



# Agilent MXG Signal Generators

*N5161A MXG ATE Analog*

*N5162A MXG ATE Vector*

*N5181A MXG Analog*

*N5182A MXG Vector*

**Configuration Guide**



This guide is to assist in the ordering process for the MXG analog and vector signal generators.



**Agilent Technologies**

# Agilent N5161A MXG ATE and N5181A MXG analog configuration steps

## Step 1. Choose model number

| Model  | Description  |
|--------|--|
| N5161A | MXG ATE analog signal generator<br>The MXG ATE signal generator has been streamlined for automated test equipment (ATE) needs with removal of the front panel display and all connectors relocated to the rear panel for convenient and secure rack configurations. Otherwise, these signal generators provide the same industry-leading capabilities, performance, and form factor of the N5181A MXG analog signal generator. |
| N5181A | MXG analog signal generator  |

## Step 2. Choose one frequency option (mandatory)

| Option | Description                           | Not compatible | Upgrade |
|--------|---------------------------------------|----------------|---------|
| 501    | Frequency range from 100 kHz to 1 GHz | 503,506,N5161A | No      |
| 503    | Frequency range from 100 kHz to 3 GHz | 501,506        | No      |
| 506    | Frequency range from 100 kHz to 6 GHz | 503,506        | No      |

## Step 3. Choose performance enhancement options

| Option           | Description  | Not compatible | Upgrade          |
|------------------|--|----------------|------------------|
| UNZ              | Fast switching   |                | Yes <sup>2</sup> |
| UNT              | AM, FM, phase modulation   |                | Yes <sup>2</sup> |
| UNU              | Pulse modulation   | UNW            | Yes <sup>2</sup> |
| 1EQ              | Low power (< -100 dBm)   |                | Yes <sup>2</sup> |
| 006              | Instrument security  |                | Yes              |
| UNW              | Narrow pulse modulation  | UNU            | Yes <sup>2</sup> |
| 1EA              | High output power  |                | Yes <sup>2</sup> |
| 099 <sup>1</sup> | Expanded license key upgradeability<br>Option 099 is recommended for anyone considering future upgrades. Option 099 simplifies the upgrade process by enabling upgrades via a license key for Options 1EA, 1EQ, UNU, UNW, UNT and UNZ. |                | Yes <sup>1</sup> |

## Step 4. Choose input/output options

| Option | Description                            | Not compatible | Upgrade |
|--------|--|----------------|---------|
| 1EM    | Move all connectors to rear panel      | N5161A         | No      |
| 1ER    | Flexible reference input (1 to 50 MHz) |                | Yes     |

1. Option 099 is recommended for anyone considering future upgrades. Option 099 simplifies the upgrade process by enabling upgrades via a license key for Options 1EA, 1EQ, UNU, UNW, UNT, and UNZ. Without Option 099, upgrades for these options require purchase and installation of a field retrofit kit. For more information, visit [www.agilent.com/find/SSupgrades](http://www.agilent.com/find/SSupgrades).

2. Upgrade requires Option 099.

### Step 5. Choose accessories and documentation options

| Option           | Description   | Not compatible | Upgrade |
|------------------|---|----------------|---------|
| 1CM              | Rackmount kit   | 1CN, 1CP, 1CR  | Yes     |
| 1CN              | Front handle kit  | 1CM, 1CP       | Yes     |
| 1CP              | Rackmount kit with front handles  | 1CM, 1CN, 1CR  | Yes     |
| 1CR              | Rack slide kit  | 1CM, 1CP       | Yes     |
| CD1              | CD-ROM containing the English documentation set, including user's guide, installation guide, programming guide, service guide, SCPI command reference, error messages, programming examples, and data sheets. In addition, Korean, Chinese, Japanese and Russian localized users's guide. |                | Yes     |
| ABA              | Printed copy of the English documentation set   |                | Yes     |
| AB1 <sup>1</sup> | Printed copy of user's guide – Korean localization  |                | Yes     |
| AB2 <sup>1</sup> | Printed copy of user's guide – Chinese localization   |                | Yes     |
| ABJ <sup>1</sup> | Printed copy of user's guide – Japanese localization  |                | Yes     |
| AKT <sup>1</sup> | Printed copy of user's guide – Russian localization   |                | Yes     |
| 0BW              | Service documentation, assembly level   |                | Yes     |
| AXT              | Hard transit case   |                | Yes     |
| 800              | Customer service kit front panel connector configuration  | N5161A         | Yes     |
| 801              | Customer service kit rear panel connector configuration   |                | Yes     |

