M9484C VXG

Vector signal generator

Introduction

This configuration guide contains information to help you configure your M9484C VXG vector signal generator to meet your requirements. Ordering optional capabilities at the time of purchase provides the lowest overall cost of ownership.

KEYSIGHT

About the M9484C VXG Vector Signal Generator

You're designing your next RF breakthrough and ensuring that your design delivers maximum throughput, robust links, and data handling capabilities. This introduces a new set of design and test challenges, including more bandwidths, frequency bands, and system complexity.

Keysight has created the ultimate VXG signal generator to take your designs to the widest bandwidths, highest frequencies, and multichannel applications. With this fully integrated, calibrated, and synchronized solution, you don't need to worry about the errors caused by additional connections and instruments. Through integration with PathWave Signal Generation software, create performance-optimized reference signals and reduce the time you spend on signal simulation.
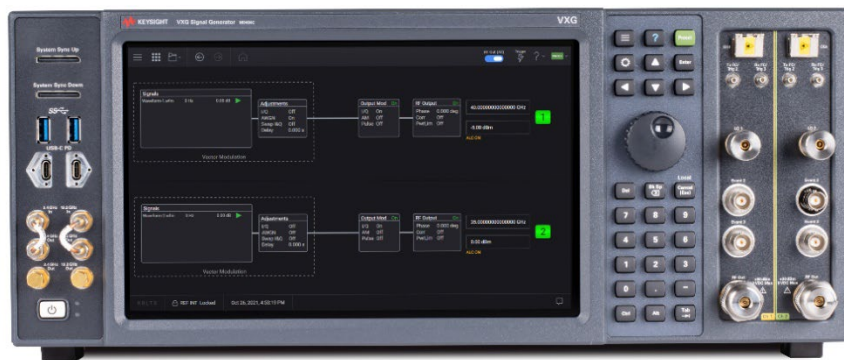

Figure 1. M9484C VXG signal generator with two 54 GHz channels.

Configure Hardware

To configure the M9484C VXG, start by selecting the desired number of channels. Then, add system features, which are ordered once per instrument. Finally, add channel features, which are ordered once per channel. Detailed information is provided below.

Select number of channels

Configuration	Required options	Descriptions	Additional information
One channel	M9484C-001	Add channel one	Required for all configurations
Two channels	M9484C-001 M9484C-002	Add channel one Add channel two	
Four channels	M9484C-001 M9484C-002 M9484C-003 M9484C-004	Add channel one Add channel two Add channel three Add channel four	Not compatible with 532, 544, 554

Select system features (ordered once per instrument)

Option	Description	Additional information
M9484C-1ER	Flexible reference input	
M9484C-CB5	Channel bonding, 5 GHz	Requires R25 on all channels, PCH, and N7653APPC Recommended with Y1166A or Y1167A accessory kits Additional instrumentation required to perform channel bonding calibration. See User Documentation for details.
M9484C-PCH	Phase coherence for N channels	Requires 002 or SNC
M9484C-SNC	Multi-instrument synchronization	Requires PCH Recommended with Y1305A accessory kit See M9484C VXG data sheet for information on which configurations may be synchronized
M9484C-AL2	Auxiliary fixed LO	Requires 532, 544 or 554 Required for use with V3080A Vector Signal Generator Frequency Extender

Select channel features (ordered once per channel)

Option	Description	Additional information
Frequency options (must select one; option will be duplicated on all channels)		
M9484C-506	CW frequency range, 9 kHz to 6 GHz	Type-N (f) RF output connector Not compatible with 1EH
M9484C-508	CW frequency range, 9 kHz to 8.5 GHz	Type-N (f) RF output connector Not compatible with 1EH
M9484C-514	CW frequency range, 9 kHz to 14 GHz	3.5 mm (m) RF output connector
M9484C-520	CW frequency range, 9 kHz to 20 GHz	3.5 mm (m) RF output connector
M9484C-532	CW frequency range, 9 kHz to 31.8 GHz	1.85 mm (m) RF output connector Not compatible with 003, 004
M9484C-544	CW frequency range, 9 kHz to 44 GHz	1.85 mm (m) RF output connector Not compatible with 003, 004
M9484C-554	CW frequency range, 9 kHz to 54 GHz	1.85 mm (m) RF output connector Not compatible with 003, 004
Bandwidth options (must select one; option may be different on each channel)		
M9484C-B1X	RF bandwidth, 160 MHz with 64 MSa memory	
M9484C-B2X	RF bandwidth, 250 MHz with 64 MSa memory	
M9484C-B5X	RF bandwidth, 500 MHz with 256 MSa memory	
M9484C-R10	RF bandwidth, 1 GHz with 256 MSa memory	
M9484C-R1E	RF bandwidth, 1 GHz with 256 MSa memory, limited	Maximum bandwidth is frequency dependent. See data sheet for details.
M9484C-R25	RF bandwidth, 2.5 GHz with 256 MSa memory	
M9484C-R2E	RF bandwidth, 2.5 GHz with 256 MSa memory, limited	Maximum bandwidth is frequency dependent. See data sheet for details.
Reference options (must select one; option will be duplicated on all channels)		
M9484C-500	High performance reference	Requires ST5
M9484C-600	Enhanced high performance reference	Requires ST6
Phase noise options (must select one; option will be duplicated on all channels)		
M9484C-ST5	Low phase noise	Requires 500
M9484C-ST6	Enhanced low phase noise	Requires 600

