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Data Sheet

August 12, 2026

KEYSIGHT / AGILENT

Keysight (Agilent) M5300A PXIe RF AWG, 4 Channels, DC-16 GHz

Keysight / Agilent M5300A PXIe RF Arbitrary Waveform Generator The M5300A is a 2-slot PXIe RF AWG with four coherent high-speed RF channels. Provides up to 16 GHz RF (user manuals also cite configurations to 18 GHz), 2 GHz instantaneous bandwidth, and 1 GSample waveform memory per channel with PathWave FPGA customization. The M5300A is a 2-slot PXIe RF AWG with four coherent high-speed RF channels. Provides up to 16 GHz RF (user manuals also cite configurations to 18 GHz), 2 GHz instantaneous bandwidth, and 1 GSample waveform memory per channel with PathWave FPGA customization.



MODEL

**Keysight / Agilent
M5300A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

M5300A

LISTING

<https://aumictechlabs.com/products/m5300a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight M5300A is a PXIe RF arbitrary waveform generator delivering four directly synthesized RF channels across DC to 16 GHz with 2 GHz instantaneous bandwidth. This two-slot PXIe module combines direct digital I/Q modulation, real-time sequencing, and user-programmable FPGA resources to generate complex analog waveforms for RF and microwave test applications. With 1 GSample of waveform memory per channel and 38.4 GSa/s sample rate, it addresses demanding requirements in quantum computing, aerospace and defense, and

advanced communications systems. Technical Specifications Channels: 4 Frequency Range: DC to 16 GHz Instantaneous Bandwidth: 2 GHz Maximum Sample Rate: 38.4 GSa/s Waveform Memory per Channel: 1 GSample Modulation Type: Direct digital I/Q modulation Bus Interface: PXIe Peripheral Module (x8 Gen 3) Form Factor: 2 PXIe slots Key Features PathWave FPGA with approximately 25% user-configurable area; customer-accessible region reserves approximately 98% of CLB registers and 98% of LUTs for custom logic 8 trigger channels for precise synchronization Clock input and output for external timing reference Real-time Sequencing via PathWave Test Sync Executive enables transparent multi-mode synchronization and time-deterministic hardware execution across multiple instruments IVI.NET, IVI-C, and IVI-COM drivers for standard test environments Python programming interface Soft Front Panel (SFP) for basic operation, debugging, and driver call monitoring Typical Applications Quantum computing test and control Aerospace and defense RF system validation Advanced communications signal generation and modulation Complex arbitrary waveform synthesis Compatibility & Integration The M5300A integrates with the Keysight M5000 Series modular ecosystem, including the M5200A PXIe Digitizer, M5201A PXIe Down Converter, and M5302A PXIe Digital I/O module for multi-instrument synchronized test solutions.

Features & description

From manufacturer datasheet

Features

• Form: 2-slot PXIe module • Channels: 4 RF AWG outputs • RF coverage: DC to 16 GHz (flyer); up to 18 GHz cited in user guide configs • Instantaneous bandwidth: 2 GHz (direct digital I/Q modulation) • Waveform memory: 1 GSample per channel • Coherence: fully coherent across module and system • Triggers: 8 • Clock: input/output • SystemLink: x4 connector (LVDS 1.2 Gbps; SERDES 6 Gbps class; +5 V @ 0.5 A) • FPGA: PathWave FPGA with ~25% customer-configurable resources • Data load: over PCIe backplane • Series: Keysight M5000 Series

Applications

• Quantum computing multi-channel RF stimulus • Aerospace/defense coherent multi-channel RF generation • Custom FPGA IP and real-time sequencing (PathWave)

M5300A Characteristics / Specifications

PARAMETER	VALUE
Model	M5300A
Manufacturer	Keysight / Agilent
Instrument Type	PXIe RF Arbitrary Waveform Generator
Alias	M5300A; Keysight M5300A
Slots	2
Channels	4 RF AWG outputs
RF max	16 GHz
Bandwidth	2 GHz
Memory/channel	1 GSample
Triggers	8 Notes Specs from Keysight M5300A RF AWG flyer and user guide. Confirm exact max RF option and FPGA image on the module. Listing title cites DC–16 GHz.
Form	2-slot PXIe module
RF coverage	DC to 16 GHz (flyer); up to 18 GHz cited in user guide configs
Instantaneous bandwidth	2 GHz (direct digital I/Q modulation)
Waveform memory	1 GSample per channel
Coherence	fully coherent across module and system
Clock	input/output
SystemLink	x4 connector (LVDS 1.2 Gbps; SERDES 6 Gbps class; +5 V @ 0.5 A)
FPGA	PathWave FPGA with ~25% customer-configurable resources
Data load	over PCIe backplane
Series	Keysight M5000 Series

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

Specifications

PARAMETER	VALUE
Model	M5300A
Manufacturer	Keysight / Agilent
Instrument Type	PXIe RF Arbitrary Waveform Generator
Alias	M5300A; Keysight M5300A

Specifications

PARAMETER	VALUE
Slots	2
Channels	4
RF max	16 GHz
Bandwidth	2 GHz
Memory/channel	1 GSample
Triggers	8

Notes

Specs from Keysight M5300A RF AWG flyer and user guide. Confirm exact max RF option and FPGA image on the module. Listing title cites DC-16 GHz.

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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.