### Step 6. Choose warranty and calibration options

| Option       | Description   | Additional information                                 |
|--------------|---|--|
| R-51B-001-3C | 1 year Return-to-Agilent warranty extended to 3 years                   |  |
| R-51B-001-5C | 1 year Return-to-Agilent warranty extended to 5 years                   |  |
| R-50C-011-3  | Return-to-Agilent Calibration Upfront Support Plan 3 year coverage      |  |
| R-50C-016-3  | Return-to-Agilent 17025 Calibration Upfront Support Plan                | Must also order R1295A for service center installation |
| R-50C-021-3  | Return-to-Agilent Z540 Calibration Upfront Support Plan 3 year coverage | Must also order R1295A for service center installation |
| R-52A-001-3  | 3 year license Agilent Commercial Calibration Software                  |  |
| R-52A-002-3  | 3 year license Agilent ISO 17025 and ANSI Z540 Calibration software     |  |
| UK6          | Commercial calibration certificate with test data                       |  |

### Step 7. Choose start up assistance service options

| Option     | Description  |
|------------|--|
| PS-S10     | Remote scheduled assistance 1- 999 hours                             |
| PS-S20     | Daily productivity assistance  |
| PS-T10-ASG | Signal generator and source basics; .05 day, max. 8 students on site |
| PS-X10     | Custom services to be qualified by Agilent                           |

Product configuration includes country specific power cord.

1. Localization options not available for the N5161A.

## Available options and upgrades for the N5161A MXG ATE analog signal generator

| Option | Description   | Order upgrade number     | Upgrade contents         |
|--------|---|--------------------------|--------------------------|
| 006    | Instrument security                                     | N5161AK-006              | License key              |
| 099    | Expanded license key upgradeability                     | N5161AK-099 <sup>1</sup> | Hardware and license key |
| 1CM    | Rackmount kit   | N5161A-1CM               | Hardware                 |
| 1CN    | Front handle kit  | N5161A-1CN               | Hardware                 |
| 1CP    | Rackmount kit with front handles                        | N5161A-1CP               | Hardware                 |
| 1CR    | Rack slide kit  | N5161A-1CR               | Hardware                 |
| 1EA    | High output power                                       | N5161AK-1EA              | License key <sup>2</sup> |
| 1EQ    | Low power (< -110 dBm)                                  | N5161AK-1EQ              | License key <sup>2</sup> |
| 1ER    | Flexible reference input (1 to 50 MHz)                  | N5161AK-1ER              | License key              |
| 503    | Frequency range from 100 kHz to 3 GHz                   | Not available            | N/A                      |
| 506    | Frequency range from 100 kHz to 6 GHz                   | Not available            | N/A                      |
| 801    | Customer service kit rear panel connector configuration | N5161AK-801              | Hardware                 |
| ABA    | Printed copy of the English documentation set           | N5161A-ABA               | Documentation            |
| 0BW    | Service documentation, assembly level                   | N5161A-0BW               | Documentation            |
| AXT    | Hard transit case                                       | N5161A-AXT               | Hardware                 |
| CD1    | CD-ROM containing the English documentation set         | N5161A-CD1               | Documentation            |
| UK6    | Commercial calibration certificate with test data       | Not available            | N/A                      |
| UNT    | AM, FM, phase modulation                                | N5161AK-UNT              | License key <sup>2</sup> |
| UNU    | Pulse modulation  | N5161AK-UNU              | License key <sup>2</sup> |
| UNW    | Narrow pulse modulation                                 | N5161AK-UNW              | License key <sup>2</sup> |
| UNZ    | Fast switching  | N5161AK-UNZ              | License key <sup>2</sup> |

### N5161A Upgrades

For complete upgrade details, visit:

[www.agilent.com/find/SSupgrades](http://www.agilent.com/find/SSupgrades)

- Option 099 is recommended for anyone considering future upgrades. Option 099 simplifies the upgrade process by enabling upgrades via a license key for Options 1EA, 1EQ, UNU, UNW, UNT, and UNZ. Without Option 099, upgrades for these options require purchase and installation of a field retrofit kit. For more information, visit [www.agilent.com/find/SSupgrades](http://www.agilent.com/find/SSupgrades).
- Also requires Option 099 hardware upgrade if not previously purchased.

