

Cascade

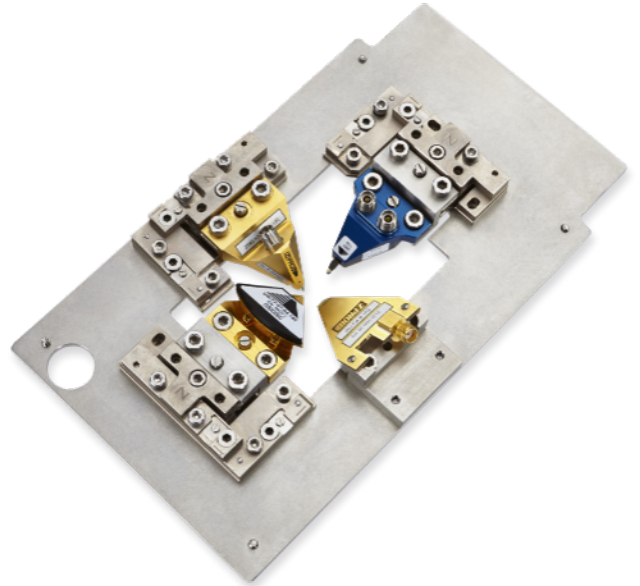
QuadCard

Cost-effective, versatile probe card solution

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Overview

The QuadCard™ probe card is the industry's first configurable, multi-quadrant probe adapter that employs innovative fine mini-manipulators - individual miniature positioners - to mount up to four FormFactor probes on a single probe card. It is designed to accommodate a combination of our probes such as Infinity Probes®, ACP probes, IZI Probes® and Multi-IZI Probes, which are aligned individually by the mini-manipulator. The QuadCard is compatible with all probe stations using standard rectangular and round probe card holders, or it can be customized to fit most probe card holders.



The QuadCard reduces overall cost-of-test by allowing quick and easy repairs by simply replacing individual probes. All QuadCard components, such as probes, board and mini-manipulators, can be repurposed for future test applications, reducing the long-term cost of ownership. The QuadCard also allows the use of the same probe technology from the lab to the production test floor, enabling fast characterization, design debug and pre-production qualification before sending devices to the full production test, minimizing the overall test cost and shortening the time to market.

Combined with a wide variety of high-performance probes from FormFactor, the versatile QuadCard enables testing of advanced devices which cannot be achieved by existing probe card solutions.

Features / Benefits

Lower cost-of-test	<ul style="list-style-type: none">• Quick and easy repairs to be performed by simply replacing individual probes and using the mini-manipulators to realign the new or repaired probes
Flexibility	<ul style="list-style-type: none">• Accommodates a combination of up to four FormFactor probes• Configurable for mixed-signal RF/mmW testing• Adaptable to new device layouts by exchanging individual probes
Measurement accuracy	<ul style="list-style-type: none">• Accurate probe alignment with mini-manipulators for the best contact quality• Superior performance of FormFactor probes• Consistent data by using the same probe technologies from the lab through production test

> Specifications

Compatible Probes

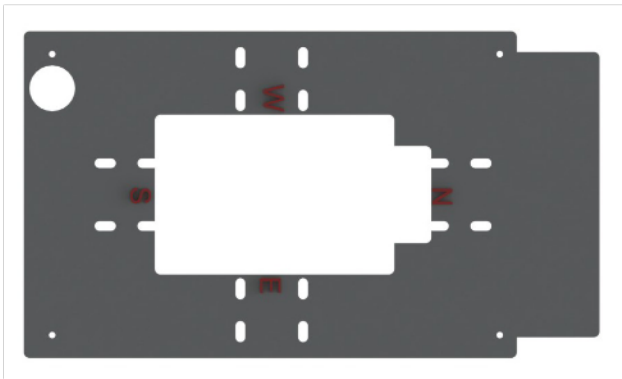
The QuadCard has the ability to hold a maximum of four mounted FormFactor probes listed below:

Infinity Probe	Single or dual coax configuration, 40/50/67/110/145 GHz
ACP Probe	Single or dual coax configuration, 40/50/65/110 GHz
IZI Probe	Single or dual configuration, 40/50/67 GHz
Multi IZI Probe	Up to 35 mixed contacts (RF up to 20 GHz, DC, logic, signal, ground)
Unity Probe™	Up to 12 contacts (DC, power, logic to 500 MHz, RF up to 20 GHz)
ProbeWedge™ HF/ACP-Q	Mixed-RF and DC contacts
ProbeWedgeDC/DCQ/WPH	Up to 12 contacts, DC needles only
Eye-Pass® Probe	Up to 12 DC contacts

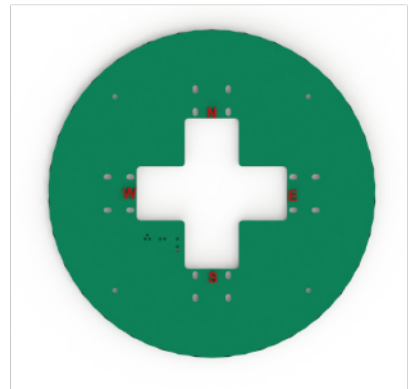
Recommended best practice: It is recommended to use the same probe type (family) for all positions if possible. Mixing probe types is possible, however it will cause differences in probe skate, mark, life and other characteristics that are probe type (family) dependent.

