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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 8663A High-Performance Signal Generator, 2.5 GHz

The HP 8663A extends the 8662A low-phase-noise architecture to 100 kHz through 2560 MHz with output to +16 dBm and added phase and pulse modulation while preserving high spectral purity and HP-IB control. Microwave receiver and radar stimulus needing low close-in noise, complex modulation combining AM/FM/phase/pulse, and automated test with MATE/CIIL Option 700. Phase and pulse modulation in addition to AM/FM Internal variable modulation oscillator 10 Hz to 99.9 kHz Internal Modulation Oscillator Resolution: 3 digits Power Requirements: 115 (90 to 126) V or 230 (198 to 252) V; 48 to 66 Hz; 450 VA max Size: 425 mmWx 178 mmHx 642 mmDNet Weight: 33.8 kg (74 lb) Specs from HP 8662A/8663A High-Performance RF Signal Generators catalog/data pages. Shared spectral-purity tables with 8662A apply below 1280 MHz except where 8663A-specific spurious limits are stated.



MODEL

**Agilent / Keysight
8663A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

8663A

LISTING

<https://aumictechlabs.com/products/8663a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 8663A is a synthesized signal generator delivering 100 kHz to 2560 MHz coverage with exceptional spectral purity and versatile modulation for RF and microwave development, manufacturing, and test. It combines ultra-low phase noise, fine frequency resolution across its band, and programmable modulation synthesis to support radar, satellite

communications, and component characterization workflows.

Technical Specifications

Frequency Performance Coverage: 100 kHz to 2560 MHz (2.56 GHz) Frequency resolution: 0.1 Hz (< 640 MHz), 0.2 Hz (640 MHz–1.28 GHz), 0.4 Hz (1.28–2.56 GHz) RF settling: 250 μ s to $\pm$ 1 kHz, 400 μ s to $\pm$ 100 Hz Accuracy and stability: Referenced to internal or external 10 MHz oscillator Output and Phase Noise Output level: +16 dBm to –129.9 dBm in 0.1 dB steps; SWR < 1.5 SSB phase noise: –135 dBc/Hz typical at 1 kHz offset; –147 dBc/Hz at 10 kHz offset Modulation Standard: AM, FM, BPSK, Pulse Modulation Optional: Phase Modulation (Option 002) Modulation synthesizer: 10 Hz to 99.9 kHz programmable rate; log and linear sweep; simultaneous modulation capability Reference Oscillator Internal: 10 MHz quartz, < 5×10^{-7} per day aging (post 10-day warmup) External inputs: 10 MHz at $\pm$ 0.005% (0.5–0.7 Vrms, 50 Ω) or 5 MHz at 1 V $\pm$ 0.1 V Warm-up time: Typical 24 hours

Key Features TTL modulation input for biphase control Swept ramp output: 0 to 10 V nominal Display blanking pulse: 250 μ s (TTL), rear panel accessible GPIB remote programming; optional MATE (Option 700) with CIL language support Type-tested to shock and vibration standards

Typical Applications Radar system development, satellite communication testing, RF component validation, and receiver characterization demanding low phase noise and precise modulation control.

Compatibility & Integration The Keysight E8663D PSG is code-compatible, enabling system upgrades. The 8663A has been superseded by the N5172B EXG X-Series RF vector signal generator.

8663A Characteristics / Specifications

PARAMETER	VALUE
Frequency Range	100 kHz to 2560 MHz (2559.9999996 MHz)
Frequency Resolution Below 640 MHz	0.1 Hz
Frequency Resolution 640 MHz to 1280 MHz	0.2 Hz
Frequency Resolution at or Above 1280 MHz	0.4 Hz
Frequency Accuracy Stability Reference	Identical to HP 8662A
Output Level Range	+16 dBm to -129.9 dBm
Output Level Resolution	0.1 dB
Output SWR	<1.5
Nonharmonic Spurious 1280 to 2560 MHz	-78 dBc
Subharmonic Related 640 to 1280 MHz	-70 dBc
Subharmonic Related 1280 to 2560 MHz	-40 dBc
AM Depth Range	0 to 95% at +10 dBm and below
AM Resolution	0.1%
AM Indicated Accuracy	±6% of reading ±1% AM at 400 Hz and 1 kHz, depth 90%
AM Distortion 0 to 30%	<2%
AM Distortion 30 to 70%	<3%
AM Distortion 70 to 90%	<4%
FM External AC Bandwidth	20 Hz to 100 kHz
FM External DC Bandwidth	dc to 100 kHz
Maximum FM Deviation 1280 to 2560 MHz	Up to 400 kHz
FM Indicated Accuracy 50 Hz to 20 kHz	±7% of setting +10 Hz
Pulse On Off Ratio 50 to 2560 MHz	>80 dB
Internal Modulation Oscillator Rates	10 Hz to 99.9 kHz