## Available options and upgrades for the N5181A MXG analog signal generator

| Option | Description  | Order upgrade number     | Upgrade contents         |
|--------|--|--------------------------|--------------------------|
| 006    | Instrument security                                      | N5181AK-006              | License key              |
| 099    | Expanded license key upgradeability                      | N5181AK-099 <sup>1</sup> | Hardware and license key |
| 0BW    | Service documentation, assembly level                    | N5181A-0BW               | Documentation            |
| 1CM    | Rackmount kit  | N5181A-1CM               | Hardware                 |
| 1CN    | Front handle kit   | N5181A-1CN               | Hardware                 |
| 1CP    | Rackmount kit with front handles                         | N5181A-1CP               | Hardware                 |
| 1CR    | Rack slide kit   | N5181A-1CR               | Hardware                 |
| 1EA    | High output power  | N5181AK-1EA              | License key <sup>2</sup> |
| 1EM    | Move all connectors to rear panel                        | Not available            | N/A                      |
| 1EQ    | Low power (< 110 dBm)                                    | N5181AK-1EQ              | License key <sup>2</sup> |
| 1ER    | Flexible reference input (1 to 50 MHz)                   | N5181AK-1ER              | License key              |
| 501    | Frequency range from 100 kHz to 1 GHz                    | Not available            | N/A                      |
| 503    | Frequency range from 100 kHz to 3 GHz                    | Not available            | N/A                      |
| 506    | Frequency range from 100 kHz to 6 GHz                    | Not available            | N/A                      |
| 800    | Customer service kit front panel connector configuration | N5181AK-800              | Hardware                 |
| 801    | Customer service kit rear panel connector configuration  | N5181AK-801              | Hardware                 |
| AB1    | Printed copy of user's guide – Korean localization       | N5181A-AB1               | Documentation            |
| AB2    | Printed copy of user's guide – Chinese localization      | N5181A-AB2               | Documentation            |
| ABA    | Printed copy of the English documentation set            | N5181A-ABA               | Documentation            |
| ABJ    | Printed copy of user's guide – Japanese localization     | N5181A-ABJ               | Documentation            |
| AKT    | Printed copy of user's guide – Russian localization      | N5181A-AKT               | Documentation            |
| AXT    | Hard transit case  | N5181A-AXT               | Hardware                 |
| CD1    | CD-ROM containing the English documentation set          | N5181A-CD1               | Documentation            |
| UK6    | Commercial calibration certificate with test data        | Not available            | N/A                      |
| UNT    | AM, FM, phase modulation                                 | N5181AK-UNT              | License key <sup>2</sup> |
| UNU    | Pulse modulation   | N5181AK-UNU              | License key <sup>2</sup> |
| UNW    | Narrow pulse modulation                                  | N5181AK-UNW              | License key <sup>2</sup> |
| UNZ    | Fast switching   | N5181AK-UNZ              | License key <sup>2</sup> |

### N5181A Upgrades

For complete upgrade details, visit:  
[www.agilent.com/find/SSupgrades](http://www.agilent.com/find/SSupgrades)

- Option 099 is recommended for anyone considering future upgrades. Option 099 simplifies the upgrade process by enabling upgrades via a license key for Options 1EA, 1EQ, UNU, UNW, UNT, and UNZ. Without Option 099, upgrades for these options require purchase and installation of a field retrofit kit. For more information, visit [www.agilent.com/find/SSupgrades](http://www.agilent.com/find/SSupgrades).
- Also requires Option 099 hardware upgrade if not previously purchased.

