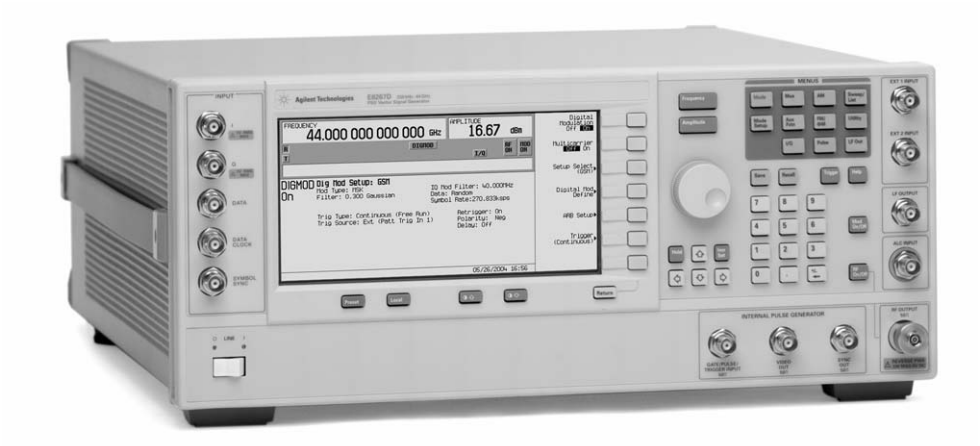
Agilent E8267D PSG Vector Signal Generator

Configuration Guide



This guide is intended to assist you with the ordering process of the PSG vector signal generators.

Agilent Technologies

Standard product includes installation guide, electronic documentation set (CD-ROM), adapters, and country specific power cord.

High output power (Option 1EA) and step attenuator (Option 1E1) are standard features in the E8267D vector signal generator.

Agilent PSG Vector Signal Generator Options

Step 1. Choose a frequency range

All frequency range options support underrange to 100 kHz. However, performance specifications are not provided between 100 kHz and 250 kHz.

Ordering number	Description	Purpose	Requires
E8267D-520	Frequency range from 250 kHz to 20 GHz	Selects the maximum frequency of the signal generator.	
E8267D-532	Frequency range from 250 kHz to 31.8 GHz	Selects the maximum frequency of the signal generator.	
E8267D-544	Frequency range from 250 kHz to 44 GHz	Selects the maximum frequency of the signal generator.	

Step 2. Choose spectral purity

Ordering number	Description	Purpose	Requires
Standard	Standard spectral purity	Provides low phase noise.	
E8267D-UNX	Ultra low phase noise	Improves phase noise performance at carrier frequency offsets ranging from 1 Hz to 10 kHz.	
E8267D-1EH	Improved harmonics below 2 GHz	Improves harmonic performance for carrier frequencies below 2 GHz.	

Step 3. Choose pulse modulation

Ordering number	Description	Purpose	Requires
Standard	CW and vector signal generation	Generates continuous wave (CW) and vector signals.	
E8267D-UNT	AM, FM, phase modulation, and LF output	Generates analog modulated signals.	
E8267D-UNU[1]	Pulse modulation	Generates pulse modulated signals (150 ns minimum pulse width).	
E8267D-UNW[1]	Narrow pulse modulation	Generates pulse modulated signals (20 ns minimum pulse width).	

Step 4. Choose ramp sweep

Ordering number	Description	Purpose	Requires
E8267D-007	Analog ramp sweep	Generates a fully synthesized ramp (analog) sweep of frequency and amplitude.	

Step 5. Choose internal baseband generator with memory

Ordering number	Description	Purpose	Requires
E8267D-601	Internal baseband generator, 8 Msa memory	Generates arbitrary and real-time I/Q waveforms (80 MHz of RF modulation bandwidth).	
E8267D-602	Internal baseband generator, 64 Msa memory	Generates arbitrary and real-time I/Q waveforms (80 MHz of RF modulation bandwidth).	
E8267D-005	6 GB internal hard drive	Provides non-volatile waveform storage.	E8267D-601 or E8267D-602

1. Option E8267D-UNU and E8267D-UNW are mutually exclusive; choose one or the other or neither. However, option E8267D-UNU can be upgraded to E8267D-UNW.

