U2040 & U/L2050/60 X-Series Wide Dynamic Range Power Sensors



Keysight U2040 &U/ L2050/60 X-Series wide dynamic range power sensors offer accurate and repeatable power measurement for any modulated signal. This series comprised of USB and LAN based models – and covers frequency from 10 MHz up to 67 GHz and power dynamic range of -70 to +26 dBm. The U2049XA [1] and L2065/66/67XT [1] are the world's first LAN-based sensor [1] with thermal vacuum (TVAC) option, is suitable for distances up to 100 meters and comes with best-in-class long term drift performance.

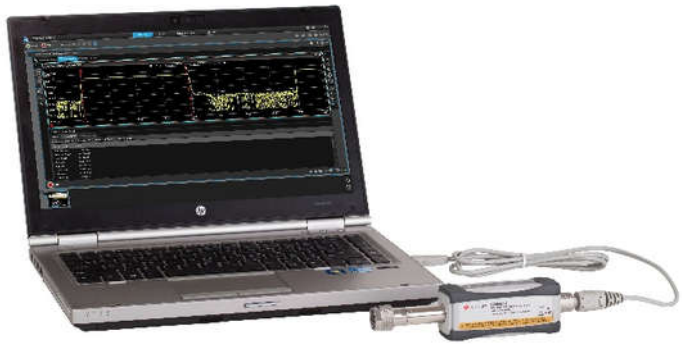
Key features and benefits

- Frequency range of 10 MHz up to 67 GHz
- USB/LAN connectivity with world's widest dynamic range (–70 to +26 dBm) for small signal measurements in wireless chipset and payload testing
- 5 MHz video bandwidth and single shot real-time capture at 20M samples/sec
- Variable sampling rate up to 1M sample/sec and Long Memory 1M samples data storage
- LAN power sensor with thermal vacuum compliance
- Super-fast measurement speed (50,000 readings/sec) enables higher manufacturing throughput
- Real-time measurement with zero dead time to ensure every single continuous pulse is measured
- Average mode time selectivity feature allows the sensor to measure average and time selectivity average power measurements across the full 96 dB range
- A BenchVue Power Meters/Sensors App (BV0007B) license is now included with your instrument. The app makes it simple to connect, control instruments, and automate test sequences

Learn more at: www.keysight.com

BenchVue Power Meters/Sensors App

- Intuitive software is bundled with each X-Series wide dynamic range power sensors
- Easy measurement start-up upon connection of hardware and launching of software
- Faster setup with built-in radar and wireless presets



For more information the X-Series wide dynamic range power sensors, visit:
www.keysight.com/find/widedynamicsensor

This information is subject to change without notice. © Keysight Technologies, 2018 - 2021, Published in USA, October 28, 2021, 5992-0053EN

USB model	LAN model	Description	Frequency range	Power range	Supported measurements	Connector type
U2041/51XA	L2051XA	Wide dynamic range average power sensor	10 MHz – 6 GHz	-70 to +26 dBm	Average, time-selectivity in average mode	N-type (male)
U2042/61XA	L2061XA	Wide dynamic range peak and average power sensor			Peak, average, peak-to-average, time-gated and free run mode, pulse parameters analysis, pulse profiling	
U2043/52XA	L2052XA	Wide dynamic range average power sensor	10 MHz – 18 GHz	-70 to +26 dBm	Average, time-selectivity in average mode	N-type (male)
U2044/62XA	L2062XA	Wide dynamic range peak and average power sensor			Peak, average, peak-to-average, time-gated and free run mode, pulse parameters analysis, pulse profiling	
U2053XA	L2053XA	Wide dynamic range average power sensor	10 MHz – 33 GHz	-70 to +26 dBm	Average, time-selectivity in average mode	3.5 mm (male)
U2063XA	L2063XA	Wide dynamic range peak and average power sensor			Peak, average, peak-to-average, time-gated and free run mode, pulse parameters analysis, pulse profiling	
	U2049XA	Wide dynamic range peak and average power sensor		-70 to +20 dBm		
U2054XA	L2054XA	Wide dynamic range average power sensor	10 MHz – 40 GHz	-70 to +20 dBm	Average, time-selectivity in average mode	2.92 mm (male)
U2064XA	L2064XA	Wide dynamic range peak and average power sensor			Peak, average, peak-to-average, time-gated and free run mode, pulse parameters analysis, pulse profiling	
U2055XA	L2055XA	Wide dynamic range average power sensor	10 MHz – 50 GHz 10 MHz – 53 GHz (Option 053)	-70 to +20 dBm (10 MHz to 50 GHz) -70 to 0 dBm (> 50 GHz to 53 GHz)[1]	Average, time-selectivity in average mode	2.4 mm (male)
U2065XA	L2065XA	Wide dynamic range peak and average power sensor			Peak, average, peak-to-average, time-gated and free run mode, pulse parameters analysis, pulse profiling	
U2056XA	L2056XA	Wide dynamic range average power sensor	10 MHz – 54 GHz	-70 to +20 dBm (10 MHz to 50 GHz) -70 to +15 dBm (> 50 GHz to 54 GHz)	Average, time-selectivity in average mode	1.85 mm (male)
U2066XA	L2066XA	Wide dynamic range peak and average power sensor			Peak, average, peak-to-average, time-gated and free run mode, pulse parameters analysis, pulse profiling	
U2057XA	L2057XA	Wide dynamic range average power sensor	10 MHz – 67 GHz	-70 to +20 dBm (10 MHz to 50 GHz) -70 to +15 dBm (> 50 GHz to 54 GHz) -70 to +10 dBm (> 54 GHz to 67 GHz)	Average, time-selectivity in average mode	1.85 mm (male)
U2067XA	L2067XA	Wide dynamic range peak and average power sensor			Peak, average, peak-to-average, time-gated and free run mode, pulse parameters analysis, pulse profiling	
Thermal vacuum compliance power sensors						
	U2049XA (Option TVA)	Wide dynamic range peak and average power sensor with thermal vacuum option	10 MHz – 33 GHz	-70 to +20 dBm	Peak, average, peak-to-average, time-gated and free run mode, pulse parameters analysis, pulse profiling	3.5 mm (male)
	L2065XT	Wide dynamic range peak and average power sensor with thermal vacuum compliance	10 MHz – 53 GHz	-70 to +20 dBm (10 MHz to 50 GHz) -70 to 0 dBm (> 50 GHz to 53 GHz)	Peak, average, peak-to-average, time-gated and free run mode, pulse parameters analysis, pulse profiling	2.4 mm (male)
	L2066XT	Wide dynamic range peak and average power sensor with thermal vacuum compliance	10 MHz – 54 GHz	-70 to +20 dBm (10 MHz to 50 GHz) -70 to +15 dBm (> 50 GHz to 54 GHz)	Peak, average, peak-to-average, time-gated and free run mode, pulse parameters analysis, pulse profiling	1.85 mm (male)
	L2067XT	Wide dynamic range peak and average power sensor with thermal vacuum compliance	10 MHz – 67GHz	-70 to +20 dBm (10 MHz to 50 GHz) -70 to +15 dBm (> 50 GHz to 54 GHz) -70 to +10 dBm (> 54 GHz to 67 GHz)	Peak, average, peak-to-average, time-gated and free run mode, pulse parameters analysis, pulse profiling	1.85 mm (male)