Option	Description	Additional information
High output power options (optionally select one; option will be duplicated on all channels)		
M9484C-1EA	High output power from 9 kHz to 6 or 8.5 GHz	Not compatible with 514, 520, 532, 544, 554
M9484C-1EB	High output power from 9 kHz to 14 or 20 GHz	Not compatible with 506, 508, 532, 544, 554
M9484C-1EC	High output power from 9 kHz to 31.8, 44 or 54 GHz	Not compatible with 506, 508, 514, 520
M9484C-1EE	High output power from 9 kHz to 31.8, 44 or 54 GHz, limited above 43.5 GHz	Not compatible with 506, 508, 514, 520
Memory options (optionally select one; option may be different on each channel)		
M9484C-M05	Baseband generator memory upgrade to 512 MSa	
M9484C-M10	Baseband generator memory upgrade to 1024 MSa	
M9484C-M20	Baseband generator memory upgrade to 2048 MSa	
M9484C-M40	Baseband generator memory upgrade to 4096 MSa	
Analog modulation options (optionally select any; options will be duplicated on all channels unless otherwise stated)		
M9484C-AN1	Analog I/O for LF out, AM, FM, PM inputs, single ended IQ outputs	Only available on channel one – will not be duplicated on all channels Not compatible with 003, 004 FM and PM inputs require ST6 AM, FM, and PM inputs are reserved for future use
M9484C-PMR	Pulse modulation	Not compatible with PME
M9484C-PME	Limited pulse modulation	Not compatible with PMR
M9484C-320	Pulse train generator (SCPI only)	Requires PMR or PME
Vector system options (optionally select any; option may be different on each channel unless otherwise stated)		
M9484C-403	AWGN and CW interferer	
M9484C-8SG	8 virtual signal generators (multiple IQ paths to RF)	Option will be duplicated on all channels
M9484C-DIQ	Differential IQ outputs	Requires AN1 Only available on channel one – will not be duplicated on all channels Not compatible with 003, 004
General purpose options (optionally select any; option may be different on each channel)		
M9484C-1EH	Improved harmonics below 3.8 GHz	Not compatible with 506, 508

Configure Software

Included software

The M9484C VXG base configuration includes the following software tools.

Description
Keysight IO Libraries Suite including Connection Expert
Sample waveforms and programming examples

Embedded PathWave software tools

Embedded PathWave software tools can be used to create and playback waveforms through the VXG touch-optimized graphical user interface. Optionally select any models. One software license per instrument is required. For additional information, see the PathWave Signal Generation Brochure.

Model	Description
N7605AP0C	PathWave Signal Generation for 3GPP MIMO fading (5GNR FR1 & FR2, LTE)
N7608APPC	PathWave Signal Generation for custom modulation
N7621APPC	PathWave Signal Generation for multitone and NPR
N7624APPC[1]	PathWave signal generation for LTE/LTE-A/LTE-A Pro FDD
N7625APPC[1]	PathWave signal generation for LTE/LTE-A/LTE-A Pro TDD
N7631APPC	PathWave Signal Generation for 5G NR
N7632APPC	PathWave Signal Generation for NR V2X
N7642APPC	PathWave Signal Generation for IQ based AM, FM, phase modulation
N7653APPC	PathWave automatic channel response correction and S-parameter de-embedding (includes instrument nonlinear correction)

1 Embedded applications for LTE (FDD and TDD) only support Uplink/PRACH. Downlink is not currently supported.

Additional PathWave software tools and MATLAB

These PathWave software tools can be used to create and playback waveforms through file-export based waveform playback. Optionally select any models. One software license per instrument is required. For additional information, see the PathWave Signal Generation Brochure.

Model	Description
Cellular communications	
N7600EMBC	PathWave Signal Generation for W-CDMA/HSPA+
N7601EMBC	PathWave Signal Generation for cdma2000/1xEV-DO
N7602EMBC	PathWave Signal Generation for GSM/EDGE/Evo
N7612EMBC	PathWave Signal Generation for TD-SCDMA/HSPA
N7624EMBC	PathWave Signal Generation for LTE/LTE-Advanced/LTE-A Pro FDD
N7625EMBC	PathWave Signal Generation for LTE/LTE-Advanced TDD
N7626EMBC	PathWave Signal Generation for LTE V2X
N7631EMBC	PathWave Signal Generation for 5G NR
N7632EMBC	PathWave Signal Generation for NR V2X
Wireless connectivity	
N7606EMBC	PathWave Signal Generation for Bluetooth
N7610EMBC	PathWave Signal Generation for IoT
N7617EMBC	PathWave Signal Generation for WLAN 802.11
N76EMQAMC	WLAN 4096QAM modulation (requires N7617EMBC)
Audio/video broadcasting, public safety	
N7611EMBC	PathWave Signal Generation for broadcast radio
N7623EMBC	PathWave Signal Generation for digital video
N7640EMBC	PathWave Signal Generation for LMR
General RF and microwave	
N6171A	MATLAB software
N7608EMBC	PathWave Signal Generation for custom modulation
N7650B	Waveform license packs (Option 221-229 for 5-pack; Option 250-259 for 50-pack)