Step 6. Choose signal creation software for your baseband generator

Ordering number	Description	Purpose	Requires
E8267D-403	Calibrated Noise (AWGN) generation	Provides settable E_b/N_o and C/N	E8267D-601 or E8267D-602
E8267D-408	Signal Studio for enhanced multitone	Generates multiple tone signals and applies pre-distortion techniques to remove the nonlinear distortion of the signal generator. Requires a PSA spectrum analyzer.	E8267D-601 or E8267D-602, E8267D-UNX (recommended)
E8267D-420	Signal Studio for pulse building	Generates customized pulse patterns for simulation. Requires a PSA or ESA spectrum analyzer for waveform corrections.	E8267D-601 or E8267D-602, E8267D-005, E8267D-UNX (recommended), E8267D-UNW
E8267D-421	Signal Studio for noise power ratio	Generates a simulated broadband noise signal to facilitate NPR measurements. Applies pre-distortion techniques to improve RF flatness and increase notch depth. Requires a PSA spectrum analyzer.	E8267D-601 or E8267D-602, E8267D-UNX (recommended)
E8267D-SP1	Signal Studio for jitter injection	Create repeatable additive calibrated jitter with variable rate and deviation for tolerance measurements	E8267D-601 or E8267D-602
E8267D-H00	3GPP W-CDMA FDD	Create W-CDMA FDD single/multi-carrier uplink/downlink test signals at baseband and RF, for basestations, mobile transceivers, and their components	E8267D-601 or E8267D-602
E8267D-H01	IS-95 and cdma2000	Create cdma2000 and IS-95-A single/multi-carrier, forward/reverse link test signals at baseband and RF, for basestations, mobile transceivers, and their components	E8267D-601 or E8267D-602
E8267D-H02	TDMA (GSM, EDGE, GPRS, EGPRS, NADC, PDC, PHS, CEcT, TETRA)	Create GSM, GPRS, EDGE, and other TDMA single or multi-carrier test signals at baseband or RF	E8267D-601 or E8267D-602
E8267D-H17	Signal Studio for IEEE 802.11 WLAN	Create IEEE 802.11a/b/g WLAN packets and generate test signals at baseband and RF for WLAN radio transceivers and their components	E8267D-601 or E8267D-602
N7613A N7613A-102	Signal Studio for 802.16-2004 (WiMAX)	Create IEEE 802.16-2004 (WiMAX) test signals at baseband and RF	E8267D-601 or E8267D-602
N7619A N7619A-113	Signal Studio for multiband OFDM UWB	Create UWB (Ultra Wideband) signals that comply with the proposed Multi-band OFDM Alliance (MBOA) physical layer specification	External wideband arbitrary waveform generator
N7620A N7620A-SW1	Signal Studio for pulse building (wideband waveforms)	Generates customized wide bandwidth pulse patterns for simulation. Requires a PSA or ESA spectrum analyzer for waveform corrections	E8267D-015 E8267D-UNX, E8267D-UNW, N6030A external wideband arbitrary waveform generator
N7622A N7622A-196	Signal Studio Toolkit, narrowband corrections	Enables narrowband corrections up to 80 MHz, with the internal baseband generator	E8267D-601 or E8267D-602
N7622A N7622A-197	Signal Studio Toolkit, wideband corrections	Enable wideband corrections, up to 800 MHz, with an external baseband generator	External wideband arbitrary waveform generator
N7623A N7623A-102	Signal Studio for DVB	Create channel-coded DVB-T/H/C waveforms for receiver and component testing	E8267D-601 or E8267D-602

Step 7. Choose wideband external I/Q

Ordering number	Description	Purpose	Requires
E8267D-015	Wideband external I/Q inputs	Provides up to 2 GHz RF modulation bandwidth for carrier frequency above 3.2 GHz. Standard external I/Q inputs provide 160 MHz RF modulation bandwidth.	

Step 8. Choose special options

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

Ordering number	Description	Purpose	Requires
E8267D-HCC	Add input and output of phase reference LO	Provides multi-source phase coherency	Z5623A-Kxx Distribution Network (recommended)
E8267D-H1G	Add 1 GHz external phase reference	Provides multi-source phase coherency for carrier frequencies 100 kHz to 250 MHz	
E8267D-SP2	Dynamic sequencing	Provides ability to change sequences on command in the arbitary waveform generator	E8267D-601 or E8267D-602
E8267D-HSQ	Add second set of IQ inputs	Provides ability to switch between two different external IQ inputs	E8267D-601 or E8267D-602
E8267D-H1S	Add 1 GHz external frequency reference input	Enables use of an external frequency reference to improve spectral purity	

Step 9. Choose instrument connector configuration and accessories

Note: Standard 20 GHz models include a 3.5 mm (m) RF output connector on the front panel.
Standard 31.8 GHz and 44 GHz models include a 2.4mm (m) RF output connector on the front panel.

