uwb Aora

UWB High Precision – 2D 360° AoA

UWB

DATASHEET QW25-UWB-1004

4.uwb Aora (QW25-UWB-1004)

The **Aora** AoA Omnidirectional Ranging Antenna is a compact, wideband solution engineered for precise 360° angle-of-arrival measurements. Leveraging Quarterwave's advanced antenna technology, it delivers accurate direction finding and ranging capabilities across IoT, industrial, and localization applications. Designed for seamless integration, the Aora AoA combines omnidirectional coverage with high reliability, making it the ideal choice for next-generation positioning and tracking systems.

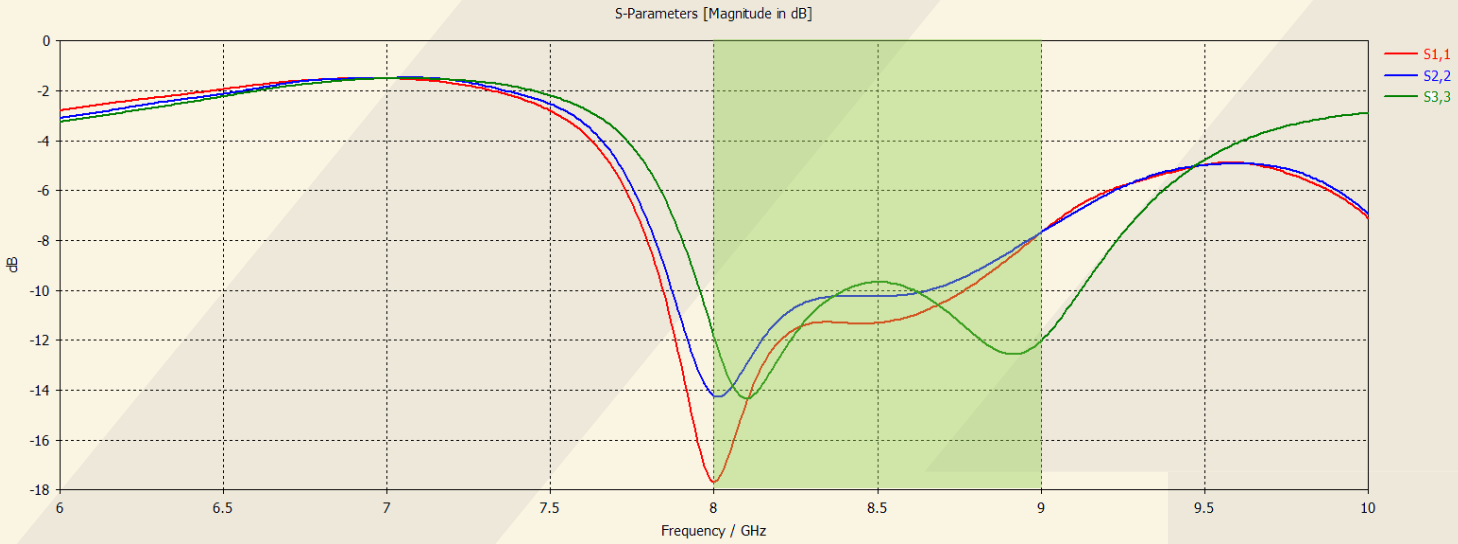
APPLICATIONS

- **Drone navigation** and UAV positioning
- **Industrial automation** and smart factory monitoring
- **Smart farming** and livestock monitoring
- **Security and surveillance** systems
- **Autonomous vehicles** and AGV navigation
- **Indoor localization** for warehouses and smart buildings
- **Emergency services** and search & rescue operation