Select accessories

Model	Description	Additional information
Y1257A	Rack mount kit for M9484C	
Y1276A	Cooling spacer kit	Required when additional instrumentation will be stacked on the M9484C (on a tabletop or in a rack).
Y1277A	Additional removable solid-state drive for serial numbers < 6348xxxx	If PathWave software will be added to a purchase which also includes an additional removable SSD, it is recommended to select floating, transportable, or USB portable license types. Node-locked licenses enable a single SSD.
Y1277B	Additional removable solid-state drive for serial numbers ≥ 6348xxxx	If PathWave software will be added to a purchase which also includes an additional removable SSD, it is recommended to select floating, transportable, or USB portable license types. Node-locked licenses enable a single SSD.
Y1166A	Channel bonding kit for VXG, 6, 8.5, 14, or 20 GHz frequency options	Requires M9484C-CB5
Y1167A	Channel bonding kit for VXG, 31.8, 44, or 54 GHz frequency options	Requires M9484C-CB5
Y1305A	Multi-instrument synchronization cable kit	Recommended with M9484C-SNC Provides appropriate length and quantity of cables for two M9484Cs stacked vertically with the Y1276A cooling spacer in between. Additional cables or cables of different length may be required for other M9484C configurations.
Y1308A	AUX IO Breakout Cable	Recommended with M9484C-AN1
N5520B	Adapter, 1.85 mm (f) to 1.85 mm (f), DC to 67 GHz	One included with M9484C-554
11900B	Adapter, 2.4 mm (f) to 2.4 mm (f), DC to 50 GHz	One included with M9484C-544 and M9484C-532
11904B	Adapter, 2.4 mm (f) to 2.9 mm (f), DC to 40 GHz	One included with M9484C-544 and M9484C-532
83059B	Coaxial Adapter, 3.5 mm (f) to 3.5 mm (f), DC to 26.5 GHz	One included with M9484C-520 and M9484C-514

Post Purchase Upgrades

Your product can be easily upgraded after the initial purchase. Some M9484C VXG vector signal generator options are controlled by a licensing key and can be quickly installed by the user. To upgrade these options:

1. Contact your Keysight representative to place an order for an option upgrade.

2. You will receive your entitlement certificate via email.

3. Redeem the certificate online by following the instructions provided to receive a license key file.

4. Save the license file to C:\ProgramData\Keysight\Licensing\Licenses\Other

5. Begin using the new capability.

Some M9484C VXG vector signal generator options require additional hardware. Contact your Keysight representative for assistance with hardware upgrades.

Upgrades are applied per channel. For example, to upgrade both channels of a two-channel M9484C VXG, upgrades for each of the respective channels should be ordered.

Ordering number	Description	Requirements	Additional information
System feature upgrades			
M9484CU-1ER	Add flexible reference input		Customer installable, license key
M9484CU-AL2	Add auxiliary fixed LO	M9484C-532, 544, or 554	Customer installable, license key
M9484CU-CB5	Add channel bonding, 5 GHz	M9484C-002, PCH, R25 on all channels N7653APPC	Customer installable, license key
M9484CU-DIQ	Add differential IQ outputs	M9484C-AN1	Customer installable, license key
M9484CU-PCH	Add phase coherency for N channels	M9484C-002 or M9484C-SNC	Customer installable, license key
M9484CU-SNC	Add multi-instrument synchronization	M9484C-PCH	Customer installable, license key
Reference upgrades (must match on all channels)			
M9484CU-785	Upgrade channel 1 with enhanced high performance reference (600)	M9484C-ST6 or M9484CU-777	Customer installable, license key
M9484CU-786	Upgrade channel 2 with enhanced high performance reference (600)	M9484C-ST6 or M9484CU-778	Customer installable, license key
M9484CU-787	Upgrade channel 3 with enhanced high performance reference (600)	M9484C-ST6 or M9484CU-779	Customer installable, license key
M9484CU-788	Upgrade channel 4 with enhanced high performance reference (600)	M9484C-ST6 or M9484CU-780	Customer installable, license key
Phase noise upgrades (must match on all channels)			
M9484CU-777	Upgrade channel 1 with enhanced low phase noise (ST6)	M9484C-600 or M9484CU-785	Customer installable, license key
M9484CU-778	Upgrade channel 2 with enhanced low phase noise (ST6)	M9484C-600 or M9484CU-786	Customer installable, license key
M9484CU-779	Upgrade channel 3 with enhanced low phase noise (ST6)	M9484C-600 or M9484CU-787	Customer installable, license key
M9484CU-780	Upgrade channel 4 with enhanced low phase noise (ST6)	M9484C-600 or M9484CU-788	Customer installable, license key