1. Available for Option 053 only.

Learn more at: www.keysight.com

This information is subject to change without notice. © Keysight Technologies, 2018 - 2021, Published in USA, October 28, 2021, 5992-0053EN

X-Series USB/LAN power sensors options

Options	Description
Trigger cable	
U2032A	BNC male to SMB female trigger cable, 50 Ω, 1.5 m
Documentation	
Option OB1	English language Operating and Service Guide
Option OBF	English language Programming Guide
Option OBN	English language Service Guide
Option ABJ	Japanese language Operating and Service Guide
U2041XA-CD[1]	Documentation Optical Disk (consists of documentation CD-ROM and Keysight Instruments Control DVD)
U2053XA-CD[2]	Documentation Optical Disk (consists of documentation CD-ROM and Keysight Instruments Control DVD)
Optional software	
BV0007B	BenchVue Power Meter/Sensor Control and Analysis app license
Calibration and test data	
UK6	Commercial calibration with test data
A6J	ANSI Z540 compliant calibrations and test data
1A7	ISO 17025 compliant calibrations and test data

1. Available for U2040 X-Series only.
2. Available for U/L2050/60 X-Series and L2065/66/67XT only.

U2050/60 X-Series USB power sensors options

Options	Description
Accessories	
U2000A-201	Transit case
U2000A-202	Soft carrying case
U2000A-203	Holster
U2000A-204	Soft carrying pouch
Cables (selectable during sensor purchase)	
U2000A-301/302/303	USB cable 1.5 m/ 3 m/ 5 m
Cables (ordered standalone)	
U2031A/B/C	USB cable 1.5 m/ 3 m/ 5 m

U2049 & L2050/60 X-Series LAN power sensors options[1]

Options	Description
Accessories	
U2035A	U2049XA sensor casing
U2036A	TVAC sensor bracket (for option TVA only)
Standard LAN cables (selectable during sensor purchase and orderable standalone)	
U2034A/B/C/D/E/F	LAN cable 1.5 m/ 3 m/ 5 m/ 15.2 m/ 30.5 m/ 61 m
TVAC LAN cables (selectable during sensor purchase and orderable standalone)	
U2037A/B/C/D/E/F	LAN cable 1.5 m/ 3 m/ 5 m/ 15.2 m/ 30.5 m/ 61 m
Trigger cable	
U2033A	TVAC trigger cable BNC Male to SMB female, 50 Ω, 1.5 m (For U2049XA Option TVA and L2065/66/67XT only)

1. PoE injector is not included. A commercially available 802.3at or 802.3af compliant PoE injector can be used with the LAN power sensors.

Standard Shipped Items

U2050/60 X-Series USB power sensors	USB cable 5 ft (1.5 m), default cable length BNC male to SMB female trigger cable, 50 Ω, 1.5 m (Quantity: 2) Certificate of calibration
U2049XA & L2050/60 X-Series LAN power sensors	LAN cable 5 ft (1.5 m), default cable length BNC male to SMB female trigger cable, 50 Ω, 1.5 m (Quantity: 2) Certificate of calibration
U2049XA (Option TVA) and L2065/66/67XT TVAC LAN power sensors	TVAC LAN cable 5 ft (1.5 m), default cable length TVAC BNC male to SMB female trigger cable, 50 Ω, 1.5 m (Quantity: 2) TVAC sensor bracket Thermal interface material Certificate of calibration

www.keysight.com/find/services
Keysight Services helps you improve productivity and product quality with our comprehensive service offerings of one-stop calibration, repair, asset management, technology refresh, consulting, training, and more.

Learn more at: www.keysight.com

This information is subject to change without notice. © Keysight Technologies, 2018 - 2021, Published in USA, October 28, 2021, 5992-0053EN