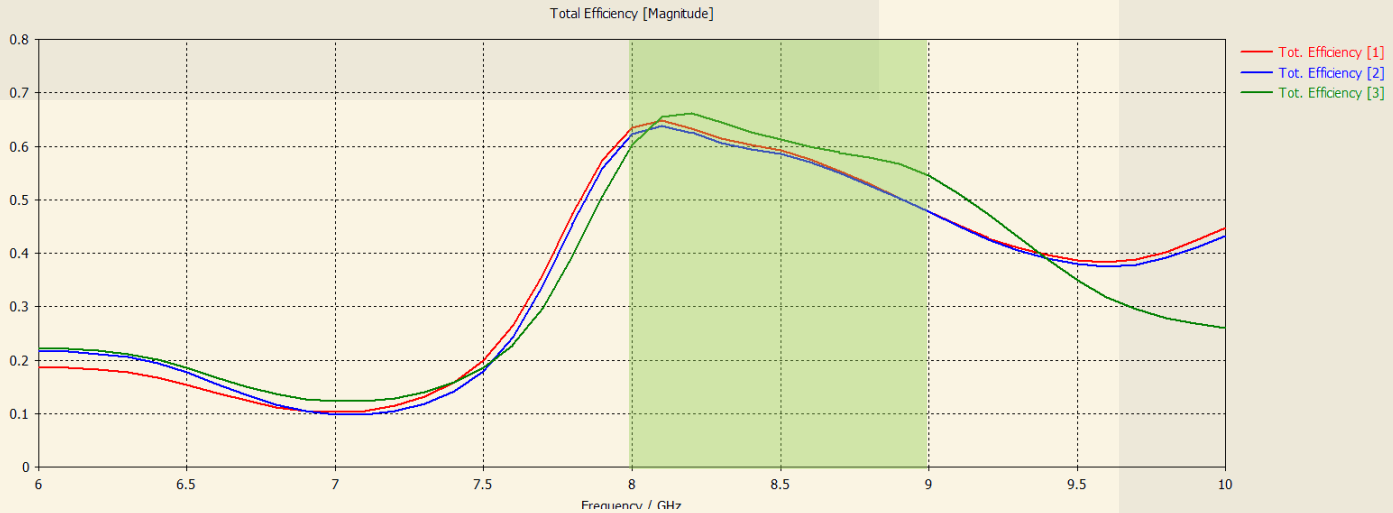
TECHNICAL SPECIFICATION

Electrical	
Operating Frequency	7.920 – 8.976 GHz
Suported Bands	10, 11
Peak Gain	5 dBi
Rad. Efficency	>60 %
VSWR	< 2 :1
Polarization	Linear
Radiation Pattern	Omnidirectional
Impedance	50 Ohm
Mechanical	
Dimension	Ø64x32 mm
Weight Antenna	72g
Connector	SMA male
Ports	3
Environmental	
Operating Temperature	-20…+95 °C
Relative Humidity	Non-condensing 65°C 95% RH

RETURN LOSS

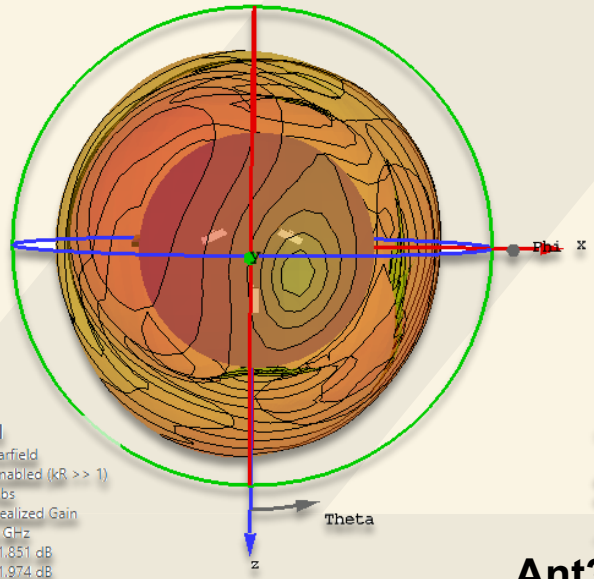


TOTAL EFFICIENCY



ANTENNA PATTERN

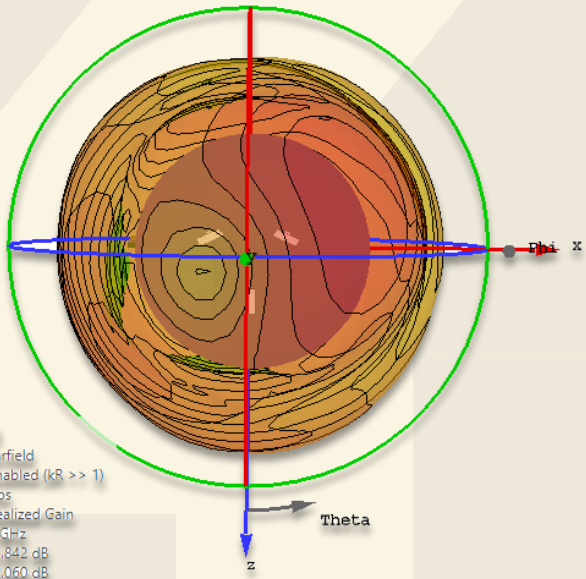
Ant1

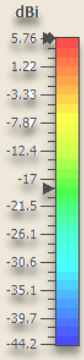


farfield (f=8) [1]