# Agilent N5162A MXG ATE and N5182A MXG vector configuration steps

## Step 1. Choose model

| Model  | Description   |
|--------|---|
| N5162A | MXG ATE vector<br>The MXG ATE signal generator has been streamlined for automated test equipment (ATE) needs with removal of the front panel display and all connectors relocated to the rear panel for convenient and secure rack configurations. Otherwise, these signal generators provide the same industry-leading capabilities, performance, and form factor of the N5182A MXG vector signal generator. |
| N5182A | MXG vector signal generator   |

## Step 2. Choose one frequency option (mandatory)

| Option | Description                           | Requires | Not compatible | Upgrade |
|--------|---------------------------------------|----------|----------------|---------|
| 503    | Frequency range from 100 kHz to 3 GHz |          | 506            | No      |
| 506    | Frequency range from 100 kHz to 6 GHz |          | 503            | No      |

## Step 3. Choose performance enhancement options

| Option | Description  | Requires         | Not compatible | Upgrade          |
|--------|--|------------------|----------------|------------------|
| UNZ    | Fast switching   |                  |                | Yes <sup>2</sup> |
| UNT    | AM, FM, phase modulation   |                  |                | Yes <sup>2</sup> |
| UNU    | Pulse modulation   |                  | UNW            | Yes <sup>2</sup> |
| UNW    | Narrow pulse modulation  |                  | UNU            | Yes <sup>2</sup> |
| UNV    | Enhanced dynamic range   | 651, 652, or 654 |                | Yes <sup>2</sup> |
| 1EQ    | Low power (< -110 dBm)   |                  |                | Yes <sup>2</sup> |
| 006    | Instrument security  |                  |                | Yes              |
| 1EA    | High output power  |                  |                | Yes <sup>2</sup> |
| 099    | Expanded license key upgradeability<br>Option 099 is recommended for anyone considering future upgrades. Option 099 simplifies the upgrade process by enabling upgrades via a license key for Options 1EA, 1EQ, UNU, UNW, UNT and UNZ. |                  |                | Yes <sup>1</sup> |
| 012    | LO In/Out for phase coherency  |                  |                | Yes              |

## Step 4. Choose baseband generator options

| Option | Description                                    | Requires         | Not compatible | Upgrade |
|--------|--|------------------|----------------|---------|
| 651    | Internal baseband generator (30 MSa/s, 8 MSa)  |                  | 652, 654       | Yes     |
| 652    | Internal baseband generator (60 MSa/s, 8 MSa)  |                  | 651, 654       | Yes     |
| 654    | Internal baseband generator (125 MSa/s, 8 MSa) |                  | 651, 652       | Yes     |
| 019    | Upgrade baseband generator memory to 64 MSa    | 651, 652, or 654 |                | Yes     |

1. Option 099 enables future upgrades via a license key for Options 1EA, 1EQ, UNU, UNW, UNT, UNV, and UNZ. Without Option 099, upgrades for these options require the installation of a field retrofit kit which installs Option 099. For more information, visit [www.agilent.com/find/SSupgrades](http://www.agilent.com/find/SSupgrades).

2. Upgrade requires Option 099.

## Step 5. Choose signal studio and embedded software

When ordering signal creation software, please refer to each product's technical overview for detailed required and recommended configurations. Available in the online documentation from [www.agilent.com/find/signalstudio](http://www.agilent.com/find/signalstudio).

