+ Gbaud PAM4 analysis

Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at www.keysight.com.

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