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# InfiniiMax RCRC Probing System

The world's highest-performing probe system keeps getting better

## Introduction

The new InfiniiMax 4 series probing system is a groundbreaking solution designed to deliver unparalleled signal fidelity and accuracy with bandwidth capabilities reaching up to 52 GHz, all while maintaining exceptionally low loading. With the InfiniiMax III/III+ probe amplifiers, this advanced InfiniiMax RCRC probe system ensures swift and reliable measurements ranging from 8 GHz to 52 GHz, setting a new standard in probing technology.




KEYSIGHT

# Unmatched Performance

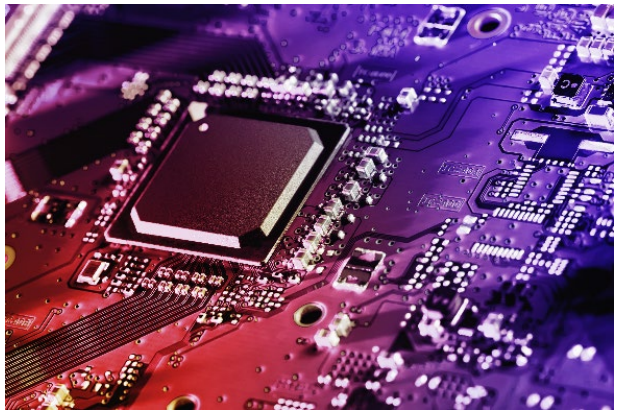
- Full 52 GHz brick-wall bandwidth to the probe tip
- InfiniiMode probing for making differential, single-ended and common mode measurements with a single probe (available with InfiniiMax III+ probing system)
- Industry's highest fidelity and accuracy due to bandwidth and extremely low loading
- Probe amplifiers loaded with measured s-parameters for more accurate response correction
- Bandwidth upgradable (available with InfiniiMax III only)
- Variety of probe heads for different use models with maximum usability

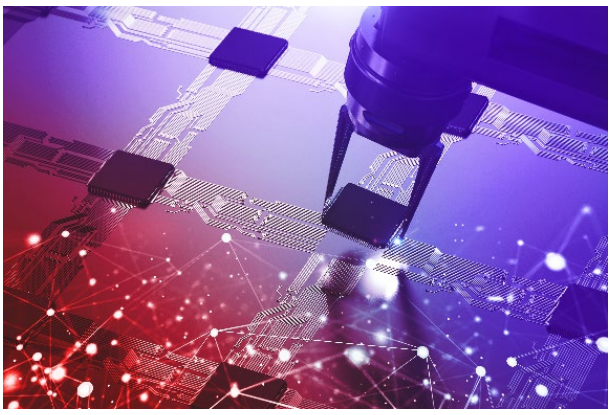
## Industry-leading probe performance

Get the highest performance available for measuring differential and single-ended signals on high-density ICs and PCBs. As devices get smaller and faster, accurately probing signals becomes more challenging. Keysight's InfiniiMax Probing System has the most accurate probe amplifiers, the widest variety of probe heads, and all the accessories you need to get the job done.

### Challenges

Upon completing your ASIC tape-out, packaging process, or designing a new PCB, the initial step is to confirm the system's functionality aligns with the design intentions. Modern probing solutions, such as the InfiniiMax 4, facilitate this verification process, significantly reducing the time required and eliminating the need for designing additional verification boards or fixtures.





In today's increasingly complex digital designs, employing an oscilloscope for transmitter testing and a bit error rate tester for receiver analysis is imperative to verify system performance. Nonetheless, testing the link between the transmitter and receiver presents a unique set of challenges in modern digital systems.

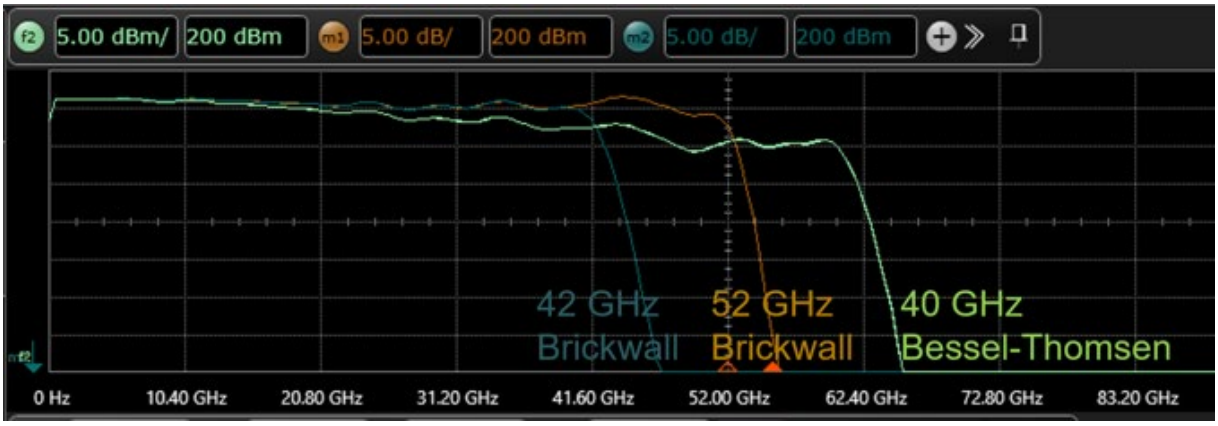
The InfiniiMax probing solution addresses these challenges, allowing for swift and non-disruptive debugging of the system. It enables you to quickly identify and rectify real system link errors, ensuring smooth and efficient system operation.

## InfiniiMax 4

The InfiniiMax 4 series probes, a recent innovation from Keysight, stand out as the market's premier high-bandwidth probing solution, offering capabilities of up to 52GHz. This probe incorporates Keysight's cutting-edge designs and leverages Keysight-proprietary InP IC process technology. It is meticulously engineered to tackle the complexities of assessing next-generation high-speed signals, delivering unparalleled performance and precision.



