

The 81150A Pulse Function Arbitrary Noise Generator at a Glance



- 1 μ Hz – 120 MHz pulse generation with variable rise/fall time
- 1 μ Hz – 240 MHz sine waveform output
- 14-bit, 2 GSa/s arbitrary waveforms
- 512k samples deep arbitrary waveform memory per channel
- Pulse, sine, square, ramp, noise and arbitrary waveforms
- Noise, with an adjustable crest factor, and signal repetition time of 26 days
- FM, AM, PM, PWM, FSK modulation capabilities
- 1 or 2 channel, coupled and uncoupled
- Differential outputs
- Two selectable output amplifiers:
 - High bandwidth amplifier
Amplitude: 50 mVpp to 5 Vpp; 50 Ω into 50 Ω
100 mVpp to 10 Vpp; 50 Ω into open

Voltage window: \pm 5 V; 50 Ω into 50 Ω
 \pm 10 V; 50 Ω into open
 \pm 9 V; 5 Ω into 50 Ω
 - High voltage amplifier
Amplitude: 100 mVpp to 10 Vpp; 50 Ω into 50 Ω , 200 m pp to 20 Vpp;
5 Ω into 50 Ω , or 50 Ω into open

Voltage window: \pm 10 V; 50 Ω into 50 Ω
 \pm 20 V; 5 Ω into 50 Ω or 50 Ω into open
- Glitch free change of timing parameters (delay, frequency, transition time, width, duty cycle)
- Programming language compatible with Agilent 81101A, 81104A, 81105A, 81110A, 81130A and 81160A
- ISO 17025 and Z540.3 calibration
- LXI class C compliant
- Optional pattern generator:
 - Ideal and arbitrary bit shaped pattern up to 120 Mbit/s
 - Three level signals
 - PRBS up to 2^{31}
 - 16 Mbit pattern memory
 - Pass through pattern for combined and physical and protocol test up to 10 Mbit/s