Ordering number	Description	Requirements	Additional information
Frequency upgrades (must match on all channels)			
M9484CU-705	Upgrade channel 1 frequency range, 9 kHz to 8.5 GHz (508)	M9484C-506	Customer installable, license key
M9484CU-706	Upgrade channel 2 frequency range, 9 kHz to 8.5 GHz (508)	M9484C-506	Customer installable, license key
M9484CU-707	Upgrade channel 3 frequency range, 9 kHz to 8.5 GHz (508)	M9484C-506	Customer installable, license key
M9484CU-708	Upgrade channel 4 frequency range, 9 kHz to 8.5 GHz (508)	M9484C-506	Customer installable, license key
M9484CU-U01	Upgrade 1 channel M9484C from 8.5 GHz to 14 GHz (514)	M9484C-508 Incompatible with M9484C-002 and AN1	Return to factory, hardware
M9484CU-U02	Upgrade 2 channel M9484C from 8.5 GHz to 14 GHz (514)	M9484C-508 and 002 Incompatible with M9484C-004 and AN1	Return to factory, hardware
M9484CU-U03	Upgrade 4 channel M9484C from 8.5 GHz to 14 GHz (514)	M9484C-508 and 004 Incompatible with M9484C-AN1	Return to factory, hardware
M9484CU-U11	Upgrade 1 channel M9484C with AN1 from 8.5 GHz to 14 GHz (514)	M9484C-508 and AN1 Incompatible with M9484C-002	Return to factory, hardware
M9484CU-U12	Upgrade 2 channel M9484C with AN1 from 8.5 GHz to 14 GHz (514)	M9484C-508, AN1, and 002	Return to factory, hardware
M9484CU-713	Upgrade channel 1 frequency range, 9 kHz to 20 GHz (520)	M9484C-514	Customer installable, license key
M9484CU-714	Upgrade channel 2 frequency range, 9 kHz to 20 GHz (520)	M9484C-514	Customer installable, license key
M9484CU-715	Upgrade channel 3 frequency range, 9 kHz to 20 GHz (520)	M9484C-514	Customer installable, license key
M9484CU-716	Upgrade channel 4 frequency range, 9 kHz to 20 GHz (520)	M9484C-514	Customer installable, license key
M9484CU-U04	Upgrade 1 channel M9484C from 20 GHz to 31.8 GHz (532)	M9484C-520 Incompatible with M9484C-002 AN1	Return to factory, hardware
M9484CU-U05	Upgrade 2 channel M9484C from 20 GHz to 31.8 GHz (532)	M9484C-520 and 002 Incompatible with M9484C-004 and AN1	Return to factory, hardware
M9484CU-U06	Upgrade 1 channel M9484C from 8.5 GHz to 31.8 GHz (532)	M9484C-508 Incompatible with M9484C-002 and AN1	Return to factory, hardware
M9484CU-U07	Upgrade 2 channel M9484C from 8.5 GHz to 31.8 GHz (532)	M9484C-508 and 002 Incompatible with M9484C-004 and AN1	Return to factory, hardware
M9484CU-U13	Upgrade 1 channel M9484C with AN1 from 20 GHz to 31.8 GHz (532)	M9484C-520 and AN1 Incompatible with M9484C-002	Return to factory, hardware
M9484CU-U14	Upgrade 2 channel M9484C with AN1 from 20 GHz to 31.8 GHz (532)	M9484C-520, AN1, and 002	Return to factory, hardware
M9484CU-U15	Upgrade 1 channel M9484C with AN1 from 8.5 GHz to 31.8 GHz (532)	M9484C-508 and AN1 Incompatible with M9484C-002	Return to factory, hardware
M9484CU-U16	Upgrade 2 channel M9484C with AN1 from 8.5 GHz to 31.8 GHz (532)	M9484C-508, AN1, and 002	Return to factory, hardware
M9484CU-721	Upgrade channel 1 frequency range, 9 kHz to 44 GHz (544)	M9484C-532	Customer installable, license key
M9484CU-722	Upgrade channel 2 frequency range, 9 kHz to 44 GHz (544)	M9484C-532	Customer installable, license key
M9484CU-725	Upgrade channel 1 frequency range, 9 kHz to 54 GHz (554)	M9484C-544 or M9484CU-721	Customer installable, license key
M9484CU-726	Upgrade channel 2 frequency range, 9 kHz to 54 GHz (554)	M9484C-544 or M9484CU-722	Customer installable, license key

Ordering number	Description	Requirements	Additional information
Output power upgrades (must match on all channels)			
M9484CU-757	Add high output power from 9 kHz to 6 or 8.5 GHz to channel 1 (1EA)	M9484C-506 or 508	Customer installable, license key
M9484CU-758	Add high output power from 9 kHz to 6 or 8.5 GHz to channel 2 (1EA)	M9484C-506 or 508	Customer installable, license key
M9484CU-759	Add high output power from 9 kHz to 6 or 8.5 GHz to channel 3 (1EA)	M9484C-506 or 508	Customer installable, license key
M9484CU-760	Add high output power from 9 kHz to 6 or 8.5 GHz to channel 4 (1EA)	M9484C-506 or 508	Customer installable, license key
M9484CU-761	Add high output power from 9 kHz to 14 or 20 GHz to channel 1 (1EB)	M9484C-514 or 520	Customer installable, license key
M9484CU-762	Add high output power from 9 kHz to 14 or 20 GHz to channel 2 (1EB)	M9484C-514 or 520	Customer installable, license key
M9484CU-763	Add high output power from 9 kHz to 14 or 20 GHz to channel 3 (1EB)	M9484C-514 or 520	Customer installable, license key
M9484CU-764	Add high output power from 9 kHz to 14 or 20 GHz to channel 4 (1EB)	M9484C-514 or 520	Customer installable, license key
M9484CU-765	Add high output power from 9 kHz to 31.8, 44, or 54 GHz to channel 1 (1EC)	M9484C-532, 544, or 554	Customer installable, license key
M9484CU-766	Add high output power from 9 kHz to 31.8, 44, or 54 GHz to channel 2 (1EC)	M9484C-532, 544, or 554	Customer installable, license key
M9484CU-769	Add high output power from 9 kHz to 43.5 GHz, limited above 43.5 GHz to channel 1 (1EE)	M9484C-532, 544, or 554	Customer installable, license key
M9484CU-770	Add high output power from 9 kHz to 43.5 GHz, limited above 43.5 GHz to channel 2 (1EE)	M9484C-532, 544, or 554	Customer installable, license key
Analog modulation upgrades (must match on all channels)			
M9484CU-855	Add limited pulse modulation to channel 1 (PME)		Customer installable, license key
M9484CU-856	Add limited pulse modulation to channel 2 (PME)		Customer installable, license key
M9484CU-857	Add limited pulse modulation to channel 3 (PME)		Customer installable, license key
M9484CU-858	Add limited pulse modulation to channel 4 (PME)		Customer installable, license key
M9484CU-859	Add pulse modulation to channel 1 (PMR)		Customer installable, license key
M9484CU-860	Add pulse modulation to channel 2 (PMR)		Customer installable, license key
M9484CU-861	Add pulse modulation to channel 3 (PMR)		Customer installable, license key
M9484CU-862	Add pulse modulation to channel 4 (PMR)		Customer installable, license key
General purpose upgrades			
M9484CU-851	Add improved harmonics to channel 1 (1EH)		Customer installable, license key
M9484CU-852	Add improved harmonics to channel 2 (1EH)		Customer installable, license key
M9484CU-853	Add improved harmonics to channel 3 (1EH)		Customer installable, license key
M9484CU-854	Add improved harmonics to channel 4 (1EH)		Customer installable, license key

