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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 8530A Microwave Receiver 45 MHz to 26.5 GHz, with extensions to 110 GHz.

Agilent Keysight 8530A Microwave Receiver 45 MHz to 26.5 GHz The HP 8530A is a fast microwave receiver for antenna and RCS measurements covering 45 MHz to 26.5 GHz, extendable to 110 GHz. OEM antenna/RCS catalog 5968-6759E lists FAST CW 200 us per sample (5000 measurements/s), FAST AD 400 us (2500 measurements/s), 4000 IF channel-switches/s, optional pulse H02 (10 kHz and 3 MHz BW), 230 us per point agility with 8511A/B, and on-site upgrade from 8510 via 85395A/B/C. Outdoor/indoor antenna patterns, compact-range RCS, and optional 8510C network-analyzer firmware mode. The HP 8530A is a fast microwave receiver for antenna and RCS measurements covering 45 MHz to 26.5 GHz, extendable to 110 GHz. OEM antenna/RCS catalog 5968-6759E lists FAST CW 200 us per sample (5000 measurements/s), FAST AD 400 us (2500 measurements/s), 4000 IF channel-switches/s, optional pulse H02 (10 kHz and 3 MHz BW), 230 us per point agility with 8511A/B, and on-site upgrade from 8510 via 85395A/B/C. Outdoor/indoor antenna patterns, compact-range RCS, and optional 8510C network-analyzer firmware mode.



MODEL

**Agilent / Keysight
8530A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

8530A

LISTING

<https://aumictechlabs.com/products/8530a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 8530A is a microwave receiver engineered for precision RF and millimeter-wave measurements. Operating from 45 MHz to 26.5 GHz with external mixer extension to 110 GHz, the instrument delivers fast data acquisition, excellent sensitivity, and wide dynamic range for antenna measurements, RCS analysis, and component testing.

Technical Specifications

Frequency Range: 45 MHz to 26.5 GHz (base); up to 110 GHz with external mixers

Measurement Linearity: Better than 0.5° phase and 0.06 dB magnitude over a 70 dB range

Data Acquisition Rate: Up to 5,000 points per second

Data Buffer: 100,000 measurement points

Internal Storage: 1.44 MB floppy disk drive (DOS or HP LIF format)

Key Features

- High sensitivity across wide dynamic range
- Multiple measurement channels with frequency agility
- Multi-parameter capability for simultaneous measurement of multiple antenna outputs
- Angle-domain measurement capability for antenna performance analysis with respect to angle
- Optional time-domain measurement capability
- HP-IB (IEEE-488) control interface with external TTL triggering support

Typical Applications

- Antenna characterization and RCS measurements
- Microwave and millimeter-wave component testing
- Manual and automated measurement systems
- Integration within larger antenna and RCS measurement platforms

Compatibility & Integration

The 8530A requires a frequency converter to downconvert RF input to 20 MHz IF. Compatible converters include the HP 85310A Distributed Frequency Converter (2 to 26.5 GHz with remote mixers) and HP 8511A/B. The HP 85325A millimeter-wave subsystem extends coverage to 110 GHz. Integration with HP 8340/41 and HP 8360 series synthesized sources is supported. HP-IB connectivity accommodates up to 2 meters per instrument with a 20-meter system maximum; extenders may be required for longer installations.

8530A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Microwave receiver (antenna/RCS)
Series Family	HP 8530A / 85301B/C systems
Frequency Range Standard	45 MHz to 26.5 GHz
Frequency Extension	to 110 GHz with mixers/subsystems
Fast Cw Speed	200 us per data sample, 5000 measurements per second (single channel, single frequency)
Fast Ad Speed	400 us per data sample, 2500 measurements per second (multiple channels, single frequency)
If Switching Rate	up to 4000 channel switches per second
Converter 8511A	45 MHz to 26.5 GHz
Converter 8511B	45 MHz to 50 GHz
Distributed Converter 85310A	0.1 to 110 GHz depending on mixers/source
Mixer 85320 H	0.1 to 3 GHz
Mixer 85320 Standard	1 to 26.5 GHz
Waveguide 26.5 To 40 Ghz	R85325A
Waveguide 75 To 110 Ghz	W85325A
Rcs Agility With 85	230 us per frequency point
Pulse Option H02 Bandwidths	10 kHz and 3 MHz
Pulse Width Class H02 Wideband	pulse widths greater than 1 us with wideband detectors
Manual Channels	up to three channels measured; up to four patterns displayed
Upgrade From 85	85395A/B/C kits; 85396A adds 8510 capability to 8530A
Network Analyzer Mode	optional 8510C firmware load (about 1 minute)
Literature	HP antenna and RCS measurement systems catalog 5968-6759E

8530A Specifications

PARAMETER	VALUE
Applications	Outdoor/indoor antenna patterns, compact-range RCS, and optional 8510C network-analyzer firmware mode.
Optional time domain for chamber reflection location	Optional pulse measurements Option H02
Technical Specifications	Instrument Type: Microwave receiver (antenna/RCS)

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Instrument Type	Microwave receiver (antenna/RCS)
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Converter 8511A	45 MHz to 26.5 GHz
Converter 8511B	45 MHz to 50 GHz
Distributed Converter 85310A	0.1 to 110 GHz depending on mixers/source
Mixer 85320 H20	0.1 to 3 GHz
Mixer 85320 Standard	1 to 26.5 GHz
Mixer 85320 H50	2 to 50 GHz
Waveguide 26.5 To 40 Ghz	R85325A
Waveguide 75 To 110 Ghz	W85325A
Rcs Agility With 8511	230 us per frequency point
Pulse Option H02 Bandwidths	10 kHz and 3 MHz
Pulse Width Class H02 Wideband	pulse widths greater than 1 us with wideband detectors
Manual Channels	up to three channels measured; up to four patterns displayed
Upgrade From 8510	85395A/B/C kits; 85396A adds 8510 capability to 8530A
Network Analyzer Mode	optional 8510C firmware load (about 1 minute)
Literature	HP antenna and RCS measurement systems catalog 5968-6759E
Notes	
Speed, frequency, converter/mixer tables, pulse H02, and 8510 upgrade kits from HP 8530A microwave receiver section of catalog 5968-6759E. Dynamic amplitude/phase accuracy plots are in that catalog; sensitivity depends on the selected 85310A or 8511 converter.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.