

SP200/SP200V Series Signal Generators

Configuration Guide



Configure Your SP200 Analog Signal Generator

This step-by-step process will help you configure your SP200 Series signal generator. Tailor the performance to meet your requirements. For detailed specifications, refer to the SP200 Series signal generator specification.

Step 1. Select maximum frequency range (required option; frequency range not upgradeable)		
Description	Option number	Additional information
Frequency range from 9 kHz to 6 GHz	506	
Frequency range from 9 kHz to 20 GHz	520	
Frequency range from 9 kHz to 40 GHz	540	

Step 2. Choose performance enhancement options		
Description	Option number	Additional information
AM, FM, phase modulation	UNT	
Narrow pulse modulation	UNW	Not compatible with UW2
Narrow pulse modulation up to 31.8 GHz	UW2	- Not compatible with UNW - Requires 540
Enhanced low phase noise	UNY	Standard
Multifunction generator	303	
Precision frequency reference	016	
Fast frequency switching	UNZ	Not compatible with UZ2
Fast frequency switching > 1.15 ms and $\pm 0.05\%$ of final frequency	UZ2	Not compatible with UNZ; Switching time > 1.15ms, frequency locking error is $\pm 0.05\%$
High output power	1EA	Standard
Step attenuator	1E1	Standard
Flexible reference input (1 to 50 MHz)	1ER	
Low nominal power	1EQ	< -110dBm

Step 3. Choose embedded software		
Description	Option number	Hardware requirements
Pulse train generator	320	UNW

Configure your SP206V vector signal generator

Step 1. Select maximum frequency range (required option; frequency range not upgradeable)

Description	Option number	Additional information
Frequency range from 9 kHz to 6 GHz	SP206V	

Step 2. Choose connector configuration

Description	Option number	Additional information
Differential I/Q outputs	1EL	

Step 3. Choose performance enhancement options

Description	Option number	Additional information
AM, FM, phase modulation	UNT	
Enhanced dynamic range	UNV	Requires 656
Narrow pulse modulation	UNW	
Low phase noise	UNX	Not compatible with UNY, standard
Enhanced low phase noise	UNY	Not compatible with UNX
Fast switching	UNZ	
Multifunction generator	303	
Precision frequency reference	SP200V-044	
Step attenuator	1E1	Standard
High output power	1EA	
Low specified power (<−110 dBm)	1EQ	
Flexible reference input (1 to 50 MHz)	1ER	

Step 4. Choose baseband generator options

Description	Option number	Additional information
ARB baseband generator (80 MHz RF bandwidth, 32 MSa)	656	
Upgrade baseband generator from 80 to 160 MHz RF bandwidth	657	Requires 656
Upgrade baseband generator memory from 32 to 512 MSa	022	Requires 656
Upgrade baseband generator memory from 32 to 1 GSa	023	Requires 656
Upgrade baseband generator with real-time capability	660	Requires 656

Step 5. Choose Signal Studio and embedded software

Product number	Description	Hardware requirements	Recommended hardware options
Cellular communications			
SP2000E	Signal Studio for W-CDMA/HSPA+ (ARB and real-time)	656 660 for real-time	UNV
SP2001E	Signal Studio for cdma2000/1xEV-DO (ARB and real-time)	656 660 for real-time	UNV
SP2002E	Signal Studio for GSM/EDGE/Evo (ARB and real-time)	656 660 for real-time	UNV, UNZ
SP2012E	Signal Studio for TD-SCDMA/HSDPA	656	UNV
SP2024E	Signal Studio for LTE/LTE-Advanced FDD (ARB and real-time)	656 660 for real-time	657, 506, 403, UNV
SP2025E	Signal Studio for LTE/LTE-Advanced TDD (ARB and real-time)	656 660 for real-time	657, 506, 403, UNV
SP2026E	Signal Studio for V2X	656	EA, 1ER, UNV, UNZ
SP2030E	Signal Studio for Pre-5G	656	657, UNV
SP2031E	Signal Studio for 5G NR	656	657, UNV
Wireless connectivity			
SP2006E	Signal Studio for Bluetooth®	656	UNV
SP2015E	Signal Studio for Mobile WiMAX	656	UNV
SP2017E	Signal Studio for WLAN 802.11a/b/g/j/p/n/ac	656	657, UNV
SP2007E	Signal Studio for DFS radar profiles	656	657
SP2010E	Signal Studio for Internet of Things (IoT)	656	

Audio/video broadcasting			
SP2011E	Signal Studio for broadcast radio	656	403, UNV
SP2002E	Signal Studio for digital video (ARB and real-time)	656 660 for real-time	403, UNV
SP2040E	Radio Test LMR	656	403, 657
Detection, positioning, tracking, and navigation			
SP2009E	Signal Studio for Global Navigation Satellite Systems (GNSS) (real-time)	656 660 for real-time	023, 403
SP2020E	Signal Studio for pulse building	656, UNW	403, 657, UNV, 1EA
General purpose			
302	Avionics (VOR/ILS)	656	
403	Calibrated AWGN	656	
430	Multitone and two-tone	656	
431	Custom digital modulation	656	
432	Phase noise impairment	656	
UN7	Internal bit error rate analyzer		
SP2005E	Signal Studio for real-time fading (real-time)	656, 403 660 for real-time	657
SP2008E	Signal Studio for custom modulation	656	
SP2014E	Signal Studio for power amplifier test	656 660 for real-time	657, 1EA
SP2021E	Signal Studio for multitone distortion	656, UNV, 1EA	657
SP2022E	Signal Studio toolkit – free utility	656	UNV
221-229	Waveform license 5-pack 1 to 9 (purchase up to 9 packs for 45 Signal Studio waveforms)	656	UNV
250-259	Waveform license 50-pack 1 to 10 (purchase up to 10 packs for 500 Signal Studio waveforms)	656	UNV
Trial version		D24	Including all trial versions of software starting with SP



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