The InfiniiMax 4 offers comprehensive support, featuring up to 52 GHz Brickwall response and 40 GHz Bessel Thompson response, ensuring it meets the demands of next-generation testing requirements. This includes support for faster PCIe, and 400G/800G technologies.



## InfiniiMax III

The InfiniiMax III probing system offers you the highest performance available for measuring differential and single-ended signals, with flexible connectivity solutions for today's high-density ICs and circuit boards. Four different InfiniiMax III probe amplifiers ranging from 16 to 30 GHz are available for matching your probing solution to your performance and budget requirements. A proprietary 200 GHz fT InP (indium phosphide) IC process with backside ground vias and novel thick film technology is utilized to accommodate your highest performance needs and is unmatched by any product in the market.



## InfiniiMax III+

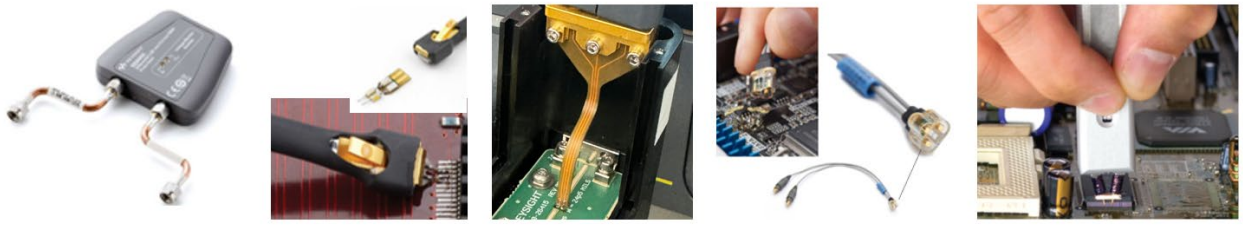
The InfiniiMax III+ probing system, N2830A/N7000A Series, significantly enhances both the measurement capabilities and user-friendliness of probes designed for comprehensive analysis of all components in a differential signal. Thanks to the integrated InfiniiMode technology, users can effortlessly transition between differential, single-ended, and common mode measurements without the need to alter the connections at the probe tip. The InfiniiMax III+ probe, through its InfiniiMode feature, supports various operational modes to accommodate diverse measurement requirements.

- A - B (differential)
- A - ground (single-ended A)
- B - ground (single-ended B)
- (A+B)/2 - ground (common mode)



# Highest fidelity and accuracy

The InfiniiMax RCRC probe system provides the highest bandwidth and incredibly low loading to allow for a new level of signal fidelity and accuracy. Continuing the probe head topology pioneered by Keysight Technologies, Inc. in the InfiniiMax RC probe systems, ten probe heads are provided to accommodate multiple-use models: a 52 GHz solder-in shows the unparalleled performance, a 30 GHz browser that is extremely usable, a 25/28 GHz ZIF probe head with economical replaceable/removable ZIF tips, a 30 GHz 2.92 mm probe head which allows cabled measurements using 2.92 mm, 3.5 mm, or SMA coax cables, an economical 26 GHz solder-in probe head for demanding measurements, and a 16 GHz QuickTip for a quick and secure connection.

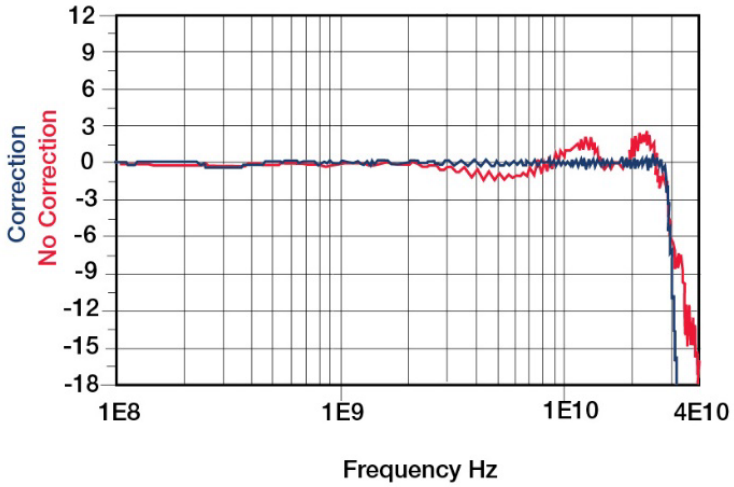





8.8ps edge is measured with InfiniiMax 4 probing solution with 52 GHz solder-in probe head

## More accurate probe correction

Each individual InfiniiMax RCRC probe amp contains its unique S-parameters, and this frequency response data is used with the S-parameters of the various probe heads to further flatten the probe's magnitude and phase response for accuracy. Traditionally, probe correction uses a nominal model based on a typical probe amplifier instead of the specific amplifier's data, collected during the final steps of production. Generally, the biggest variation between probing systems is a result of the probe amplifier. The ability to correct a specific probe amplifier's response results in a more accurate probe correction, which yields a more accurate measurement.