Ordering number	Description	Purpose	Requires
Standard with E8267D-520	3.5 mm (f) to 3.5 mm (f)	Adapter set is included with the purchase of the 20 GHz models to connect to 3.5 mm (m).	
Standard with E8267D-532 and E8267D-544	2.4 mm (f) to 2.4 mm (f)	Adapter set is included with the purchase of the 31.8 GHz and 44 GHz models to connect to 2.4 mm (m).	
E8267D-1ED [1]	Type-N (f) RF output connector	Type-N (m) to 3.5 mm (f) adapter set is included with the purchase of the type-N (m) connector.	E8267D-520
E8267D-1EM	Moves all front panel connectors to the rear panel	Simplifies cable management in rack mount environments.	
E8267D-003	PSG digital output connectivity with N5102A		E8267D-601 or E8267D-602, N5102A
E8267D-004	PSG digital input connectivity with N5102A		E8267D-601 or E8267D-602, N5102A
E8267D-1CM	Rackmount flange kit	Provides a flange kit to mount the signal generator into a standard EIA 19" rack.	
E8267D-1CN	Front handle kit	Provides front handles for carrying the instrument (not for rack mount).	
E8267D-1CP	Rack mount flange and front handle kit	Provides front handles and a flange kit to mount the signal generator into a standard EIA 19″ rack.	
8120-8806	Master/slave interface cable	Provides an interface cable to use two PSG's in master/slave mode.	
9211-2656	Transit case	Provides a hard transit case to protect the instrument during transit.	
9211-7481	Transit case with wheels	Provides a hard transit case with wheels to protect the instrument during transit.	
N5101A	Baseband Studio PCI card	Enables N5110B Baseband Studio	E8267D-601 or E8267D-602, N5110B
N5101A-022	512 MSamples of waveform memory	Waveform memory for the Baseband Studio PCI card	N5101A
N5102A	Baseband Studio digital signal interface module	Provides digital I/Q and digital IF inputs/outputs to/from the E4438C ESG and E8267D PSG vector signal generators.	E8267D-601 or E8267D-602, E8267D-003, E8267D-004
N5110B	Baseband Studio for waveform capture and playback	Allows playback of I/Q waveform data directly from a PC hard drive or the optional 512 MSa waveform memory on the N5101A to the E4438C ESG or the E8267D PSG vector signal generator.	N5101A, E8267D-601 or E8267D-602

1. E8267D-1ED is not compatible with the 31.8 GHz or 44 GHz models.

Step 10. Choose documentation

Standard products ship with an installation guide and an electronic documentation set (CD-ROM). The CD-ROM includes: user's guide, installation guide, programming guide, service guide, SCPI command reference, error messages, key reference, data sheets, and additional product literature.

Ordering number	Description
E8267D-CD1	CD-ROM containing the English documentation set
E8267D-ABA	Printed copy of the English documentation set (user's guide, programming guide, SCPI reference, key reference, and data sheets)
E8267D-AB2	Printed copy of the Chinese User's Guide
E8267D-0BW	Printed copy of the assembly-level service guide
E8267D-UK6	Commercial calibration certificate and test data

Step 11. Choose a warranty plan

Ordering number	Description
Standard	1-year return-to-Agilent warranty and service
3 years	Extended return-to-Agilent warranty and service
5 years	Extended return-to-Agilent warranty and service

Step 12. Choose a calibration plan

There is no calibration plan standard with the E8267D. For a calibration plan, specify 3 or 5 years for one of the appropriate plans below when ordering. For more information, please visit: www.agilent.com/find/services_upfront_options.

Plan
Agilent Calibration Upfront Plan
Agilent Calibration Plus Upfront Plan
Z540 Calibration Upfront Plan

Step 13. Choose extended support life

This option provides a license, stored within the E8267D, to guarantee support of the unit for a longer period of time than standard. This is not a warranty; the unit's owner will have to pay for repairs, but Agilent will carry sufficient inventory and maintain test and calibration capability to service the licensed unit.