Ordering number	Description	Requirements	Additional information
Bandwidth upgrades			
M9484CU-733	Upgrade channel 1 RF bandwidth, from 160 MHz to 250 MHz (B2X)	M9484C-B1X	Customer installable, license key
M9484CU-734	Upgrade channel 2 RF bandwidth, from 160 MHz to 250 MHz (B2X)	M9484C-B1X	Customer installable, license key
M9484CU-735	Upgrade channel 3 RF bandwidth, from 160 MHz to 250 MHz (B2X)	M9484C-B1X	Customer installable, license key
M9484CU-736	Upgrade channel 4 RF bandwidth, from 160 MHz to 250 MHz (B2X)	M9484C-B1X	Customer installable, license key
M9484CU-737	Upgrade channel 1 RF bandwidth, from 250 MHz to 500 MHz (B5X)	M9484C-B2X or M9484CU-733	Customer installable, license key
M9484CU-738	Upgrade channel 2 RF bandwidth, from 250 MHz to 500 MHz (B5X)	M9484C-B2X or M9484CU-734	Customer installable, license key
M9484CU-739	Upgrade channel 3 RF bandwidth, from 250 MHz to 500 MHz (B5X)	M9484C-B2X or M9484CU-735	Customer installable, license key
M9484CU-740	Upgrade channel 4 RF bandwidth, from 250 MHz to 500 MHz (B5X)	M9484C-B2X or M9484CU-736	Customer installable, license key
M9484CU-741	Upgrade channel 1 RF bandwidth, from 500 MHz to 1 GHz (R10)	M9484C-B5X or M9484CU-737	Customer installable, license key
M9484CU-742	Upgrade channel 2 RF bandwidth, from 500 MHz to 1 GHz (R10)	M9484C-B5X or M9484CU-738	Customer installable, license key
M9484CU-743	Upgrade channel 3 RF bandwidth, from 500 MHz to 1 GHz (R10)	M9484C-B5X or M9484CU-739	Customer installable, license key
M9484CU-744	Upgrade channel 4 RF bandwidth, from 500 MHz to 1 GHz (R10)	M9484C-B5X or M9484CU-740	Customer installable, license key
M9484CU-745	Upgrade channel 1 RF bandwidth, from 500 MHz to 1 GHz, limited (R1E)	M9484C-B5X or M9484CU-737	Customer installable, license key
M9484CU-746	Upgrade channel 2 RF bandwidth, from 500 MHz to 1 GHz, limited (R1E)	M9484C-B5X or M9484CU-738	Customer installable, license key
M9484CU-747	Upgrade channel 3 RF bandwidth, from 500 MHz to 1 GHz, limited (R1E)	M9484C-B5X or M9484CU-739	Customer installable, license key
M9484CU-748	Upgrade channel 4 RF bandwidth, from 500 MHz to 1 GHz, limited (R1E)	M9484C-B5X or M9484CU-740	Customer installable, license key
M9484CU-749	Upgrade channel 1 RF bandwidth, from 1 GHz to 2.5 GHz (R25)	M9484C-R10 or M9484CU-741	Customer installable, license key
M9484CU-750	Upgrade channel 2 RF bandwidth, from 1 GHz to 2.5 GHz (R25)	M9484C-R10 or M9484CU-742	Customer installable, license key
M9484CU-751	Upgrade channel 3 RF bandwidth, from 1 GHz to 2.5 GHz (R25)	M9484C-R10 or M9484CU-743	Customer installable, license key
M9484CU-752	Upgrade channel 4 RF bandwidth, from 1 GHz to 2.5 GHz (R25)	M9484C-R10 or M9484CU-744	Customer installable, license key
M9484CU-753	Upgrade channel 1 RF bandwidth, from 1 GHz to 2.5 GHz, limited (R2E)	M9484C-R1E or M9484CU-745	Customer installable, license key
M9484CU-754	Upgrade channel 2 RF bandwidth, from 1 GHz to 2.5 GHz, limited (R2E)	M9484C-R1E or M9484CU-746	Customer installable, license key
M9484CU-755	Upgrade channel 3 RF bandwidth, from 1 GHz to 2.5 GHz, limited (R2E)	M9484C-R1E or M9484CU-747	Customer installable, license key
M9484CU-756	Upgrade channel 4 RF bandwidth, from 1 GHz to 2.5 GHz, limited (R2E)	M9484C-R1E or M9484CU-748	Customer installable, license key
Baseband generator memory upgrades			
M9484CU-835	Upgrade channel 1 baseband generator memory upgrade to 512 MSa (M05)		Customer installable, license key
M9484CU-836	Upgrade channel 2 baseband generator memory upgrade to 512 MSa (M05)		Customer installable, license key
M9484CU-837	Upgrade channel 3 baseband generator memory upgrade to 512 MSa (M05)		Customer installable, license key
M9484CU-838	Upgrade channel 4 baseband generator memory upgrade to 512 MSa (M05)		Customer installable, license key
M9484CU-839	Upgrade channel 1 baseband generator memory upgrade to 1024 MSa (M10)	M9484C-M05 or M9484CU-835	Customer installable, license key
M9484CU-840	Upgrade channel 2 baseband generator memory upgrade to 1024 MSa (M10)	M9484C-M05 or M9484CU-836	Customer installable, license key
M9484CU-841	Upgrade channel 3 baseband generator memory upgrade to 1024 MSa (M10)	M9484C-M05 or M9484CU-837	Customer installable, license key
M9484CU-842	Upgrade channel 4 baseband generator memory upgrade to 1024 MSa (M10)	M9484C-M05 or M9484CU-838	Customer installable, license key
M9484CU-843	Upgrade channel 1 baseband generator memory upgrade to 2048 MSa (M20)	M9484C-M10 or M9484CU-839	Customer installable, license key
M9484CU-844	Upgrade channel 2 baseband generator memory upgrade to 2048 MSa (M20)	M9484C-M10 or M9484CU-840	Customer installable, license key
M9484CU-845	Upgrade channel 3 baseband generator memory upgrade to 2048 MSa (M20)	M9484C-M10 or M9484CU-841	Customer installable, license key
M9484CU-846	Upgrade channel 4 baseband generator memory upgrade to 2048 MSa (M20)	M9484C-M10 or M9484CU-842	Customer installable, license key