# Uncompromised Usability

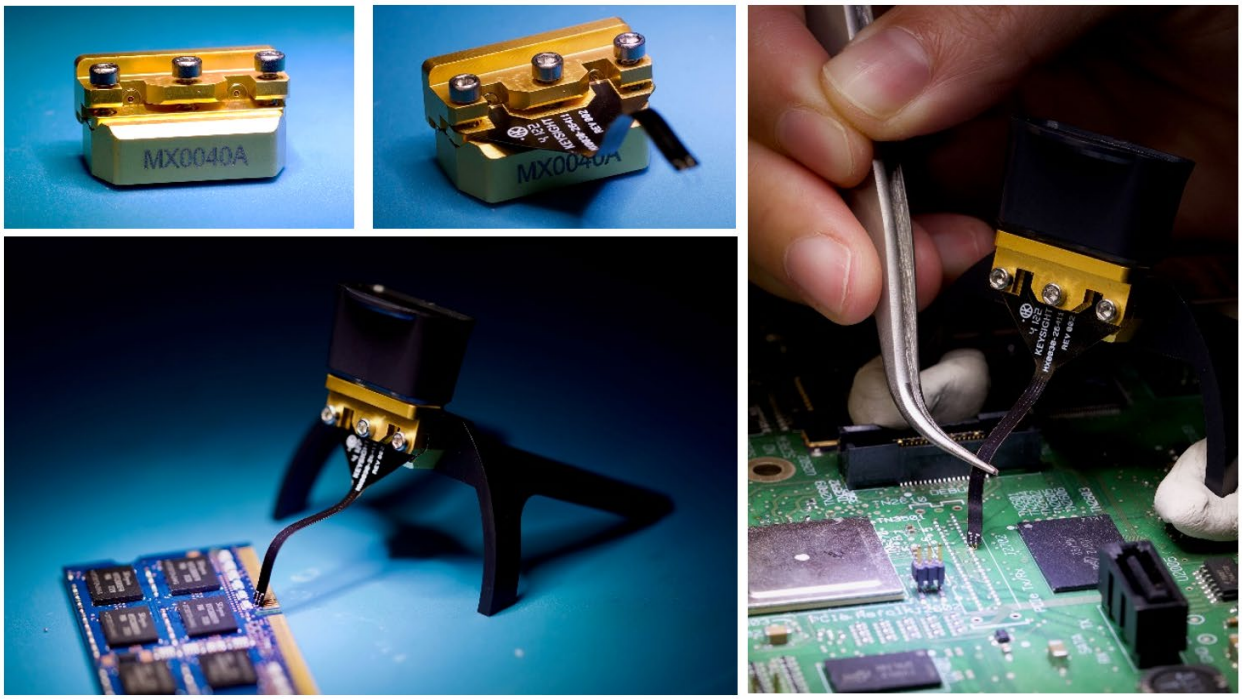
## Extensive line-up of probe heads and accessories

Keysight's InfiniiMax RCRC probes are designed to accommodate a broad spectrum of high-speed applications, offering a comprehensive range of probe heads and accessories. This system ensures exceptional signal fidelity and accuracy, thanks to its impressive bandwidth capabilities and extremely low loading. Building on the innovative probe head topology initiated by Keysight Technologies, Inc., the InfiniiMax RCRC probes set a new standard in precision measurement.

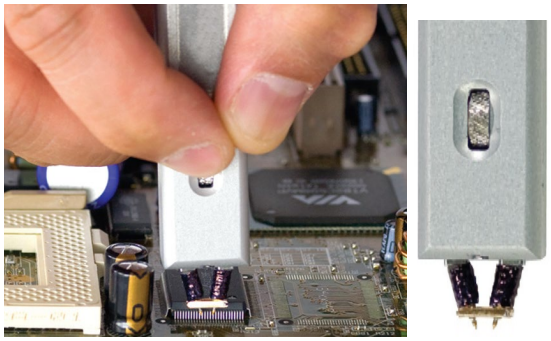
The InfiniiMax 4, Keysight's latest probe system, offers an impressive bandwidth capacity of up to 52 GHz. Achieving this level of performance required the development of an innovative modular probe head system, featuring a flexible printed circuit (FPC) probe head.

This unique system comprises the MX0040A probe head connector and two FPC probe heads of varying lengths (MX0041A and MX0042A), catering to diverse testing needs. The design facilitates rapid attachment of the amplifier to different probe head connectors, and the 3 different position cradles (MX0046A) aid in precisely aligning the probe and DUT. The newly developed FPC not only enhances signal stability but also adds flexibility to the probing process, making it more user-friendly and efficient.

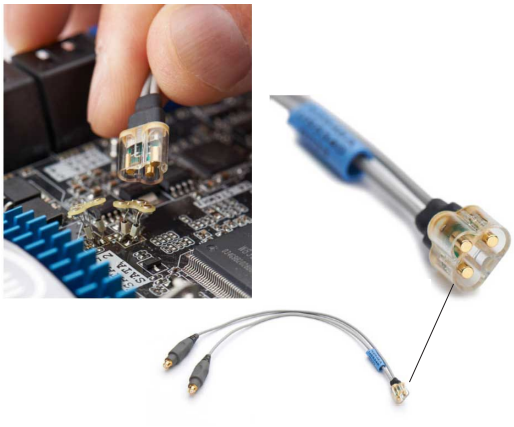
The MX0045A adapters seamlessly bridge the InfiniiMax 4 with previous generations of InfiniiMax III/III+ probe systems, substantially broadening the selection of compatible probe heads. This compatibility extends to earlier generation probe heads such as the N5445A Browser, N5444A SMA head, N5439A ZIF head, among others, providing users with a wide range of probing options.




The N5445A browser head (30 GHz) is the best choice for quick general-purpose troubleshooting of differential signals with its z-axis compliance and variable spacing from 20 mil to 125 mil (or 0.5 mm to 3.1 mm). The span between the signal tips is easily adjusted with a thumb wheel on the browser. Integrated LED lighting at the tip illuminates the probing area for better visibility. Order N5476A for replacement browser tips (set of 4).



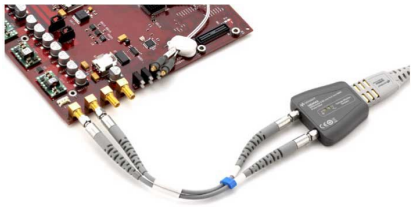
The N2848A/49A QuickTip offers the industry's first magnetically-engaged probe head and tip for a quick and secure connection, pushing the usability to the next level. The N2848A QuickTip probe head quickly snaps to the N2849A probe tip, utilizing magnets to connect to the two sides of the differential signal and ground. Multiple N2849A probe tips can be installed on a DUT, allowing quick and reliable measurement of many probe points. The QuickTip supports the InfiniiMode probing when used with the InfiniiMax III+ probe amp and supports differential probing with the InfiniiMax III probe amp. The N2849A QuickTip tips can also be used with the InfiniiMax I/II probe amps when used in conjunction with the N2851A QuickTip probe head for InfiniiMax I/II RC probes.