Type	Farfield
Approximation	enabled (kR >> 1)
Component	Abs
Output	Realized Gain
Frequency	8 GHz
Rad. Effic.	-1.851 dB
Tot. Effic.	-1.974 dB
Rlzd. Gain	5.601 dBi

Ant2

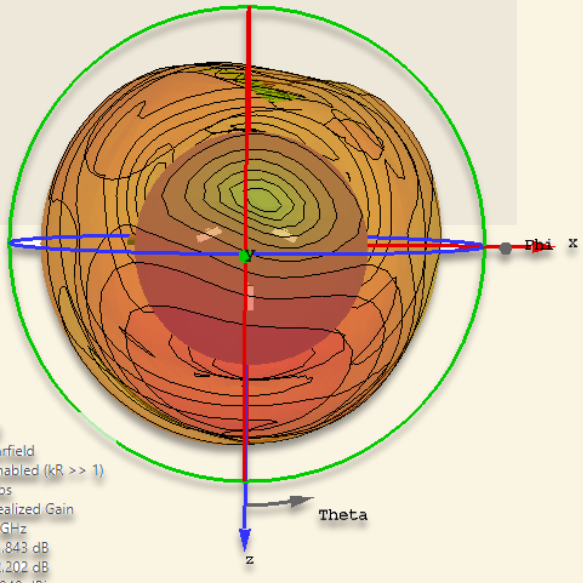




=8) [2]

ation	Farfield
nt	enabled (kR >> 1)
	Abs
	Realized Gain
	8 GHz
	-1.842 dB
	-2.060 dB
	5.762 dBi

Ant3

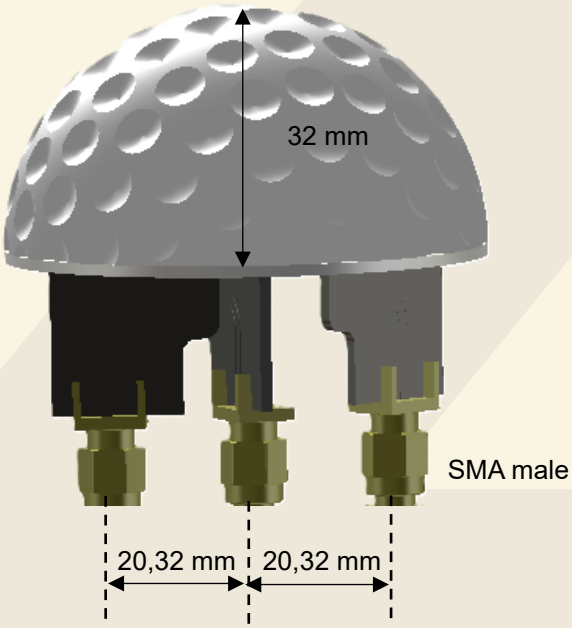


rfield (f=8) [3]

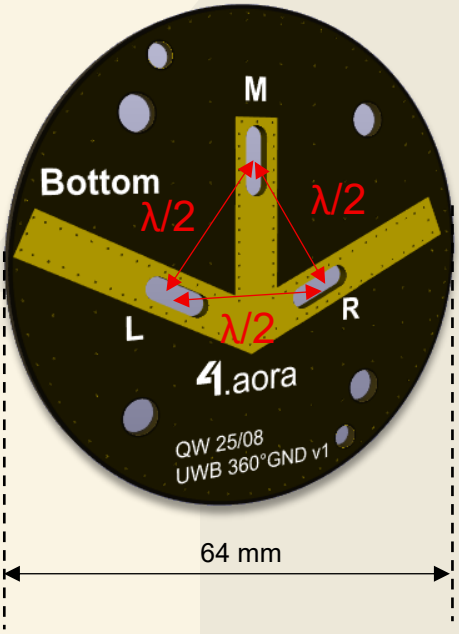
ype	Farfield
pproximation	enabled (kR >> 1)
omponent	Abs
utput	Realized Gain
requency	8 GHz
ad. Effic.	-1.843 dB
ot. Effic.	-2.202 dB
lzd. Gain	5.048 dBi

DIMENSIONS

[1] Radom



[2] Baseplate



[3] Antenna Left [4] Antenna Mid [5] Antenna Right