Ordering number	Description	Requirements	Additional information
Baseband generator memory upgrades (continued)			
M9484CU-847	Upgrade channel 1 baseband generator memory upgrade to 4096 MSa (M40)	M9484C-M20 or M9484CU-843	Customer installable, license key
M9484CU-848	Upgrade channel 2 baseband generator memory upgrade to 4096 MSa (M40)	M9484C-M20 or M9484CU-844	Customer installable, license key
M9484CU-849	Upgrade channel 3 baseband generator memory upgrade to 4096 MSa (M40)	M9484C-M20 or M9484CU-845	Customer installable, license key
M9484CU-850	Upgrade channel 4 baseband generator memory upgrade to 4096 MSa (M40)	M9484C-M20 or M9484CU-846	Customer installable, license key
Vector system feature upgrades			
M9484CU-789	Add 8 virtual signal generators (multiple IQ paths to RF) to channel 1 (8SG)	Must match on all channels	Customer installable, license key
M9484CU-790	Add 8 virtual signal generators (multiple IQ paths to RF) to channel 2 (8SG)	Must match on all channels	Customer installable, license key
M9484CU-791	Add 8 virtual signal generators (multiple IQ paths to RF) to channel 3 (8SG)	Must match on all channels	Customer installable, license key
M9484CU-792	Add 8 virtual signal generators (multiple IQ paths to RF) to channel 4 (8SG)	Must match on all channels	Customer installable, license key
M9484CU-831	Add calibrated AWGN to channel 1 (403)		Customer installable, license key
M9484CU-832	Add calibrated AWGN to channel 2 (403)		Customer installable, license key
M9484CU-833	Add calibrated AWGN to channel 3 (403)		Customer installable, license key
M9484CU-834	Add calibrated AWGN to channel 4 (403)		Customer installable, license key
Analog I/O upgrades			
M9484CU-AN2	Add analog I/O to 1 channel, 6 or 8.5 GHz M9484C	M9484C-506 or 508 Not compatible with M9484C-002 or 004	Return to factory, hardware
M9484CU-AN3	Add analog I/O to 2 channel, 6 or 8.5 GHz M9484C (first channel only)	M9484C-506 or 508 Not compatible with M9484C-004	Return to factory, hardware
M9484CU-AN4	Add analog I/O to 1 channel, 14 or 20 GHz M9484C	M9484C-514 or 520, 002 Not compatible with M9484C-002 or 004	Return to factory, hardware
M9484CU-AN5	Add analog I/O to 2 channel, 14 or 20 GHz M9484C (first channel only)	M9484C-514 or 520, 002 Not compatible with M9484C-004	Return to factory, hardware
M9484CU-AN6	Add analog I/O to 1 channel, 31.8, 44, or 54 GHz M9484C	M9484C-532, 544, or 554 Not compatible with M9484C-002 or 004	Return to factory, hardware
M9484CU-AN7	Add analog I/O to 2 channel, 31.8, 44, or 54 GHz M9484C (first channel only)	M9484C-532, 544, or 554 Not compatible with M9484C-004	Return to factory, hardware