| Order item          | Description  | Requires         | Recommended                     | Upgrade |
|---------------------|--|------------------|---------------------------------|---------|
| N5182A<br>221 - 229 | Waveform License 5-packs<br>1 to 9 (purchase up to 9<br>packs for 45 Signal Studio<br>waveforms)     | 651, 652, or 654 | 654                             | Yes     |
| N5182A<br>250 - 259 | Waveform License 50-packs<br>1 to 10 (purchase up to 10<br>packs for 500 Signal Studio<br>waveforms) | 651, 652, or 654 | 654                             | No      |
| 430                 | Multitone and two-tone   | 651, 652, or 654 | 651                             | Yes     |
| 431                 | Custom digital modulation  | 651, 652, or 654 | 654                             | Yes     |
| 432                 | Phase noise impairments  | 651, 652, or 654 | 651                             | Yes     |
| N7600B*             | Signal Studio for<br>3GPP W-CDMA FDD   | 651, 652, or 654 | 652, 503, 019,<br>UNV           | Yes     |
| N7601B*             | Signal Studio for<br>3GPP2 CDMA  | 651, 652, or 654 | 651, 503, 019,<br>403, 1EI, UNV | Yes     |
| N7602B *            | Signal Studio for<br>GSM/EDGE  | 651, 652, 654    | 654, 503, 1EL,<br>1ER, UNV, UNZ | Yes     |
| N7606B *            | Signal Studio for<br>Bluetooth   | 651, 652, 654    | 652, 506, 019,<br>403, UNV      | Yes     |
| N7611B*             | Signal Studio for<br>Broadcast Radio   | 651, 652, or 654 | 652, 506, 019,<br>403, UNV      | Yes     |
| N7612B*             | Signal Studio for<br>TD-SCDMA  | 651, 652, or 654 | 652, 503, 019,<br>403, UNV      | Yes     |
| N7613A              | Signal Studio for<br>802.16-2004 (WiMAX™)  | 652, or 654      | 654, 506, 019,<br>403, UNV      | Yes     |
| N7615B*             | Signal Studio for<br>802.16 WIMAX  | 651, 652, or 654 | 652, 506, 019,<br>403, UNV      | Yes     |
| N7616B*             | Signal Studio for T-DMB  | 652, or 654      | 652, 503, 019,<br>403, UNV      | Yes     |
| N7617B*             | Signal Studio for<br>802.11 WLAN   | 654              | 654, 506, 019,<br>403, UNV      | Yes     |
| N7621B*             | Signal Studio for<br>multitone distortion test   | 651, 652, or 654 | 654, 019                        | Yes     |
| N7622A*             | Signal Studio toolkit  | 651, 652, or 654 | 651, 019, 1EL,<br>UNV           | Yes     |
| N7623B*             | Signal Studio for<br>digital video   | 651, 652, or 654 | 652, 506, 019,<br>403, UNV      | Yes     |
| N7624B*             | Signal Studio for 3GPP LTE   | 654              | 654, 506, 019,<br>403, UNV      | Yes     |
| N7625B*             | Signal Studio for<br>3GPP LTE TDD  | 654              | 654, 506, 403,<br>UNV, 1EA, 1EL | Yes     |

\* For factory installation of Signal Studio fixed perpetual licenses, Signal Studio model-number must be ordered under the N5162A/N5182A configuration.

## Step 6. Choose input/output options

| Option | Description                            | Requires | Not compatible | Upgrade |
|--------|--|----------|----------------|---------|
| 1EM    | Move all connectors to rear panel      |          | N5162A         | No      |
| 1EL    | Differential I/Q outputs               |          |                | Yes     |
| 1ER    | Flexible reference input<br>(1-50 MHz) |          |                | Yes     |

## Step 7. Choose accessories and documentation options

| Option           | Description   | Not compatible | Upgrade |
|------------------|---|----------------|---------|
| 1CM              | Rackmount kit   | 1CN, 1CP, 1CR  | Yes     |
| 1CN              | Front handle kit  | 1CM, 1CP       | Yes     |
| 1CP              | Rackmount kit with front handles  | 1CM, 1CN, 1CR  | Yes     |
| 1CR              | Rack slide kit  | 1CM, 1CP       | Yes     |
| CD1              | CD-ROM containing the English documentation set, including user's guide, installation guide, programming guide, service guide, SCPI command reference, error messages, programming examples, and data sheets. In addition, Korean, Chinese, Japanese and Russian localized users's guide. |                | Yes     |
| ABA              | Printed copy of the English documentation set   |                | Yes     |
| AB1 <sup>1</sup> | Printed copy of user's guide – Korean localization  |                | Yes     |
| AB2 <sup>1</sup> | Printed copy of user's guide – Chinese localization   |                | Yes     |
| ABJ <sup>1</sup> | Printed copy of user's guide – Japanese localization  |                | Yes     |
| AKT <sup>1</sup> | Printed copy of user's guide – Russian localization   |                | Yes     |
| 0BW              | Service documentation, assembly level   |                | Yes     |
| AXT              | Hard transit case   |                | Yes     |
| 800              | Customer service kit front panel connector configuration  | N5162A         | Yes     |
| 801              | Customer service kit rear panel connector configuration   |                | Yes     |

