E8663D PSG

RF analog signal generator

Introduction

This configuration guide contains information to help you configure your E8663D PSG RF analog signal generator to meet your requirements. Ordering optional capabilities at the time of purchase provides the lowest overall cost.

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Keysight PSG RF Analog Signal Generator Options

Standard product includes installation guide, adapters, and country specific power cord.

Step 1. Choose a frequency range (required)

Ordering number	Description	Purpose
E8663D-503	Frequency range from 100 kHz to 3.2 GHz	Selects the maximum frequency of the signal generator
E8663D-509	Frequency range from 100 kHz to 9.0 GHz	Selects the maximum frequency of the signal generator

Step 2. Choose order convenience bundle

Ordering number	Description	Purpose
E8663D-063	E8663B backwards compatibility option bundle - 1EU, 1E1, 1EH, UNX, UNT	Provides all the same options included in the E8663B

Step 3. Choose modulation

Ordering number	Description	Purpose	Requires
Standard	CW and pulse modulation	Generates continuous wave (CW) signals and pulse modulation (150 ns minimum pulse width)	
E8663D-UNT	AM, FM, Phase modulation, and LF output	Adds analog modulated signals	
E8663D-UNW	Narrow pulse modulation	Generates pulse modulated signals (20 ns minimum pulse width)	
E8663D-1SM[1]	Scan modulation	Provides deep AM modulation	E8663D-UNT

Step 4. Choose attenuator

Ordering number	Description	Purpose
Standard	No step attenuator	Generates signals with output power levels ranging from -20 dBm to maximum power
E8663D-1E1	Step attenuator	Generates signals with output power levels ranging from -135 dBm to the maximum power

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[1] E8663D-1SM is not compatible with E8663D-1EM.

Step 5. Choose high output power

Ordering number	Description	Purpose
Standard	Standard output power	Generates maximum RF output power of +15 dBm
E8663D-1EU	High output power	Generates maximum RF output power of +21 dBm

Step 6. Choose spectral purity

Ordering number	Description	Purpose
Standard	Standard spectral purity	Provides low phase noise
E8663D-UNX[2]	Ultra-low phase noise performance	Improves phase noise performance close-to-carrier
E8663D-UNY[2]	Enhanced ultra-low phase noise	Improves phase noise for carrier offsets from 1 Hz to 300 kHz
E8663D-1EH	Improved harmonics below 2 GHz	Improves harmonic performance for carrier frequencies < 2 GHz
E8663D-HY2[2]	Enhanced Ultra Low Phase Noise Level 2	Improves phase noise performance for carrier offsets greater than 1 MHz Requires E8663D-1E1, 1EH, and 1EU Incompatible with E8663D-1EM

Step 7. Choose ramp sweep

Ordering number	Description	Purpose
E8663D-007	Analog ramp sweep	Generates fully synthesized ramp (analog) sweep

Step 8. Choose instrument security

Ordering number	Description	Purpose
E8663D-008	Removable flash memory	Provides 8 GB of removable compact flash memory; all user-accessible files are located on this memory card

Step 9. Choose custom options[3]

Custom options add unique capabilities to the signal generator for specific applications.

Ordering number	Description	Purpose	Requires
E8663D-H1S	Provides 1 GHz IN and OUT on rear panel to improve phase noise	Enables use of an external frequency reference to improve spectral purity	E8663D-UNX or E8663D-UNY

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2 E8663D-UNX, E8663D-UNY and E8663D-HY2 are mutually exclusive. Choose at most one.
3 All specified performance attributes of custom options are tested at 25 °C (± 3 °C) unless otherwise noted. For more information, contact Keysight Technologies.