Ordering number	Description	Requirements	Additional information
Additional channel upgrades			
M9484CU-012	Add a second channel with 506, ST5, 500, B1X (002)	M9484C-506, ST5, 500	Return to factory, hardware
M9484CU-022	Add a second channel with 506, ST6, 600, B1X (002)	M9484C-506, ST6, 600	Return to factory, hardware
M9484CU-032	Add a second channel with 508, ST5, 500, B1X (002)	M9484C-508, ST5, 500	Return to factory, hardware
M9484CU-042	Add a second channel with 508, ST6, 600, B1X (002)	M9484C-508, ST6, 600	Return to factory, hardware
M9484CU-052	Add a second channel with 514, ST5, 500, B1X (002)	M9484C-514, ST5, 500	Return to factory, hardware
M9484CU-062	Add a second channel with 514, ST6, 600, B1X (002)	M9484C-514, ST6, 600	Return to factory, hardware
M9484CU-072	Add a second channel with 520, ST5, 500, B1X (002)	M9484C-520, ST5, 500	Return to factory, hardware
M9484CU-082	Add a second channel with 520, ST6, 600, B1X (002)	M9484C-520, ST6, 600	Return to factory, hardware
M9484CU-092	Add a second channel with 532, ST5, 500, B1X (002)	M9484C-532, ST5, 500	Return to factory, hardware
M9484CU-102	Add a second channel with 532, ST6, 600, B1X (002)	M9484C-532, ST6, 600	Return to factory, hardware
M9484CU-112	Add a second channel with 544, ST5, 500, B1X (002)	M9484C-544, ST5, 500	Return to factory, hardware
M9484CU-122	Add a second channel with 544, ST6, 600, B1X (002)	M9484C-544, ST6, 600	Return to factory, hardware
M9484CU-132	Add a second channel with 554, ST5, 500, B1X (002)	M9484C-554, ST5, 500	Return to factory, hardware
M9484CU-142	Add a second channel with 554, ST6, 600, B1X (002)	M9484C-554, ST6, 600	Return to factory, hardware
M9484CU-01A	Add a second channel with 506, ST5, 500, B1X (first channel has AN1) (002)	M9484C-506, ST5, 500, AN1	Return to factory, hardware
M9484CU-02A	Add a second channel with 506, ST6, 600, B1X (first channel has AN1) (002)	M9484C-506, ST6, 600, AN1	Return to factory, hardware
M9484CU-03A	Add a second channel with 508, ST5, 500, B1X (first channel has AN1) (002)	M9484C-508, ST5, 500, AN1	Return to factory, hardware
M9484CU-04A	Add a second channel with 508, ST6, 600, B1X (first channel has AN1) (002)	M9484C-508, ST6, 600, AN1	Return to factory, hardware
M9484CU-05A	Add a second channel with 514, ST5, 500, B1X (first channel has AN1) (002)	M9484C-514, ST5, 500, AN1	Return to factory, hardware
M9484CU-06A	Add a second channel with 514, ST6, 600, B1X (first channel has AN1) (002)	M9484C-514, ST6, 600, AN1	Return to factory, hardware
M9484CU-07A	Add a second channel with 520, ST5, 500, B1X (first channel has AN1) (002)	M9484C-520, ST5, 500, AN1	Return to factory, hardware
M9484CU-08A	Add a second channel with 520, ST6, 600, B1X (first channel has AN1) (002)	M9484C-520, ST6, 600, AN1	Return to factory, hardware
M9484CU-09A	Add a second channel with 532, ST5, 500, B1X (first channel has AN1) (002)	M9484C-532, ST5, 500, AN1	Return to factory, hardware
M9484CU-10A	Add a second channel with 532, ST6, 600, B1X (first channel has AN1) (002)	M9484C-532, ST6, 600, AN1	Return to factory, hardware
M9484CU-11A	Add a second channel with 544, ST5, 500, B1X (first channel has AN1) (002)	M9484C-544, ST5, 500, AN1	Return to factory, hardware
M9484CU-12A	Add a second channel with 544, ST6, 600, B1X (first channel has AN1) (002)	M9484C-544, ST6, 600, AN1	Return to factory, hardware
M9484CU-13A	Add a second channel with 554, ST5, 500, B1X (first channel has AN1) (002)	M9484C-554, ST5, 500, AN1	Return to factory, hardware
M9484CU-14A	Add a second channel with 554, ST6, 600, B1X (first channel has AN1) (002)	M9484C-554, ST6, 600, AN1	Return to factory, hardware
M9484CU-014	Add a third and fourth channel with 506, ST5, 500, B1X (004)	M9484C-002, 506, ST5, 500	Return to factory, hardware
M9484CU-024	Add a third and fourth channel with 506, ST6, 600, B1X (004)	M9484C-002, 506, ST6, 600	Return to factory, hardware
M9484CU-034	Add a third and fourth channel with 508, ST5, 500, B1X (004)	M9484C-002, 508, ST5, 500	Return to factory, hardware
M9484CU-044	Add a third and fourth channel with 508, ST6, 600, B1X (004)	M9484C-002, 508, ST6, 600	Return to factory, hardware
M9484CU-054	Add a third and fourth channel with 514, ST5, 500, B1X (004)	M9484C-002, 514, ST5, 500	Return to factory, hardware
M9484CU-064	Add a third and fourth channel with 514, ST6, 600, B1X (004)	M9484C-002, 514, ST6, 600	Return to factory, hardware
M9484CU-074	Add a third and fourth channel with 520, ST5, 500, B1X (004)	M9484C-002, 520, ST5, 500	Return to factory, hardware
M9484CU-084	Add a third and fourth channel with 520, ST6, 600, B1X (004)	M9484C-002, 520, ST6, 600	Return to factory, hardware