The N5439A ZIF probe head provides 28 GHz bandwidth in an economical replaceable tip form factor. For differential measurement, the N5439A ZIF probe head with the N5440A or N5447A ceramic ZIF tip provides the industry's lowest signal loading. The ZIF tips can be left on the DUT as the probe head is moved from one probing site to the next. Order N5440A (450 Ω ceramic), N5447A (200 Ω ceramic) or the new N2838A (450 Ω PC board) for a set of 5 ZIF tips with plastic sporks to aid in soldering the tips to your DUT. The N2838A PC board ZIF tip increased the robustness of the ZIF tip significantly while maintaining the bandwidth performance up to 25 GHz when used in conjunction with the N2803A and N5439A. Variable spacing from 5 mil to 80 mil (or 0.127 mm to 2 mm). (The N5447A 200 Ω ZIF tip is not compatible with InfiniiMax III+ and InfiniiMax 4 probes.



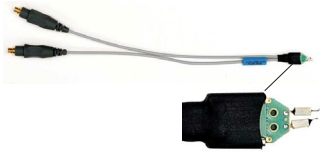
The N5444A 2.92 mm/3.5 mm/SMA probe head (30 GHz) allows you to connect two 2.92 mm, 3.5 mm or SMA cables to make a differential measurement on a single oscilloscope channel. Order N5448B 2.92 mm head flex cables (10” or 25 cm) or N2823A 2.92 mm cables with 1 m to extend the cable length and add convenience. You can control the termination voltage of the N5444A probe head using either the Infiniium scope software or by using a N5444-61601 cable included in the N5444A kit connected to your own DC power supply.



For extended temperature testing with extreme temperature range measurements, the MX0109A 26 GHz solder-in head supports extreme operating temperature of –55 to +150 °C per JEDEC JESD22-A104 revision E. Variable span of leads ranges from 5 to 250 mil. Damping resistor tips are user replaceable when damaged. This probe head is form, fit, function compatible with N2836A. This probe head supports InfiniiMode probing when used with the InfiniiMax III+ probe amp.



The N2836A solder-in head provides up to 26 GHz bandwidth when used in conjunction with the N2803A probe amplifier. This probe head supports InfiniiMode probing when used with the InfiniiMax III+ probe amp.



The N5442A Precision BNC 50 Ω adapter allows you to use your existing InfiniiMax I (1130B-1134B), InfiniiMax II (1168B/69B), N2750A-52A, N2795A-97A active probes or a general purpose 50 Ω BNC cable with the V, 90000 X- or 90000 Q-Series oscilloscope.



The N5449A high impedance adapter allows connection for probes that require a high impedance scope input such as a high impedance passive probe, 1147B/N2893A current probe, or N2790A differential probe to the Infiniium V, 90000-X/Q Series oscilloscopes. The N5449A provides switchable AC/DC coupling as well as 10:1 and 1:1 attenuation settings. The adapter comes with a N2873A 500 MHz 10:1 passive probe.



The N5477A sampling oscilloscope adapter makes the InfiniiMax III probing system fully compatible with the Infiniium 86100C DCA-J sampling oscilloscope. Previously the DCA-J was limited to 13 GHz of probing, but with the N5477A, the DCA-J now has 30 GHz of probing, increasing its performance and flexibility.



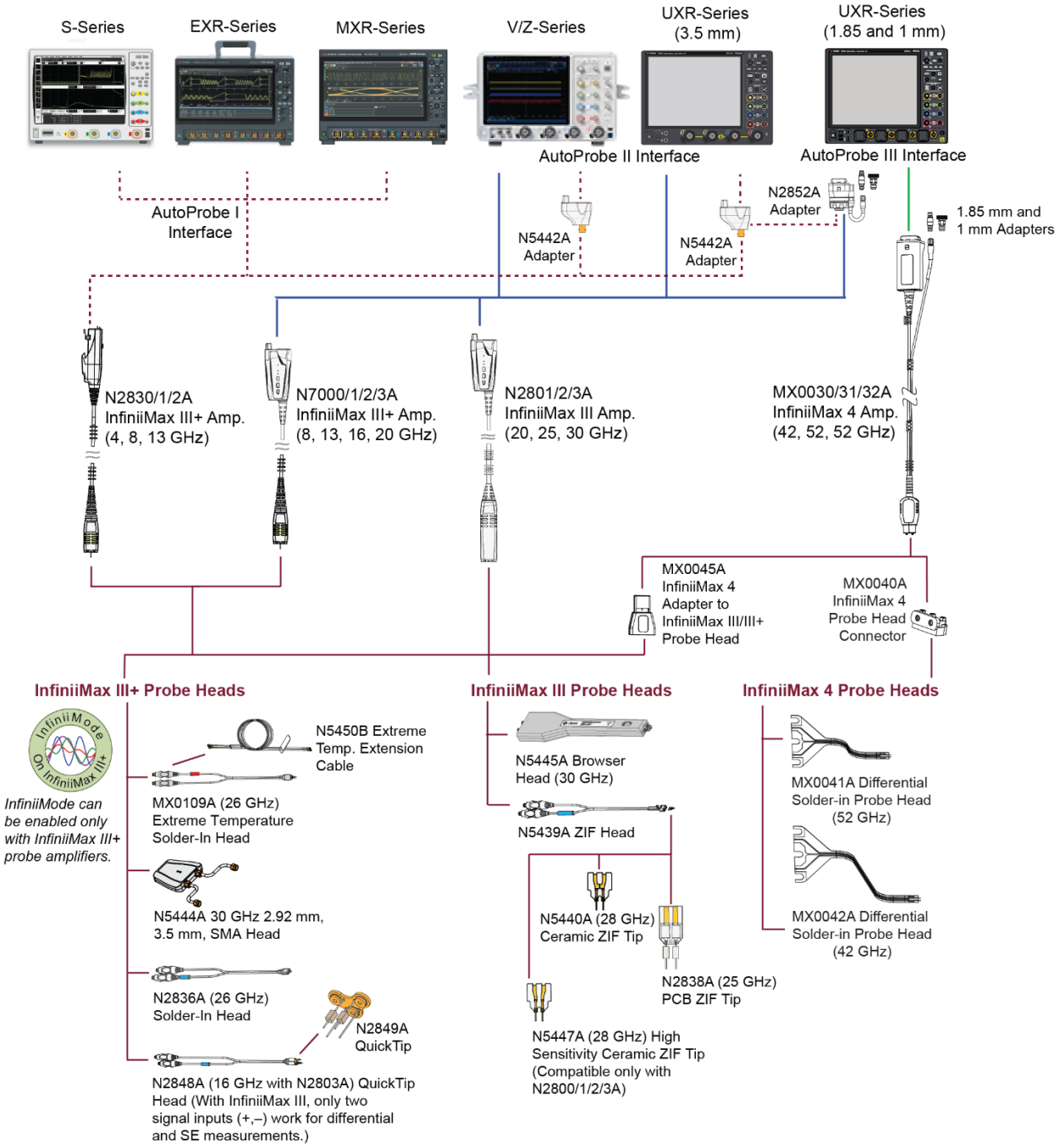
The MX0104A performance verification and deskew fixture is required to calibrate and verify the performance of the InfiniiMax III probe. The MX0104A is a replacement of the N5443A. The MX0104A comes with the 50 ohm through fixture only. You have an option to choose the option 001 plastic stand or the option N2787A 3D probe positioner which will help you properly position the probe amplifier. Order E2655C to calibrate and verify the performance of the InfiniiMax probe with < 13 GHz of bandwidth.