## Step 8. Choose warranty and calibration options

| Option       | Description   | Additional information                                 |
|--------------|---|--|
| R-51B-001-3C | 1 year Return-to-Agilent warranty extended to 3 years                   |  |
| R-51B-001-5C | 1 year Return-to-Agilent warranty extended to 5 years                   |  |
| R-50C-011-3  | Return-to-Agilent Calibration Upfront Support Plan 3 year coverage      |  |
| R-50C-016-3  | Return-to-Agilent 17025 Calibration Upfront Support Plan                | Must also order R1295A for service center installation |
| R-50C-021-3  | Return-to-Agilent Z540 Calibration Upfront Support Plan 3 year coverage | Must also order R1295A for service center installation |
| R-52A-001-3  | 3 year license Agilent Commercial Calibration Software                  |  |
| R-52A-002-3  | 3 year license Agilent ISO 17025 and ANSI Z540 Calibration software     |  |
| UK6          | Commercial calibration certificate with test data                       |  |

1. Localization options are not available for the N5162A.



### Step 9. Choose start up assistance options

| Order item | Description  |
|------------|--|
| PS-S10     | Remote scheduled assistance 1-999 hours                              |
| PS-S20     | Daily productivity assistance  |
| PS-T10-ASG | Signal generator and source basics; .05 day, max. 8 students on site |
| PS-X10     | Custom services to be qualified by Agilent                           |

Product configuration includes country specific power cord.

## Available options and upgrades for the N5162A MXG vector signal generator

| Option         | Description   | Order upgrade number     | Upgrade contents         |
|----------------|---|--------------------------|--------------------------|
| 006            | Instrument security   | N5162AK-006              | License key              |
| 012            | LO In/Out for phase coherency   | N5162AK-012              | Hardware and license key |
| 099            | Expanded license key upgradeability   | N5162AK-099 <sup>1</sup> | Hardware and license key |
| 019            | Upgrade baseband generator memory to 64 MSa   | N5162AK-019              | License key              |
| 1EA            | High output power   | N5162AK-1EA              | License key <sup>2</sup> |
| 1EL            | Differential I/Q outputs  | N5162AK-1EL              | License key              |
| 1EQ            | Low power (< -110 dBm)  | N5162AK-1EQ              | License key <sup>2</sup> |
| 1ER            | Flexible reference input (1 to 50 MHz)  | N5162AK-1ER              | License key              |
| N5182A 221-229 | Waveform License 5-packs 1 to 9 (purchase up to 9 packs for 45 Signal Studio waveforms)     | N5162AK 221 - 229        | License key              |
| N5182A 250-259 | Waveform License 50-packs 1 to 10 (purchase up to 10 packs for 500 Signal Studio waveforms) | Not available            | N/A                      |
| 403            | Calibrated AWGN   | N5162AK-403              | License key              |
| 430            | Multitone and two-tone  | N5162AK-430              | License key              |
| 431            | Custom digital modulation   | N5162AK-431              | License key              |
| 432            | Phase noise impairment  | N5162AK-432              | License key              |
| 503            | Frequency range from 100 kHz to 3 GHz   | Not available            | N/A                      |
| 506            | Frequency range from 100 kHz to 6 GHz   | Not available            | N/A                      |
| 651            | Internal baseband generator (30 MSa/s, 8 MSa)   | N5162AK-651              | License key              |
| 652            | Internal baseband generator (60 MSa/s, 8 MSa)   | N5162AK-652              | License key              |
| 654            | Internal baseband generator (125 MSa/s, 8 MSa)  | N5162AK-654              | License key              |
| 670            | Upgrade baseband generator from 30 MSa/s to 60 MSa/s (48 MHz RF BW)                         | N5162AK-670 <sup>3</sup> | License key              |
| 671            | Upgrade baseband generator from 30 MSa/s to 125 MSa/s (100 MHz RF BW)                       | N5162AK-671 <sup>3</sup> | License key              |
| 672            | Upgrade baseband generator 60 MSa/s to 125 MSa/s (100 MHz RF BW)                            | N5162AK-672 <sup>3</sup> | License key              |
| UK6            | Commercial calibration certificate with test data   | Not available            | N/A                      |
| UNT            | AM, FM, phase modulation  | N5162AK-UNT              | License key <sup>2</sup> |
| UNU            | Pulse modulation  | N5162AK-UNU              | License key <sup>2</sup> |
| UNV            | Enhanced dynamic range  | N5162AK-UNV              | License key <sup>2</sup> |
| UNW            | Narrow pulse modulation   | N5162AK-UNW              | License key <sup>2</sup> |
| UNZ            | Fast switching  | N5162AK-UNZ              | License key <sup>2</sup> |
| 0BW            | Service documentation, assembly level   | N5162A-0BW               | Documentation            |
| 1CM            | Rackmount kit   | N5162A-1CM               | Hardware                 |
| 1CN            | Front handle kit  | N5162A-1CN               | Hardware                 |
| 1CP            | Rackmount kit with front handles  | N5162A-1CP               | Hardware                 |
| 1CR            | Rack slide kit  | N5162A-1CR               | Hardware                 |
| CD1            | CD-ROM containing the English documentation set   | N5162A-CD1               | Documentation            |
| ABA            | Printed copy of the English documentation set   | N5162A-ABA               | Documentation            |
| AXT            | Hard transit case   | N5162A-AXT               | Hardware                 |
| 801            | Customer service kit rear panel RF connector configuration                                  | N5162AK-801              | Hardware                 |