Ordering number	Description	Requirements	Additional information
Signal descriptor word streaming upgrades[2]			
M9484CU-827	Add signal descriptor word streaming to channel 1 (SDW)	M9484C-R25 Not compatible with M9484C-AN1	Customer installable, license key
M9484CU-828	Add signal descriptor word streaming to channel 2 (SDW)	M9484C-R25 Not compatible with M9484C-AN1	Customer installable, license key
M9484CU-829	Add signal descriptor word streaming to channel 3 (SDW)	M9484C-R25 Not compatible with M9484C-AN1	Customer installable, license key
M9484CU-830	Add signal descriptor word streaming to channel 4 (SDW)	M9484C-R25 Not compatible with M9484C-AN1	Customer installable, license key
M9484CU-811	Add 2 virtual channels for SDW streaming to channel 1 (2CH)	M9484CU-827; Not compatible with M9484CU-815 or M9484CU-819	Customer installable, license key
M9484CU-812	Add 2 virtual channels for SDW streaming to channel 2 (2CH)	M9484CU-828; Not compatible with M9484CU-816 or M9484CU-820	Customer installable, license key
M9484CU-813	Add 2 virtual channels for SDW streaming to channel 3 (2CH)	M9484CU-829; Not compatible with M9484CU-817 or M9484CU-821	Customer installable, license key
M9484CU-814	Add 2 virtual channels for SDW streaming to channel 4 (2CH)	M9484CU-830; Not compatible with M9484CU-818 or M9484CU-822	Customer installable, license key
M9484CU-815	Add 4 virtual channels for SDW streaming to channel 1 (4CH)	M9484CU-827; Not compatible with M9484CU-811 or M9484CU-819	Customer installable, license key
M9484CU-816	Add 4 virtual channels for SDW streaming to channel 2 (4CH)	M9484CU-828; Not compatible with M9484CU-812 or M9484CU-820	Customer installable, license key
M9484CU-817	Add 4 virtual channels for SDW streaming to channel 3 (4CH)	M9484CU-829; Not compatible with M9484CU-813 or M9484CU-821	Customer installable, license key
M9484CU-818	Add 4 virtual channels for SDW streaming to channel 4 (4CH)	M9484CU-830; Not compatible with M9484CU-814 or M9484CU-822	Customer installable, license key
M9484CU-819	Add 8 virtual channels for SDW streaming to channel 1 (8CH)	M9484CU-827; Not compatible with M9484CU-811 or M9484CU-815	Customer installable, license key
M9484CU-820	Add 8 virtual channels for SDW streaming to channel 2 (8CH)	M9484CU-828; Not compatible with M9484CU-812 or M9484CU-816	Customer installable, license key
M9484CU-821	Add 8 virtual channels for SDW streaming to channel 3 (8CH)	M9484CU-829; Not compatible with M9484CU-813 or M9484CU-817	Customer installable, license key
M9484CU-822	Add 8 virtual channels for SDW streaming to channel 4 (8CH)	M9484CU-830; Not compatible with M9484CU-814 or M9484CU-818	Customer installable, license key

Related Literature

For more detailed product and specification information, refer to the following literature and web pages:

- M9484C VXG web page
- M9484C VXG data sheet
- PathWave Signal Generation Brochure

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[2] This product is controlled for export under the International Traffic in Arms Regulations (ITAR). A license from the U.S. Department of State is required prior to the export of this product from the United States.

Confidently Covered by Keysight Services

Prevent delays caused by technical questions and reduce system downtime due to instrument maintenance and repairs with Keysight Services. Keysight Services are here to support your test needs with expert technical support, instrument repair and calibration, software support, training, alternative acquisition program options, and more.

A KeysightCare agreement provides dedicated, proactive support through a single point of contact for instruments, software, and solutions. KeysightCare covers an extensive group of instruments, application software, and solutions and ensures optimal uptime, faster response, faster access to experts, and faster resolution.

Keysight Services

Offering	Benefits
KeysightCare **KEYSIGHT**CARE	KeysightCare provides elevated support for Keysight instruments and software, with access to technical support experts that respond within a specified time and ensure committed repair and calibration turnaround times (TAT). KeysightCare offers multiple service agreement tiers, including KeysightCare Assured, Enhanced, and Application Software Support. See the KeysightCare data sheet for details.
KeysightCare Assured	KeysightCare Assured goes beyond basic warranty with repair services that include committed TAT and unlimited access to technical experts.
KeysightCare Enhanced	KeysightCare Enhanced includes all the benefits of KeysightCare Assured plus Keysight's accurate and reliable Calibration Services, accelerated, and committed TAT, and technical response.
Keysight Support Portal & Knowledge Center	All KeysightCare tiers include access to the Keysight Support Portal where you can manage support and service resources related to your assets such as service requests, and status, or browse the Knowledge Center.
Education Services	Build confidence and gain new skills to make accurate measurements, with flexible Education Services developed by Keysight experts. Including Start-up Assistance.
Alternative acquisition options	
KeysightAccess	Reduce budget challenges with a leased-based subscription service, that offers low monthly payments, enabling you to get the instruments, software, and technical support you want for your test needs.

Recommended Services

Maximize your test system up-time by securing technical support, repair, and calibration services with committed response and turnaround times. 1-year KeysightCare Assured is included in every new instrument purchase. Obtain multi-year KeysightCare upfront to eliminate the need for lengthy and tedious paperwork and yearly requests for maintenance budget. Plus, you benefit from secured service for 2, 3, or 5 years.

Service	Function
KeysightCare Enhanced*	**Includes tech support, warranty and calibration**
R-55B-001-1	KeysightCare Enhanced – Upgrade 1 year
R-55B-001-2	KeysightCare Enhanced – Extend to 2 years
R-55B-001-3	KeysightCare Enhanced – Extend to 3 years (Recommended)
R-55B-001-5	KeysightCare Enhanced – Extend to 5 years (Recommended)
KeysightCare Assured	**Includes tech support and warranty**
R-55A-001-2	KeysightCare Assured – Extend to 2 years
R-55A-001-3	KeysightCare Assured – Extend to 3 years
R-55A-001-5	KeysightCare Assured – Extend to 5 years
Start-Up Assistance	
PS-S40-01	Included – instrument fundamentals and operations starter
PS-S40-04	Recommended – instrument fundamentals and operations starter
PS-S40-02	Optional, technology & measurement science standard learning

* Available in select countries. For details, please view the datasheet. R-55B-001-2/3/5 must be ordered with R-55B-001-1.

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