# Bandwidth upgradability (for InfiniiMax III)

As frequencies have continued to increase, so have the cost of probes. The InfiniiMax III system (N280xA) offers the world's first fully upgradable probe amplifier. Purchase a 16 GHz probe amplifier today, knowing that in the future, you can upgrade the amplifier to higher bandwidths (20/25/30 GHz) at a fraction of the cost of a new probe amplifier.

# InfiniiMax RCRC Probing System family diagram



# Performance Specification and Characteristics

## Warranted specifications

| Probe head | Probe Amp | Bandwidth | DC input |
|---|---|---|---|
| MX0041A | MX0032A<br>MX0031A<br>MX0030A | 52 GHz (Brickwall), 40 GHz (Bessel-Thomson)<br>52 GHz<br>42 GHz | Rdiff=100 kΩ ± 2%, Rse=50 kΩ ± 2% |
| N5440A with N5439A | N2803A<br>N2802A<br>N2801A<br>N2832A<br>N2831A<br>N2830A<br>N7003A<br>N7002A<br>N7001A<br>N7000A | 26 GHz<br>25 GHz<br>20 GHz<br>13 GHz<br>8 GHz<br>4 GHz<br>20 GHz<br>16 GHz<br>13 GHz<br>8 GHz | Rdiff=100 kΩ ± 2%, Rse=50 kΩ ± 2% |
| N5445A browser | N2803A<br>N2802A<br>N2801A<br>N2832A<br>N2831A<br>N2830A<br>N7003A<br>N7002A<br>N7001A<br>N7000A | 28 GHz<br>25 GHz<br>20 GHz<br>13 GHz<br>8 GHz<br>4 GHz<br>20 GHz<br>16 GHz<br>13 GHz<br>8 GHz | Rdiff=100 kΩ ± 2%, Rse=50 kΩ ± 2% |
| MX0109A/N2836A | N2803A<br>N2802A<br>N2801A<br>N2832A<br>N2831A<br>N2830A<br>N7003A<br>N7002A<br>N7001A<br>N7000A | 26 GHz<br>25 GHz<br>20 GHz<br>13 GHz<br>8 GHz<br>4 GHz<br>20 GHz<br>16 GHz<br>13 GHz<br>8 GHz | Rdiff=100 kΩ ± 2%, Rse=50 kΩ ± 2% |