### N5162A Upgrades

For complete upgrade details, visit:  
[www.agilent.com/find/SSupgrades](http://www.agilent.com/find/SSupgrades)

- Option 099 is recommended for anyone considering future upgrades. Option 099 simplifies the upgrade process by enabling upgrades via a license key for Options 1EA, 1EQ, UNU, UNW, UNT, and UNZ. Without Option 099, upgrades for these options require purchase and installation of a field retrofit kit. For more information, visit [www.agilent.com/find/SSupgrades](http://www.agilent.com/find/SSupgrades).
- Also requires Option 099 hardware upgrade if not previously purchased.
- Options 670, 671, and 672 are only available as upgrade options.

## Available options and upgrades for the N5182A MXG vector signal generator

| Option         | Description   | Order upgrade number     | Upgrade contents         |
|----------------|---|--------------------------|--------------------------|
| 006            | Instrument security   | N5182AK-006              | License key              |
| 012            | LO In/Out for phase coherency   | N5182AK-012              | Hardware and license key |
| 099            | Expanded license key upgradeability   | N5182AK-099 <sup>1</sup> | Hardware and license key |
| 019            | Upgrade baseband generator memory to 64 MSa   | N5182AK-019              | License key              |
| 1EA            | High output power   | N5182AK-1EA              | License key <sup>2</sup> |
| 1EL            | Differential I/Q outputs  | N5182AK-1EL              | License key              |
| 1EM            | Move RF output to rear panel  | Not available            | N/A                      |
| 1EQ            | Low power (< -110 dBm)  | N5182AK-1EQ              | License key <sup>2</sup> |
| 1ER            | Flexible reference input (1 to 50 MHz)  | N5182AK-1ER              | License key              |
| N5182A 221-229 | Waveform License 5-packs 1 to 9 (purchase up to 9 packs for 45 Signal Studio waveforms)     | N5182AK 221 - 229        | License key              |
| N5182A 250-259 | Waveform License 50-packs 1 to 10 (purchase up to 10 packs for 500 Signal Studio waveforms) | Not available            | N/A                      |
| 403            | Calibrated AWGN   | N5182AK-403              | License key              |
| 430            | Multitone and two-tone  | N5182AK-430              | License key              |
| 431            | Custom digital modulation   | N5182AK-431              | License key              |
| 432            | Phase noise impairment  | N5182AK-432              | License key              |
| 503            | Frequency range from 100 kHz to 3 GHz   | Not available            | N/A                      |
| 506            | Frequency range from 100 kHz to 6 GHz   | Not available            | N/A                      |
| 651            | Internal baseband generator (30 MSa/s, 8 MSa)   | N5182AK-651              | License key              |
| 652            | Internal baseband generator (60 MSa/s, 8 MSa)   | N5182AK-652              | License key              |
| 654            | Internal baseband generator (125 MSa/s, 8 MSa)  | N5182AK-654              | License key              |
| 670            | Upgrade baseband generator from 30 MSa/s to 60 MSa/s (48 MHz RF BW)                         | N5182AK-670 <sup>3</sup> | License key              |
| 671            | Upgrade baseband generator from 30 MSa/s to 125 MSa/s (100 MHz RF BW)                       | N5182AK-671 <sup>3</sup> | License key              |
