



GIM05: Spherical Roll positioner

GIM05 brings a revolutionary solution for antenna over-the-air (OTA) mmWave and THz measurement with a spherical roll design offering the widest possible unobstructed field of view. Traditional Azimuth-Elevation positioners have arm structures on the sides of the device under test (DUT) which blocks the measurement path at some high angles. Instead GIM05 holds the DUT from the back which completely clears the sides from obstruction and stray reflections coming from the positioner body.

ROBUST AND ACCURATE- All gears in GIM05 are made of precision machined Delrin™ material for higher strength, precision and long life span. GIM05 is activated by smart actuators with absolute encoders resolution below 0.1°.

POLARIZATION CONTROLLER- The probe side is motorized such that the probe can match the polarization of the DUT during the rolling capture sweep. Also, it can also be programmed for any other cross polarization measurement.

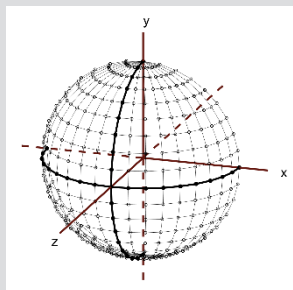
MODULAR SIZE- GIM05 design allows the depth and the height to be mechanically adjusted, to accommodate various DUT size requirement. Two standard sizes are 340mm and 440mm representing the maximum width of the DUT.

CABLE ROUTING- To bring power, control or RF to the DUT efficiently, GIM05 provides pass-thru channels at the center of each rotation axis and numerous anchor points along the path. This way, no connectors or slip rings are needed from source to DUT.

OPEN FRAMEWORK- As with all our other positioners, GIM05 is controlled by a Python based software provide in source which allows easy integration with any instrument or DUT with several built-in capture modes in multiple dimensions.



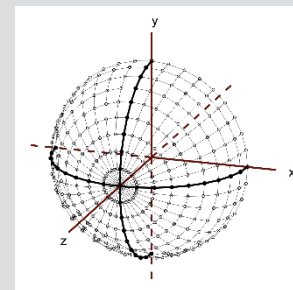
Spherical Roll coordinates



Typical Azimuth/Elevation coordinates

GIM05 uses a new set of coordinates for its rotation which eliminates the need for side arms. This coordinate system can cover the entire sphere around the DUT but the measurement paths are different.

Because the DUT is rotating on its radiation axis, the measurement probe has to follow the polarization of the DUT at all time to capture accurate measurement.



GIM05 Spherical Roll coordinates

Comparison Chart

| | GIM05-340 | GIM05-440 |
|------------------------|------------------|-------------|
| | | |
| Max DUT width | 340mm / 13" | 440mm / 17" |
| Max DUT weight | 5kg | 5kg |
| DUT depth | 113mm / 4.5" | 175mm / 7" |
| Measurement height | 327mm (12.8") | 386mm (15") |
| Polarization Control | ✓ | ✓ |
| Fits in MBX0x chambers | ✓ | ✗ |
| Fits In MBX3x chambers | ✓ | ✓ |
| Manufacturer warranty | 1 year all parts | |

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