



R&S®NRPM OTA POWER MEASUREMENT SOLUTION

New approach to mmWave testing

The perfect choice for



5G, 802.11ad/ay

Power calibration

Verification of beamforming

Simplified mmWave testing

Key specifications	
Frequency range	18 GHz to 90 GHz
Measurement range	Continuous average: -76 dBm to -19 dBm Trace: -63 dBm to -19 dBm
Rise time/fall time	2.2 μs
Number of antenna modules	3 per R&S®NRPM sensor module
Accuracy (relative)	< 0.1 dB

Redefining power measurements

Eliminate the headache of expensive, fragile millimeter connectors. The R&S®NRPM OTA power measurement solution enables you to measure the output power of highly integrated devices over the air. This accurate, affordable measurement solution for power calibration and verification of beamforming transmitters simplifies the test setup.

Your benefit	Features
Scalable	Flexible, configurable and easy to expand
Real-time results	PC software displays results in real time
Accurate results	Integrated diode detector for direct measurements on the antenna, which eliminates cable loss
Shielded measurements	Seamlessly integrates into the R&S®TS7124 shielded box
Save time	DUTs can be quickly swapped without affecting the test setup



For more information, visit <https://www.rohde-schwarz.com/catalog/NRPM>

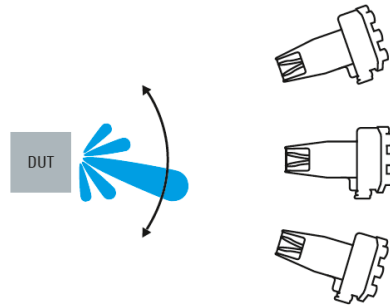
Designed for performance



Integrated diode detector measures directly at the Vivaldi antenna (R&S®NRPM-A90).

Compensated frequency response ensures accurate measurements over a wide frequency range.

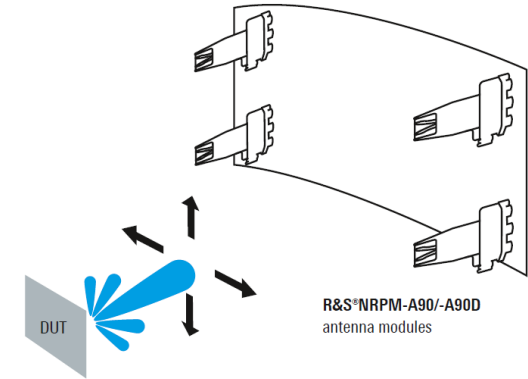
Real-time measurements on beamforming DUTs



R&S®NRPM-A90
single-polarized antenna module
or
R&S®NRPM-A90D
dual-polarized antenna module

Real-time measurements from three antennas for quick verification of beamforming performance.

Scalable to support highly complex transmitters



System can be easily expanded to address highly complex beamforming systems.

Antennas can be easily installed on a half antenna ring



Accurate, secure placement of antennas ensures repeatable measurement results.

Seamlessly integrates into the R&S®TS7124 RF shielded box



The R&S®TS7124 can be operated manually or automatically.

Solution components

Required	Item
Three-channel sensor module	R&S®NRPM3
Single-polarized antenna module	R&S®NRPM-A90
Dual-polarized antenna module	R&S®NRPM-A90D
Cable feedthrough for R&S®TS7124 shielded box	R&S®NRPM-ZD3
Interface cable (R&S®NRPM-ZD3 to R&S®NRPM3)	R&S®NRPM-ZKD3
USB interface cable	R&S®NRP-ZKU
Optional	
Interface module for benchtop operation	R&S®NRPM-Z3
Half antenna ring (see picture)	R&S®TS-F24-AH1
Full antenna ring	R&S®TS-F24-AR
RF shielded box	R&S®TS7124