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Data Sheet
August 6, 2026

KEYSIGHT / AGILENT

Keysight (Agilent) 81141A Pulse Data Generator, 7 GHz

Keysight (Agilent) 81141A Pulse Data Generator, 7 GHz The Keysight/Agilent 81141A is a 7 GHz serial pulse data generator in the 81140A family (companion 81142A to 13.5 GHz). Bit rates 150 Mbit/s to 7 Gbit/s; formats NRZ, RZ, R1; differential data/clock/trigger; transition times <25 ps (10/90); jitter ~1 ps rms typical (clock), ~9 ps pp typical (data). 32 Mbit pattern memory; PRBS; linear delay modulation DC–1 GHz for jitter tolerance. High-speed serial PHY characterization; jitter tolerance; eye diagram stimulus to 7 Gbit/s. The Keysight/Agilent 81141A is a 7 GHz serial pulse data generator in the 81140A family (companion 81142A to 13.5 GHz). Bit rates 150 Mbit/s to 7 Gbit/s; formats NRZ, RZ, R1; differential data/clock/trigger; transition times <25 ps (10/90); jitter ~1 ps rms typical (clock), ~9 ps pp typical (data). 32 Mbit pattern memory; PRBS; linear delay modulation DC–1 GHz for jitter tolerance. High-speed serial PHY characterization; jitter tolerance; eye diagram stimulus to 7 Gbit/s.

MODEL **Keysight / Agilent 81141A**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **81141A**	LISTING **https://aumictechlabs.com/products/81141a-2/**

NIST-traceable cal · SAM registered · 30-day returns · NAICS 423690 · 811210 · 541380

This unit

The Keysight (Agilent) 81141A is a pulse data generator designed for testing high-speed digital systems and components up to 7 GHz. It delivers precise control over pulse and data stream parameters with low-jitter signals essential for physical layer measurements, jitter tolerance

analysis, and stress testing applications across R&D, manufacturing, and quality assurance environments.Technical Specifications Signal Generation Frequency range: 150 MHz to 7 GHz Output formats: Pulse, Data Pattern, and PRBS (Pseudo-Random Binary Sequence) Data formats: RZ, R1, and NRZ PRBS capability: 2^5-1 to 2^31-1 Pattern memory: 32 Mbit for complex, real-world data simulation Sequencing: One level with up to 4 blocks for protocol-like generation Transition time: <20 ps (10%/90%) Jitter Characteristics Clock mode jitter: <1 ps RMS Data mode jitter: 9 ps peak-to-peak Jitter modulation bandwidth: Up to 1 GHz Delay modulation range: -100 ps to +100 ps Output Specifications Single channel: Data and clock, differential or single-ended Amplitude range: 0.1 Vpp to 1.8 Vpp (5 mV resolution) Output voltage window: -2 V to +3 V Output impedance: 50 Ω nominal Connector: 2.4 mm female Timing Control Clock/Data delay range: ±0.75 ns (100 fs resolution) External delay control: Modulates jitter via external signal (400 ps/V sensitivity, ±5% linearity) Delay control input: DC coupled, 50 Ω, SMA femaleKey Features Flexible sequencing with pattern trigger mode synchronized to user-specified PRBS patterns Divided clock triggering at factors of 2, 4, 8, 10, 16, 20, 32, 64, and 128 External clock input and trigger I/O (Aux In, Trigger Out) External termination voltage adjustment: -2.0 V to +3.0 VTypical Applications High-speed digital component characterization and stress testing Jitter tolerance and jitter transfer measurements Protocol-based data stream generation for device validation Physical layer testing up to 7 GHzCompatibility & Integration Accepts external clock signals and integrates trigger inputs for synchronized operation with automated test systems and measurement instruments.

Features & description

From manufacturer datasheet

Features

• Bit rate: 150 Mbit/s to 7 Gbit/s • Formats: NRZ, RZ, R1 • Transition times: <25 ps (10/90); <20 ps typical class • Jitter: ~1 ps rms typ (clock); ~9 ps pp typ (data) • Delay modulation: −100 to +100 ps; DC–1 GHz bandwidth • Clock/data delay: ±0.75 ns, 100 fs resolution • Amplitude: 0.10–1.8 V, 5 mV steps; window −2 to +3 V • Memory: 32 Mbit; sequencing up to 4 blocks • Connectors: 2.4 mm • Interfaces: GPIB, LAN, USB, VGA, printer

81141A Characteristics / Specifications

PARAMETER	VALUE
Model	81141A
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	Serial Pulse Data Generator
Family	81140A Series
Alias	81141A; Agilent 81141A Data Rate / Timing 150 Mbit/s–7 Gbit/s; edges <25 ps (10/90) Operational Notes Prefer Agilent 81141A/81142A datasheet 5989-3052.
Bit rate	150 Mbit/s to 7 Gbit/s
Formats	NRZ, RZ, R1
Transition times	<25 ps (10/90); <20 ps typical class
Jitter	~1 ps rms typ (clock); ~9 ps pp typ (data)
Delay modulation	−100 to +100 ps; DC–1 GHz bandwidth
Clock/data delay	±0.75 ns, 100 fs resolution
Amplitude	0.10–1.8 V, 5 mV steps; window −2 to +3 V
Memory	32 Mbit; sequencing up to 4 blocks
Connectors	2.4 mm
Interfaces	GPIB, LAN, USB, VGA, printer
Bandwidth	Clock/data delay: ±0.75 ns, 100 fs resolution - Amplitude: 0.10–1.8 V, 5 mV steps; window −2 to +3 V - Memory: 32 Mbit; sequencing up to 4 blocks - Connectors: 2.4 mm - Interfaces: GPIB, LAN, USB, VGA, printer
Data Rate	/ Timing

81141A Specifications

PARAMETER	VALUE
Applications	High-speed serial PHY characterization; jitter tolerance; eye diagram stimulus to 7 Gbit/s.
Key Features	- Bit rate: 150 Mbit/s to 7 Gbit/s
Technical Specifications	Model: 81141A
Data Rate / Timing	150 Mbit/s–7 Gbit/s; edges <25 ps (10/90)
Operational Notes	Prefer Agilent 81141A/81142A datasheet 5989-3052.

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	81141A
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	Serial Pulse Data Generator
Family	81140A Series
Alias	81141A; Agilent 81141A

Data Rate / Timing
150 Mbit/s–7 Gbit/s; edges <25 ps (10/90)

Operational Notes
Prefer Agilent 81141A/81142A datasheet 5989-3052.

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

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