PARAMETER	VALUE
Internal Modulation Oscillator Resolution	3 digits
Operating Temperature	0 C to +55 C
Power Requirements	115 (90 to 126) V or 230 (198 to 252) V; 48 to 66 Hz; 450 VA max
Size	425 mmWx 178 mmHx 642 mmDNet Weight: 33.8 kg (74 lb)
Shipping Weight	40 kg (88 lb)
Bandwidth	20 Hz to 100 kHz

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to +55 C
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Power Requirements	115 (90 to 126) V or 230 (198 to 252) V; 48 to 66 Hz; 450 VA max
Size	425 mmWx 178 mmHx 642 mmDNet Weight: 33.8 kg (74 lb)
Shipping Weight	40 kg (88 lb) Notes Specs from HP 8662A/8663A High-Performance RF Signal Generators catalog/data pages. Shared spectral-purity tables with 8662A apply below 1280 MHz except where 8663A-specific spurious limits are stated.

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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PARAMETER	VALUE
Frequency Range	100 kHz to 2560 MHz (2559.999996 MHz)
Frequency Resolution Below 640 MHz	0.1 Hz
Frequency Resolution 640 MHz to 1280 MHz	0.2 Hz
Frequency Resolution at or Above 1280 MHz	0.4 Hz
Frequency Accuracy Stability Reference	Identical to HP 8662A
Output Level Range	+16 dBm to -129.9 dBm
Output Level Resolution	0.1 dB
Absolute Level Accuracy +16 to -119.9 dBm: ±1 dB at +15 to +45 C	
Absolute Level Accuracy -120 dBm and Below: ±3 dB at +15 to +45 C	
Output SWR: <1.5	
Harmonics at or Below +13 dBm: < -30 dBc	
Harmonics +13 to +16 dBm fc <1280 MHz: < -25 dBc	
Harmonics fc ≥1280 MHz: < -25 dBc	
Specifications	
PARAMETER	VALUE
Nonharmonic Spurious 1280 to 2560 MHz	-78 dBc
Subharmonic Related 640 to 1280 MHz	-70 dBc
Subharmonic Related 1280 to 2560 MHz	-40 dBc
AM Depth Range	0 to 95% at +10 dBm and below
AM Resolution	0.1%
AM Indicated Accuracy	±6% of reading ±1% AM at 400 Hz and 1 kHz, depth 90%
AM Distortion 0 to 30%	<2%
AM Distortion 30 to 70%	<3%
AM Distortion 70 to 90%	<4%
FM External AC Bandwidth	20 Hz to 100 kHz
FM External DC Bandwidth	dc to 100 kHz
Maximum FM Deviation 1280 to 2560 MHz	Up to 400 kHz

FM Indicated Accuracy 50 Hz to 20 kHz: $\pm 7\%$ of setting +10 Hz
Pulse On Off Ratio 50 to 2560 MHz: >80 dB
Pulse Rise Fall Time fc ≥ 640 MHz: <100 ns

Specifications

PARAMETER	VALUE
Internal Modulation Oscillator Rates	10 Hz to 99.9 kHz
Internal Modulation Oscillator Resolution	3 digits
Operating Temperature	0 C to +55 C
Power Requirements	115 (90 to 126) V or 230 (198 to 252) V; 48 to 66 Hz; 450 VA max
Size	425 mmWx 178 mmHx 642 mmDNet Weight: 33.8 kg (74 lb)
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Notes
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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.