# Probe head characteristics

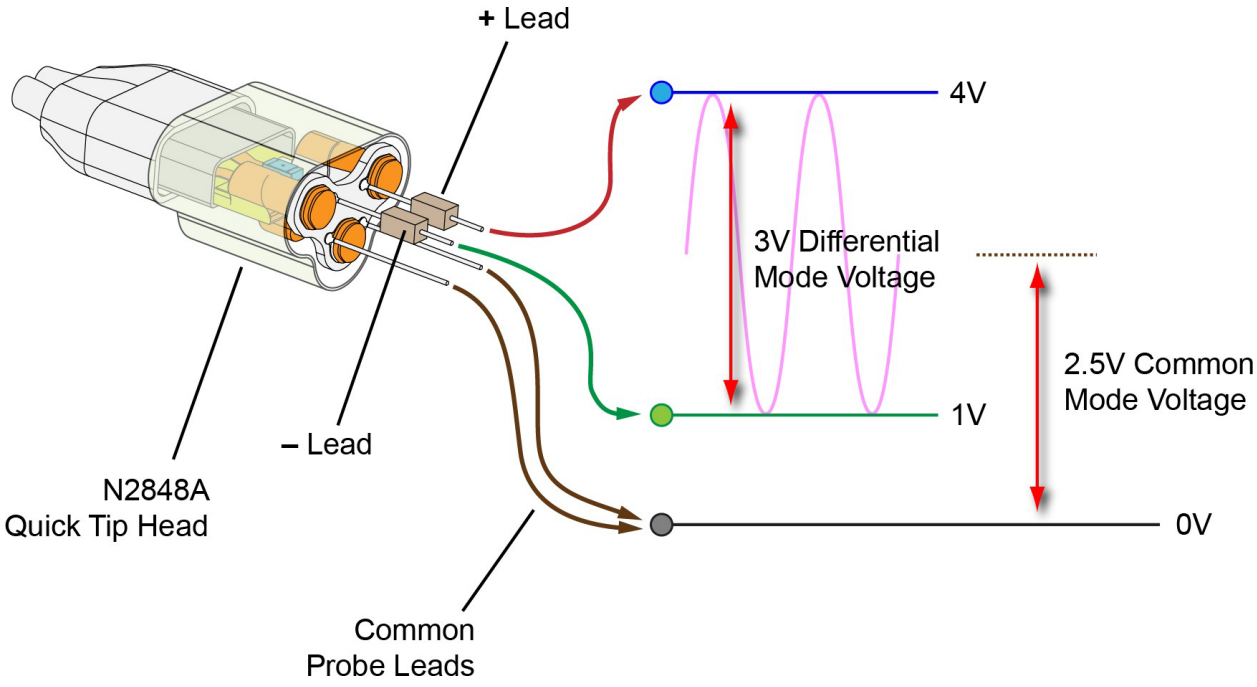
| | Input Capacitance | With N280xA Differential Mode | With N700xA Differential Mode | With MX0032A Differential Mode |
|---|---|---|---|---|
| MX0041A differential solder-in probe head - 52 GHz | Cdiff=30 fF; Cse=40 fF | Not compatible | Not compatible | 52 GHz, 10 pS, 7 pS |
| MX0042A differential solder-in probe head – 42 GHz | Cdiff=30 fF; Cse=40 fF | Not compatible | Not compatible | 42 GHz, 12.7 pS, 8.8 pS |
| N5440A_N5439A ceramic 450 Ω ZIF tip and ZIF probe head | Cdiff=32 fF; Cse=44 fF | 28 GHz, 15.5 pS, 11.0 pS | 20 GHz, 21.7 pS, 15.4 pS | 28 GHz, 15.5 pS, 11.0 pS |
| N5447A_N5439A ceramic 200 Ω ZIF tip and ZIF probe head | Cdiff=32 fF; Cse=44 fF | 28 GHz, 15.5 pS, 11.0 pS | Not compatible | 28 GHz, 15.5 pS, 11.0 pS |
| N5445A 450 Ω browser | Cdiff=35 fF; Cse=50 fF | 30 GHz, 14.5 pS, 10.3 pS | 20 GHz, 21.7 pS, 15.4 pS | 30 GHz, 14.5 pS, 10.3 pS |
| N2838A_N5439A PC board 450 Ω ZIF tip and ZIF probe head | Cdiff=95 fF; Cse=130 fF | 25 GHz, 17.4 pS, 12.3 pS | 20 GHz, 21.7 pS, 15.4 pS | 25 GHz, 17.4 pS, 12.3 pS |
| MX0109A/N2836A 450 Ω solder-in probe head vertical orientation with no ground wires | Cdiff=108 fF; Cse=140 fF | 27 GHz, 16.1 pS, 11.4 pS | 20 GHz, 21.7 pS, 15.4 pS | 27 GHz, 16.1 pS, 11.4 pS |
| MX0109A/N2836A 450 Ω solder-in probe head flat orientation with minimum length ground wires | Cdiff=108 fF; Cse=140 fF | 27 GHz, 16.1 pS, 11.4 pS | 20 GHz, 21.7 pS, 15.4 pS | 27 GHz, 16.1 pS, 11.4 pS |
| N2849A_N2848A 450 Ω QuickTip and QuickTip probe head with ground wires connected | Cdiff=340 fF; Cse=200 fF | 16 GHz, 27.1 pS, 19.3 pS | 20 GHz, 21.7 pS, 15.4 pS | 16 GHz, 27.1 pS, 19.3 pS |
| N5444A 2.92 mm, SMA, 3.5 mm probe head | N/A | 30 GHz, 15.5 pS, 11.0 pS | 20 GHz, 21.7 pS, 15.4 pS | 30 GHz, 15.5 pS, 11.0 pS |