Supported Probe Card Format*

* Custom probe card format available upon request.



4.5" rectangular probe card: standard probe card to be mounted on analytical probe stations. Probes mountable on N/W/S/E positions, coarse positioning.



9" round probe card: commonly used on production probe stations with circular probe card holders. Probes mountable on N/W/S/E positions, coarse positioning.

➤ Probe Compatibility*

Compatibility with 9" round probe cards:

	All Positions (North / South / East / West)
Infinity Probe	Compact / Advanced
ACP Probe	Compact / Advanced
IZI Probe	Compact / Advanced
Multi IZI Probe	Compact / Advanced
IZI Wedge	Compact / Advanced
IZI Wedge HF	Compact / Advanced
Unity Probe	Compact / Advanced
Eye-Pass Probe	Compact / Advanced
ProbeWedge™ HF / ACP-Q	Compact / Advanced
ProbeWedge DC / DCQ / WPH	Compact / Advanced

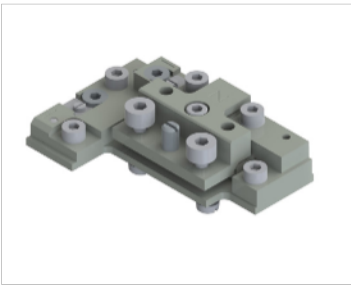

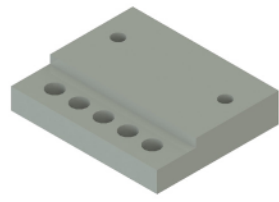
Compatibility with 4.5" rectangular cards:

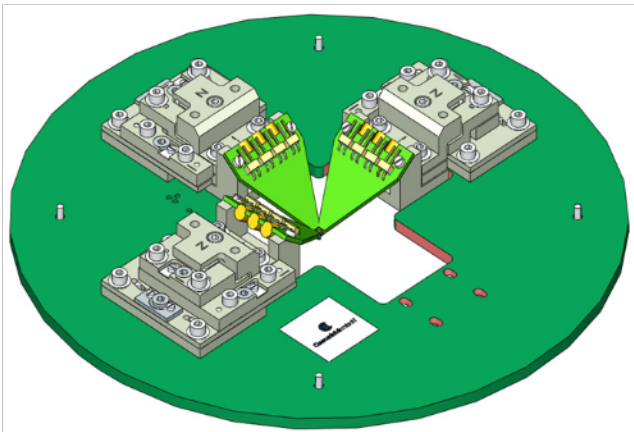
	North and South	East and West
Infinity Probe	Compact / Advanced	Not available
ACP Probe	Compact / Advanced	Not available
IZI Probe	Compact / Advanced	Compact
Multi IZI Probe	Compact / Advanced	Compact
IZI Wedge	Compact / Advanced	Compact
IZI Wedge HF	Compact / Advanced	Compact
Unity Probe	Compact / Advanced	Not available
Eye-Pass Probe	Compact / Advanced	Not available
ProbeWedge HF / ACP-Q	Compact / Advanced	Not available
ProbeWedge DC / DCQ / WPH	Compact / Advanced	Not available

Note: A fixed non-adjustable mounting block can be used in one position in some circumstances, however in general it is not recommended. Please consult with factory if this option is desired. This note applies to both 9" round and 4.5" rectangular cards.

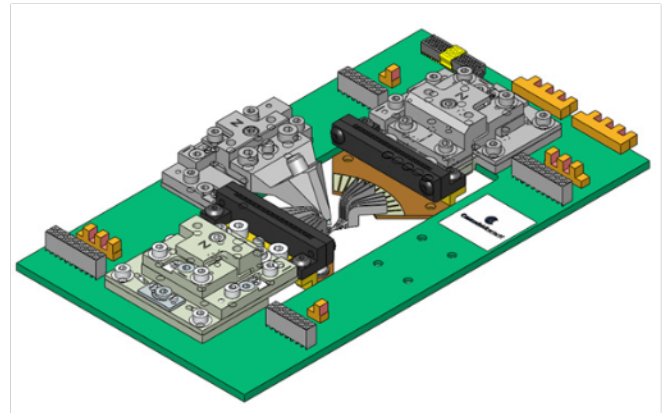
Mini-manipulators

Mini-Manipulator Options

	Compact (PN 140280)	Advanced (PN 140802)	Fixed Adapter (Custom)
			Example:  * Maximum one per card
Adjustable axes	X, Y, Z and planarity	X, Y, Z and theta and planarity	NA
X/Y	± 0.775 mm	± 0.375 mm	NA
Z	± 1.0 mm	± 1.0 mm	NA
Theta	N/A	± 0.775 mm	NA
Resolution	15 μ m	15 μ m	NA
Probe card compatibility	4.5" rectangular card - all positions 9" round card - all positions	4.5" rectangular card – North and South positions only 9" round card - all positions	4.5" rectangular card - all positions 9" round card - all positions Consult factory for specific application usability



9" round probe card with advanced mini-manipulators.



4.5" rectangular probe card with both compact and advanced mini-manipulators.

Please contact FormFactor to configure your QuadCard.

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QuadCard-DS-0418