| 672            | Upgrade baseband generator 60 MSa/s to 125 MSa/s (100 MHz RF BW)                            | N5182AK-672 <sup>3</sup> | License key              |
| UK6            | Commercial calibration certificate with test data   | Not available            | N/A                      |
| UNT            | AM, FM, phase modulation  | N5182AK-UNT              | License key <sup>2</sup> |
| UNU            | Pulse modulation  | N5182AK-UNU              | License key <sup>2</sup> |
| UNV            | Enhanced dynamic range  | N5182AK-UNV              | License key <sup>2</sup> |
| UNW            | Narrow pulse modulation   | N5182AK-UNW              | License key <sup>2</sup> |
| UNZ            | Fast switching  | N5182AK-UNZ              | License key <sup>2</sup> |
| 0BW            | Service documentation, assembly level   | N5182A-0BW               | Documentation            |
| 1CM            | Rackmount kit   | N5182A-1CM               | Hardware                 |
| 1CN            | Front handle kit  | N5182A-1CN               | Hardware                 |
| 1CP            | Rackmount kit with front handles  | N5182A-1CP               | Hardware                 |
| 1CR            | Rack slide kit  | N5182A-1CR               | Hardware                 |
| CD1            | CD-ROM containing the English documentation set   | N5182A-CD1               | Documentation            |
| ABA            | Printed copy of the English documentation set   | N5182A-ABA               | Documentation            |
| AB1            | Printed copy of user's guide – Korean localization  | N5182A-AB1               | Documentation            |
| AB2            | Printed copy of user's guide – Chinese localization   | N5182A-AB2               | Documentation            |
| ABJ            | Printed copy of user's guide – Japanese localization  | N5182A-ABJ               | Documentation            |
| AKT            | Printed copy of user's guide – Russian localization   | N5182A-AKT               | Documentation            |
| AXT            | Hard transit case   | N5182A-AXT               | Hardware                 |
| 800            | Customer service kit front panel RF connector configuration                                 | N5182A-800               | Hardware                 |
| 801            | Customer service kit rear panel RF connector configuration                                  | N5182A-801               | Hardware                 |

### N5182A Upgrades

For complete upgrade details, visit:  
[www.agilent.com/find/SSupgrades](http://www.agilent.com/find/SSupgrades)

1. Option 099 is recommended for anyone considering future upgrades. Option 099 simplifies the upgrade process by enabling upgrades via a license key for Options 1EA, 1EQ, UNU, UNW, UNT, and UNZ. Without Option 099, upgrades for these options require purchase and installation of a field retrofit kit. For more information, visit [www.agilent.com/find/SSupgrades](http://www.agilent.com/find/SSupgrades).
2. Also requires Option 099 hardware upgrade if not previously purchased.
3. Options 670, 671, and 672 are only available as upgrade options.

## Web resources

For additional product information, visit the Agilent MXG web page: [www.agilent.com/find/mxg](http://www.agilent.com/find/mxg)

For information about renting, leasing or financing test equipment from Agilent, visit: [www.agilent.com/find/buyalternatives](http://www.agilent.com/find/buyalternatives)



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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.



[www.lxistandard.org](http://www.lxistandard.org)  
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