# Probe amp characteristics

| | N280XA InfiniiMax III | | | N283XA InfiniiMax III+ | | MX003XA InfiniiMax 4 | |
|---|---|---|---|---|---|---|---|
| | 450 Ω probe heads | 200 Ω probe heads | N5444A 2.92 mm | 450 Ω probe heads | N5444A 2.92 mm | 450 Ω probe heads | N5444A 2.92 mm |
| DC input resistance | Rse=50 kΩ ± 2% each input to ground, Rdiff=100 kΩ ± 2% and Rcm=25 kΩ ± 2% | Rse=50 kΩ ± 2% each input to ground, Rdiff=100 kΩ ± 2% and Rcm=25 kΩ ± 2% | 55 Ω to Vterm | Rse=50 kΩ ± 2% each input to ground, Rdiff=100 kΩ ± 2% and Rcm=25 kΩ ± 2% | 55 Ω to Vterm | Rse=50 kΩ ± 2% each input to ground, Rdiff=100 kΩ ± 2% and Rcm=25 kΩ ± 2% 55 Ω to Vterm | 55 Ω to Vterm |
| Input resistance > 10 kHz | Rse=500 Ω each inputto ground, Rdiff=1 kΩ and Rcm=250 Ω | Rse=500 Ω each inputto ground, Rdiff=1 kΩ and Rcm=250 Ω | 50 Ω to .901*Vterm | Rse=500 Ω each inputto ground, Rdiff=1 kΩ and Rcm=250 Ω | 50 Ω to .901*Vterm | Rse=500 Ω each input to ground, Rdiff=1 kΩ and Rcm=250 Ω | 50 Ω to .901*Vterm |
| Input voltage range (differential or single-ended), mains isolated | 1.6 Vpp, ± 0.8 V (HD2&3 < –38 dbc),2.5 Vpp, ± 1.25 V (HD2&3 < –34 dbc) | 0.8 Vpp, ± 0.4 V (HD2&3 < –38 dbc), 1.6 Vpp, ± 0.8 V (HD2&3 < –34 dbc) | 1.6 Vpp, ± 0.8 V (HD2&3 < –38 dbc),2.5 Vpp, ± 1.25 V (HD2&3 < –34 dbc) | 2.5 Vpp or ±1.25 Vat 5:1 attenuation, 5.0 Vpp or ± 2.50 V at 10:1 attenuation | 2.5 Vpp or ± 1.25 Vat 5:1 attenuation 5.0 Vpp or ± 2.50 V at 10:1 attenuation without violating max input power | 1.6 Vpp, ± 0.8 V (HD2&3 < –38 dbc), 2.5 Vpp, ± 1.25 V (HD2&3 < –34 dbc) | 1.6 Vpp, ± 0.8 V (HD2&3 < –38 dbc), 2.5 Vpp, ± 1.25 V (HD2&3 < –34 dbc) |
| Max input power | N/A | N/A | 125 mW calculated by {[rms(vin-vterm)]^2/55]} for eachinput | N/A | 125 mW calculated by {[rms(vin-vterm)]^2/55]} for eachinput | N/A | 125 mW calculated by {[rms(vin-vterm)]^2/55]} for each input |
| Input common moderange | ± 2 VDC to 250 Hz, ± 1.25 V > 250 Hz | ± 6 VDC to 250 Hz, ± 0.65 V > 250 Hz | ± 6 VDC to 250 Hz, ± 1.25 V > 250 Hz without violating max input power | ± 7 VDC to 100 Hz, ± 1.25 V > 100 Hz at 5:1 attenuation, ± 2.5 V > 100 Hz at 10:1 attenuation | ± 6 VDC to 100 Hz, ± 1.25 V > 100 Hz at 5:1 attenuation, ± 2.5 V > 100 Hz at 10:1 attenuation without violating max input power | ± 2 VDC to 250 Hz, ± 1.25 V > 250 Hz | ± 6 VDC to 250 Hz, ± 1.25 V > 250 Hz without violating max input power |
| DC attenuation ratio | 6:1 | 3:1 | 6:1 | 5:1 or 10:1 Automatically selected based on volts/division (all modes) | 5:1 or 10:1 Automatically selected based on volts/division (all modes) | 6:1 | 6:1 |
| Offset range (for probing a single-ended signal) | ± 16 V | ± 8 V | ± 6 V without violating max input power | ± 16 V | ± 6 V without violating max input power | ± 16 V | ± 6 V without violating max input power |
| Input referred noise spectral density | 23.9 nV/rt (Hz) | 12.0 nV/rt (Hz) | 23.9 nV/rt (Hz) | Diff 5:1 atten 33.5 nV/rt (Hz)<br>Diff 10:1 atten 53.9 nV/rt (Hz)<br>SE A or B 5:1 atten 27.8 nV/rt (Hz)<br>SE A or B 10:1 atten 47.7 nV/rt (Hz)<br>CM 5:1 atten 21.8 nV/rt (Hz)<br>CM 10:1 atten 38.4 nV/rt (Hz) | | 23.9 nV/rt (Hz) | 23.9 nV/rt (Hz) |
| Input referred noise example | 4 mVrms with 28 GHz probe head and 30 GHz probe amp | 2 mVrms with 28 GHz probe head and 30 GHz probe amp | 4 mVrms | 4.5 mVrms in diff mode 5:1 atten with >= 18 GHz probe head and 13 GHz probe amp | 4.5 mVrms in diff mode 5:1 atten with 30 GHz N5444A probe head and 13 GH | 4 mVrms with 28 GHz probe head and 30 GHz probe amp | 4 mVrms |
| Maximum input voltage | 18 Vpeak mains isolated | 18 Vpeak mains isolated | 8 Vpeak without violating max input power | 18 Vpeak mains isolated | 8 Vpeak without violating max input power | 18 Vpeak mains isolated | 8 Vpeak without violating max input power |

# What is InfiniiMode?

InfiniiMode allows convenient measurement of differential, single-ended and common mode signals with a single probe tip - without reconnecting the probe from its connection point. (Available in InfiniiMax III+)




# Ordering information

## InfiniiMax RCRC probe amplifier models

| Model | Description | Recommended oscilloscope |
|---|---|---|
| MX0032A | 52 GHz InfiniiMax 4 probe amplifier (with 40 GHz B-T filter) | Infiniium UXR 1.85 / 1 mm Series models with AP3 interface |
| MX0031A | 52 GHz InfiniiMax 4 probe amplifier | Infiniium UXR 1.85 / 1 mm Series models with AP3 interface |
| MX0030A | 42 GHz InfiniiMax 4 probe amplifier | Infiniium UXR 1.85 / 1 mm Series models with AP3 interface |
| N2803A | 30 GHz InfiniiMax III probe amplifier | Infiniium V/Z/UXR 3.5mm Series models with AP2 interface |
| N2802A | 25 GHz InfiniiMax III probe amplifier | Infiniium V/Z/UXR 3.5mm Series models with AP2 interface |
| N7003A | 20 GHz InfiniiMax III+ probe amplifier | Infiniium V/Z/UXR 3.5mm Series models with AP2 interface |
| N2801A | 20 GHz InfiniiMax III probe amplifier | Infiniium V/Z/UXR 3.5mm Series models with AP2 interface |
| N7002A | 16 GHz InfiniiMax III+ probe amplifier | Infiniium V/Z/UXR 3.5mm Series models with AP2 interface |
| N2800A | 16 GHz InfiniiMax III probe amplifier | Infiniium V/Z/UXR 3.5mm Series models with AP2 interface |
| N7001A | 13 GHz InfiniiMax III+ probe amplifier | Infiniium V/Z/UXR 3.5mm Series models with AP2 interface |
| N2832A | 13 GHz InfiniiMax III+ probe amplifier | Infiniium 9000A/S/EXR/MXR Series models with AP1 interface |
| N7000A | 8 GHz InfiniiMax III+ probe amplifier | Infiniium V/Z/UXR 3.5mm Series models with AP2 interface |
| N2831A | 8 GHz InfiniiMax III+ probe amplifier | Infiniium S/EXR/MXR Series models with AP1 interface |
| N2830A | 4 GHz InfiniiMax III+ probe amplifier | Infiniium S/EXR/MXR Series models with AP1 interface |

