RASCAL AT A GLANCE

Chamber Dimensions:
35’ L x 18’ W x 14’ H

Quiet Zone Dimensions:
3’ W x 2’ H (typ.)

Polarizations:
Linear and Circular

Frequency Coverage:
1-110 GHz

FEATURES

Rapid Prototype Measurements

Large, Wideband Array Measurements

Integrated Measurement of Subsystems
with Digital Backends
**Measurement System**

The measurement system in RASCAL is built around a Keysight N5247A 67 GHz 4-port VNA. The system includes a 24-port MUX for multiple simultaneous measurements for reduced measurement time and also frequency extensions up to 100 GHz.

<table>
<thead>
<tr>
<th>Frequency (GHz)</th>
<th># of Ports</th>
</tr>
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<tbody>
<tr>
<td>40</td>
<td>24</td>
</tr>
<tr>
<td>67</td>
<td>4</td>
</tr>
<tr>
<td>100</td>
<td>1</td>
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**Motion System**

Six axis controller for precise movement. Four AUT axes: azimuth, elevation, roll and linear. Two axes for feed: focal plane and polarization alignments.

Multi-axis motion enables accurate measurements for full hemispherical data collection/processing.

**Processing Capabilities**

RASCAL has the capability to perform time-domain based post-processing on measured data as well as hardware gating to eliminate sources of error within the range itself.

Processing is also available for multi-arm spiral antennas for the generation of modal patterns.

**Wideband Arrays / Digital Backend Measurements**

The RASCAL system was designed with the measurement of large, wideband arrays in mind with a 24-port MUX and plane wave phase errors $\leq \pm 5^\circ$ across the quiet zone.

**Contact Info**

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