Step 10. Choose instrument connector configuration

Ordering number	Description	Purpose
Standard	Type-N (f) RF output connector	Type-N (m) to 3.5 mm (f) adapter is included
E8663D-1EM[4]	Moves all front panel connectors to the rear panel	Simplifies cable management in rack mount environments

Step 11. Choose accessories

Ordering number	Description	Purpose
1CM114A	Rackmount flange kit (Palette 2015)	Provide a flange kit to mount the signal generator into a standard EIA 19" rack
1CN103A	Front handle kit (Palette 2015)	Provides front handles for carrying the instrument (not for rack mount)
1CP106A	Rackmount kit with front handles (Palette 2015)	Provides front handles and a flange kit to mount the signal generator into a standard EIA 19" rack
1CR100A	Rack slide kit (Palette 2015)	Provides a non-tilting rack slide kit

Step 12. Choose documentation

Ordering number	Description
E8663D-ABA	Printed copy of the English documentation set

Step 13. Choose a calibration plan

Ordering number	Description
E8663D-UK6	Commercial calibration certificate and test data
E8663D-A6J	ANSI Z540-1-1994 calibration
E8663D-AMG	Keysight Cal + Uncertainties + Guardbanding (accredited cal)
R-50C-011-3	Calibration Assurance Plan, Return-to-Keysight, 3 years
R-50C-011-5	Calibration Assurance Plan, Return-to-Keysight, 5 years
R-50C-016-3	Keysight Calibration + Uncertainties + Guardbanding, 3 years
R-50C-016-5	Keysight Calibration + Uncertainties + Guardbanding, 5 years
R-50C-021-3	ANSI Z540-1-1994 Calibration, 3 years
R-50C-021-5	ANSI Z540-1-1994 Calibration, 5 years

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4 Not compatible with Option 1SM (scan modulation) or Option HY2 (enhanced ultra low phase noise level 2).

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Step 14. Choose start-up assistance options

Ordering number	Description
PS-S10	Remote scheduled assistance 1-999 hours
PS-S20	Start-up assistance
PS-T10-ASG	Signal generator and source basics; 0.5 day (H7215B-165), max. 8 students on site
PS-X10	Custom services to be qualified by Keysight

Upgradeable Options

For complete upgrade details, including firmware, visit: www.keysight.com/find/E8663D_upgrade_table

Customer-installable and service center-installable upgrade kits are available for the E8663D PSG signal generator. If an option is not mentioned that you would like to have upgraded on your PSG, please contact your local Keysight representative about our customized upgradeable options.

Ordering number	Description	Upgrade contents	Additional requirements	Incompatible with
E8663DU-007	Analog ramp sweep	License key	None	None
E8663DU-008	Removable flash memory	License key and hardware	None	None
E8663DU-1E1	Adds a step attenuator to provide calibrated minimum output power levels of -135 dBm while maintaining superior level accuracy	License key and hardware	None	None
E8663DU-1EH	Improved harmonics below 2 GHz	License key	None	None
E8663DU-1EU	High output power	License key	None	None
E8663DU-R2C	Core instrument firmware enhancements	License key	None	None
E8663DU-UNT	AM, FM, phase modulation, and LF output	License key	None	None
E8663DU-UNW	Narrow pulse modulation	License key	None	None
E8663DU-UNX	Adds ultra-low phase noise performance	License key and hardware	None	None
E8663DU-UNY[5]	Adds enhanced ultra-low phase noise performance	License key and hardware	S/N ≥ 5042	S/N < 5042
E8663DU-2NY[6]	Adds enhanced ultra-low phase noise performance	License key and hardware	S/N < 5042	S/N ≥ 5042

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5 Keysight service center installation only.
6 Keysight factory installation only. Requires an additional factory installation and calibration charge (E8663DU-700).

Web Resources

- For additional product information, visit: www.keysight.com/find/psg
- For accessory information, visit: www.keysight.com/find/accessories

Related Keysight Literature

Publication name	Publication number
E8663D PSG RF Analog Signal Generator - Data Sheet	5990-4136EN
E8257D PSG Microwave Analog Signal Generator - Data Sheet	5989-0698EN
E8257D PSG Microwave Analog Signal Generator - Configuration Guide	5989-1325EN
E8267D PSG Vector Signal Generator - Data Sheet	5989-0697EN
E8267D PSG Vector Signal Generator - Configuration Guide	5989-1326EN

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