## InfiniiMax RCRC probe heads

| Model | Description | Notes |
|---|---|---|
| MX0040A | InfiniiMax 4 probe head connector | Required for connecting MX0041A and MX0042A |
| MX0041A | InfiniiMax 4 differential solder-in probe head - 52 GHz 5 pack (option 001) 25 pack (option 002) | Compatible with InfiniiMax 4 amp only, 40mm long (MX0040A is required) |
| MX0042A | InfiniiMax 4 differential solder-in probe head - 42 GHz 5 pack (option 001) 25 pack (option 002) | Compatible with InfiniiMax 4 amp only with longer 60 mm tip length (MX0040A is required) |
| N2848A | InfiniiMax III QuickTip probe head | Compatible with InfiniiMax III/III+ amp |
| | | Supports InfiniiMode with InfiniiMax III+ amp |
| N2849A | InfiniiMax III QuickTip tips | Set of 4 tips |
| N5445A | InfiniiMax III browser head | Order N5476A for replacement probe tips (set of 4) |
| N5439A | InfiniiMax III ZIF probe head | Order N2838A PC board ZIF (450 Ω), N5440A Ceramic ZIF (450 Ω) or N5447A Ceramic ZIF (200 Ω) for a set of 5 ZIF tips with plastic sporks |
| N5444A | InfiniiMax III 2.92 mm/3.5 mm/SMA probe head | Order N5448B (25 cm) or N2823A (1 m) 2.92 mm (m)-to-2.92 mm (m) head flex cables to extend the cable length. Supports InfiniiMode with InfiniiMax III+ amp |
| N5441A | InfiniiMax lll 16 GHz solder-in probe head | Discontinued and replaced by N2836A and MX0109A |
| N2836A | InfiniiMax III 26 GHz solder-in probe head | Supports InfiniiMode with InfiniiMax III+ amp. Order N2836-68701 for damping resistor replacement tips |
| N2835A | InfiniiMax III differential connectivity kit | Contains 1x N5445A, 2x N2836A, 2x N5439A, 2x N2838A, 2x N2848A, 2x N2849A |
| MX0109A | InfiniiMax III 26 GHz Extreme temperature solder-in probe head | Supports –55 to +150 °C of operating temperature range and InfiniiMode with InfiniiMax III+ amp. Order N2836-68701 for damping resistor replacement tips |

## InfiniiMax III probe adapters

| Model | Description | Notes |
|---|---|---|
| MX0045A | InfiniiMax 4 adapter to InfiniiMax III probe head | InfiniiMax 4 to InfiniiMax III/III+ probe head adapters |
| N5442A | Precision BNC adapter (50 Ω) | For use with InfiniiMax I/II/III+ probes, N2750A-52A, N2795A/96A/97A,1156A-58A etc. |
| N5449A | High impedance probe adapter | Includes one N2873A 500 MHz 10:1 passive probe |
| N5477A | Sampling scope adapter | For InfiniiMax III amp to use with Keysight 86100C DCA-J sampling scope |
| N1022B | Probe adapter | For InfiniiMax III+ amp to use with 86100C DCA-J sampling scope |
| MX0104A | Performance verification and deskew fixture | For InfiniiMax III and InfiniiMax III+ > 13 GHz. Order option 001 plastic stand or theoption N2787A 3D probe positioner. |
| E2655C | Performance verification and deskew fixture | For InfiniiMax III+ <=13 GHz and InfiniiMax I/II |
| N2852A | AutoProbe II to AutoProbe III interface adapter for Infiniium UXR Series | |

## Probe bandwidth upgrade options (for InfiniiMax III only)

| Model | Description | Notes |
|---|---|---|
| N5446A-001 | 16 to 20 GHz bandwidth upgrade | |
| N5446A-002 | 20 to 25 GHz bandwidth upgrade | |
| N5446A-003 | 25 to 30 GHz bandwidth upgrade | |
| N5446A-004 | 16 to 25 GHz bandwidth upgrade | |
| N5446A-005 | 16 to 30 GHz bandwidth upgrade | |
| N5446A-006 | 20 to 30 GHz bandwidth upgrade | |

## Other recommended accessories for InfiniiMax III/III+ probing system

| Model | Description | Notes |
|---|---|---|
| MX0046A | InfiniiMax 4 mounting cradles | For positioning InfiniiMax 4 connectors |
| N2787A | 3D probe positioner | For hands-free probing |
| N5450B | Extreme temperature extension cable | 1 m long, check out Keysight literature 5990-3504EN for other available probe accessories for extreme temperature testing |
| N2812B | High performance input cable, 2.92 mm connectors, 1 m length | For use with Infiniium V, 90000-X/Q Series oscilloscope |
| N5448B | Phase matched cable pair, 25 cm, 2.92 mm (m) to 2.92 mm (m) | > 40 GHz bandwidth. Skew error matched to < 5 psec |
| N2823A | Phase matched cable pair, 1 m, 2.92 mm (m) to 2.9 2mm (m) | > 40 GHz bandwidth. Skew error matched to < 5 psec |
| MV-23 | Carson Optical MagniVisor | www.carsonoptical.com/Magnifiers |



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