The 81160A Pulse Function Arbitrary Noise Generator at a Glance

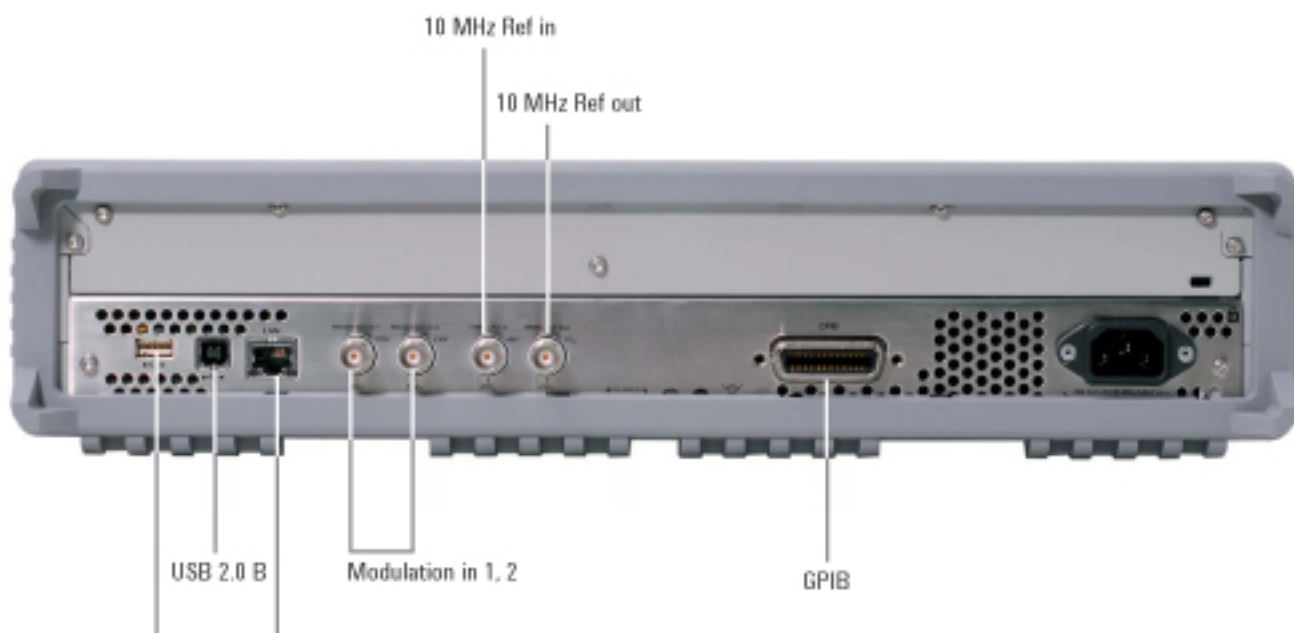
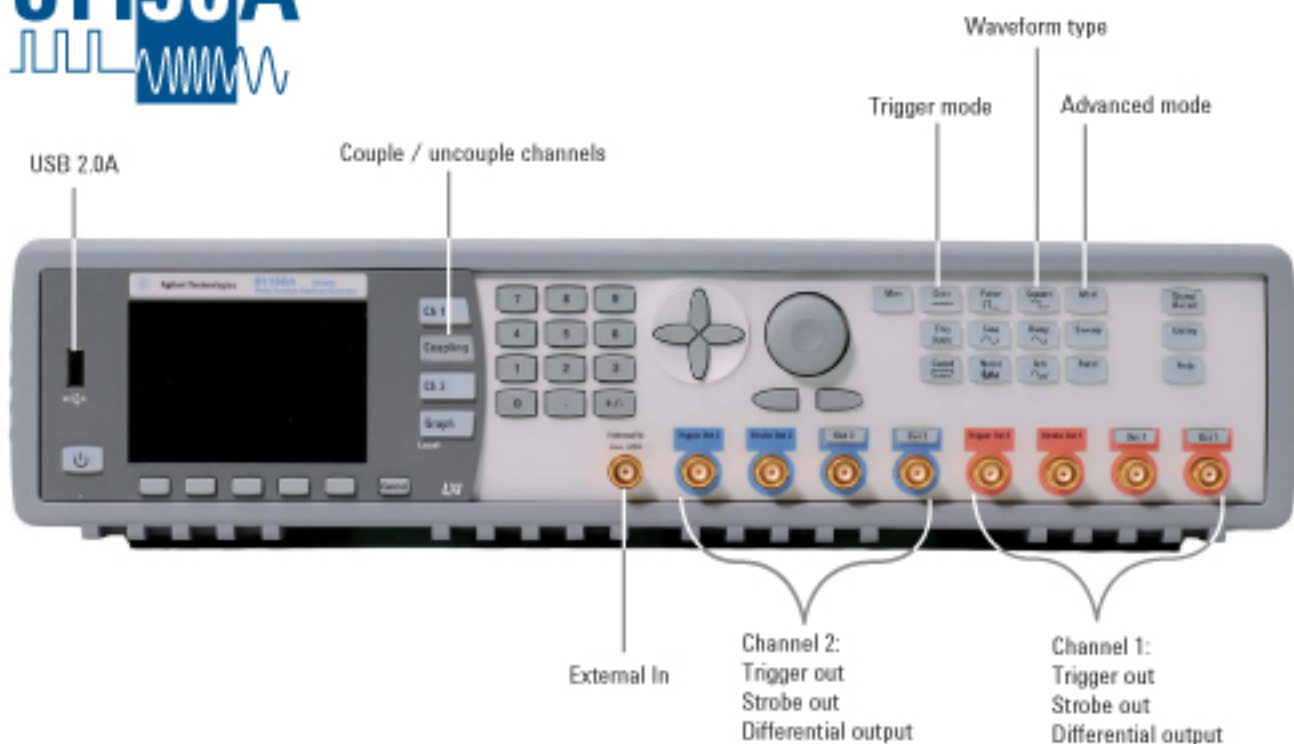


- 1 μ Hz – 330 MHz pulse generation with variable rise/fall time
- 1 μ Hz – 500 MHz sine waveform output
- 14-bit, 2.5 GSa/s arbitrary waveforms
- 256k samples deep arbitrary waveform memory per channel
- Pulse, sine, square, ramp, noise and arbitrary waveforms
- Noise, with an adjustable crest factor, and signal repetition time of 20 days
- FM, AM, PM, PWM, FSK modulation capabilities
- 1 or 2 channel, coupled and uncoupled
- Differential outputs
 - Amplitude:

50 Ω into 50 Ω	50 mV _{pp} to 5 V _{pp}
50 Ω into open	100 mV _{pp} to 10 V _{pp}
 - Voltage window:

50 Ω into 50 Ω	\pm 5 V
50 Ω into open	\pm 10 V
- Glitch free change of timing parameters (delay, frequency, transition time, width, duty cycle)
- Programming language compatible with Agilent 81101A, 81104A, 81105A, 81110A, 81130A and 81150A
- ISO 17025 and Z540.3 calibration
- LXI class C compliant
- Optional pattern generator:
 - Ideal and arbitrary bit shaped pattern up to 330 Mbit/s (Option 330) or 660 Mbit/s (Option 660)
 - Three level signals
 - PRBS up to 2³¹
 - 4 Mbit pattern memory for the 1-channel instrument and 2 Mbit per channel for the 2-channel instrument
 - Pass through pattern for combined and physical and protocol test up to 10 Mbit/s

81150A



General Specifications

	81150A	81160A
Power supply	100 V to 240 V ~, 50 to 60 Hz 100 V to 127 V ~, 50 to 400 Hz	100 V to 240 V ~, 50 to 60 Hz 100 V to 127 V ~, 50 to 400 Hz
Power consumption	180 W max.	90 W nom.
Operating temperature	0 to 50 °C	0 to 55 °C
Operating altitude	Up to 2000 m	Up to 2000 m
Storage temp.	-40 to 70 °C	-40 to 70 °C
Stored states	4 named user configurations and factory default	4 named user configurations and factory default
Power on state	Default or last state	Default or last state
Interface	2 x USB 2.0 standard A, 1 x USB 2.0 standard B, GPIB and LAN	2 x USB 2.0 standard A, 1 x USB 2.0 standard B, GPIB and LAN
Programming language	SCPI-1997 IEEE-488.2 LXI compliant to LXI class C	SCPI-1997 IEEE-488.2 LXI compliant to LXI class C
Dimensions (WxHxD)		
Bench top	439 mm x 108 mm x 456 mm	439 mm x 108 mm x 456 mm
Rack mount	428 mm x 89 mm x 439 mm	428 mm x 89 mm x 439 mm
Weight	8 kg	8 kg
Safety designed to	IEC61010-1 UL61010 CSA22.2 61010.1 certified	IEC61010-1 UL61010 CSA22.2 61010.1 certified
EMC tested to	IEC61326	IEC61326
Warm up time	30 min.	30 min.
Calibration interval	1 year recommended	2 years recommended
Warranty	1 year standard	1 year standard
Cooling requirements	When operating the instrument choose a location that provides at least 80 mm of clearance at rear, and at least 30mm of clearance at each side	When operating the instrument choose a location that provides at least 80 mm of clearance at rear, and at least 30mm of clearance at each side

Definitions

Specification (spec.)

The warranted performance of a calibrated instrument that has been stored for a minimum of 2 hours within the operating temperature range of 0 °C to 55 °C and after a 45-minute warm up period. Within ± 20 °C after autocal. All specifications include measurement uncertainty and were created in compliance with ISO-17025 methods. Data published in this document are specifications (spec) only where specifically indicated.

Typical (typ.)

The characteristic performance, which 80% or more of manufactured instruments will meet. This data is not warranted, does not include measurement uncertainty, and is valid only at room temperature (approximately 23 °C).

Nominal (nom.)

The mean or average characteristic performance, or the value of an attribute that is determined by design such as a connector type, physical dimension, or operating speed. This data is not warranted and is measured at room temperature (approximately 23 °C).

Measured (meas.)

An attribute measured during development for purposes of communicating the expected performance. This data is not warranted and is measured at room temperature (approximately 23 °C).

Accuracy

Represents the traceable accuracy of a specified parameter. Includes measurement error and timebase error, and calibration source