Ordering number	Description
E8257D-1EZ	Extends support life from 5 years to 10 years after product discontinuance

Upgradeable Options

Customer-installable and service center-installable upgrade kits are available for the E8267D signal generators. If an option is not mentioned that you would like to have upgraded on your PSG, please contact your local Agilent representative about our customized upgradeable options.

Choose customer- installable upgrade kits [1, 3]

Ordering number	Upgrade description	Information required with order
E8267DK-601 [2]	Complete upgrade kit with installation guide	
E8267DK-602 [2]	Complete upgrade kit with installation guide	
E8267DK-005	Complete upgrade kit with installation guide	
E8267DK-1ED [2]	Complete upgrade kit with installation guide	
E8267DK-1EH [2]	Complete upgrade kit with installation guide	
E8267DK-UNX [2]	Complete upgrade kit with installation guide	
E8267DK-UNW [2]	Complete upgrade kit with installation guide	
E8267DK-015	License key (alphanumeric)	Customer's email address
E8267DK-408	License key (alphanumeric)	Customer's email address
E8267DK-420	License key (alphanumeric)	Customer's email address
E8267DK-421	License key (alphanumeric)	Customer's email address
E8267DK-007	License key (alphanumeric)	Customer's email address
E8267DK-UNT	License key (alphanumeric)	Customer's email address
E8267DK-UNU	License key (alphanumeric)	Customer's email address
E8267DK-1EZ	License key (alphanumeric)	Customer's email address

1. Latest firmware is recommended for upgrades. Firmware can be found at **www.agilent.com/find/upgradeassistant.**
2. Calibration required.
3. Calibration and installation costs are not included in the price of upgrade installation performed at a service center. Consult your Agilent Sales representative for details.

Web Resources

For additional product information, visit: **www.agilent.com/find/psg**

For information about renting, leasing or financing Agilent's latest technology, visit: **www.agilent.com/find/buyalternatives**

For accessory information, visit: **www.agilent.com/find/accessories**

Related Agilent Literature

Agilent PSG Signal Generators
Brochure, Literature number 5989-1324EN

E8257D PSG Analog Signal Generator
Data Sheet, Literature number 5989-0698EN

E8267D PSG Vector Signal Generator
Data Sheet, Literature number 5989-0697EN

E8257D PSG Analog Signal Generator
Configuration Guide, Literature number 5989-1325EN

PSG Two-Tone and Multitone Personalities
Application Note 1410, Literature number 5988-7689EN

Signal Studio for Pulse Building
Technical Overview, Literature number 5988-8134EN

Signal Studio for Noise Power Ratio
Technical Overview, Literature number 5988-9161EN

Signal Studio for Enhanced Multitone
Technical Overview, Literature number 5988-5639EN

N5102A Baseband Studio Digital Signal Interface Module
Technical Overview, Literature number 5988-9495EN

N5110B Baseband Studio for Waveform Capture and Playback
Technical Overview, Literature number 5989-2095EN

Digital Modulation in Communications Systems — An Introduction
Application Note 1298, Literature number 5965-7160E

Free Agilent Software
Agilent software can be found by selecting the Software, Firmware & Drivers embedded link located on each of the PSG E8267D and PSG E8257D web pages.

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Agilent Technologies' Test and Measurement Support, Services, and Assistance

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Our Promise

Our Promise means your Agilent test and measurement equipment will meet its advertised performance and functionality. When you are choosing new equipment, we will help you with product information, including realistic performance specifications and practical recommendations from experienced test engineers. When you receive your new Agilent equipment, we can help verify that it works properly and help with initial product operation.

Your Advantage

Your Advantage means that Agilent offers a wide range of additional expert test and measurement services, which you can purchase according to your unique technical and business needs. Solve problems efficiently and gain a competitive edge by contracting with us for calibration, extra-cost upgrades, out-of-warranty repairs, and onsite education and training, as well as design, system integration, project management, and other professional engineering services. Experienced Agilent engineers and technicians worldwide can help you maximize your productivity, optimize the return on investment of your Agilent instruments and systems, and obtain dependable measurement accuracy for the life of those products.

Agilent Open

www.agilent.com/find/open
Agilent Open simplifies the process of connecting and programming test systems to help engineers design, validate and manufacture electronic products. Agilent offers open connectivity for a broad range of system-ready instruments, open industry software, PC-standard I/O and global support, which are combined to more easily integrate test system development.

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