

Ordering Information

SKU	Description	UPC
100840	UWB Surveyor	0616469146816

Description

A planar ultra-wideband antenna with an average gain of 3dBi across an extremely wide operation range and a female SMA connector. The antenna field is linearly polarized and stable along the horizon across its operating range.



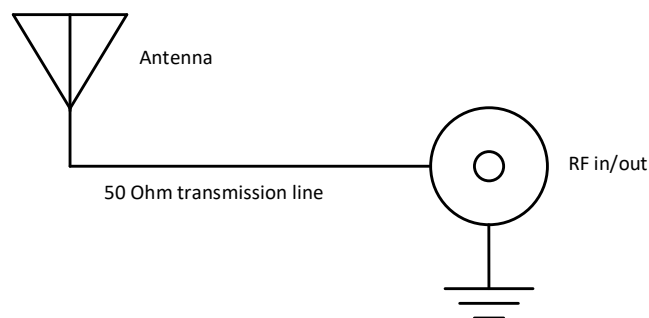
Features

- 700MHz to 10GHz frequency range
- Overall average gain ~3dBi
- 50Ω matched port
- Symmetric radiation patterns
- Can be deployed for Tx and Rx

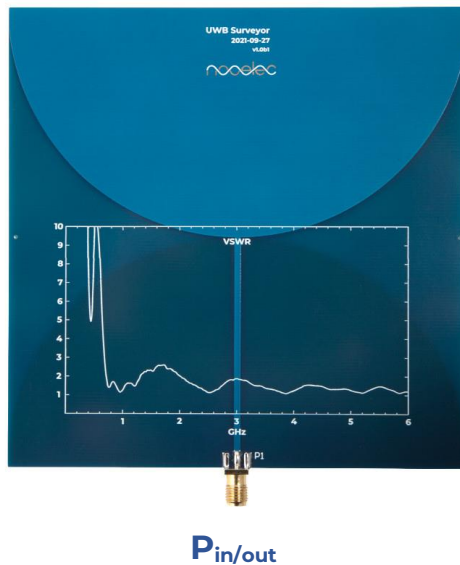
Applications

- Software-defined radio
- EMC testing
- Wideband signal analysis
- Large bandwidth spectrum surveying
- ADS-B, Wi-Fi, BT, LTE, and 5G
- UWB sensors and indoor localization
- UWB-enabled IoT

Simplified Schematic



Pin Configuration and Functions



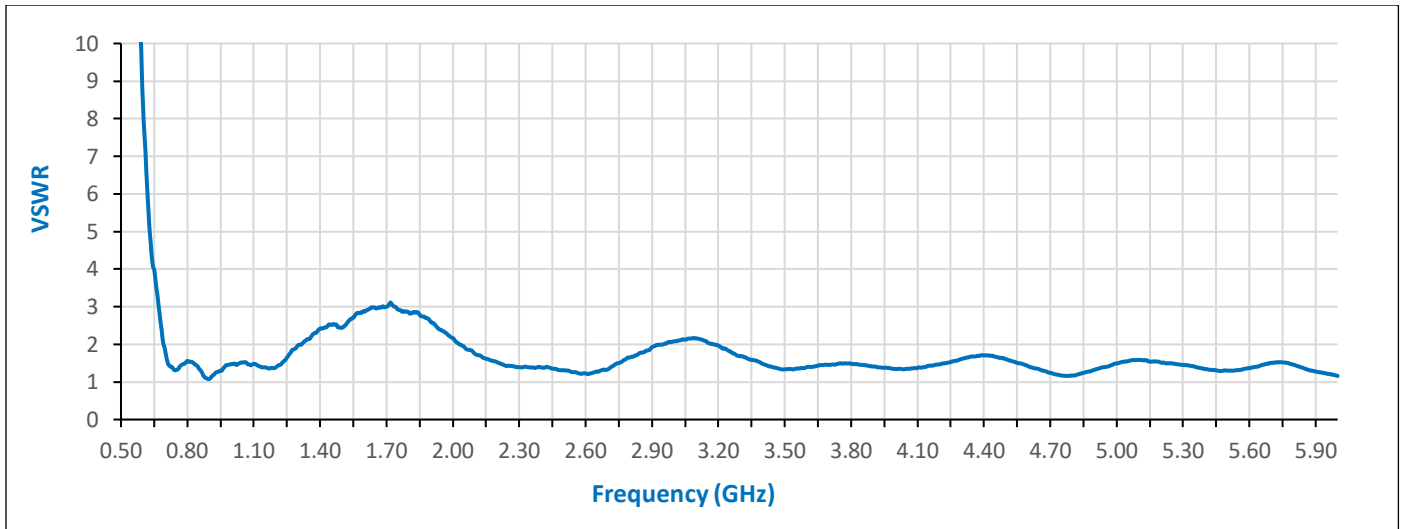
Pin	Function	Type	Description
P_{in/out}	Antenna Port	Input/Output	The input/output SMA port for Tx / Rx

Electrical Specifications

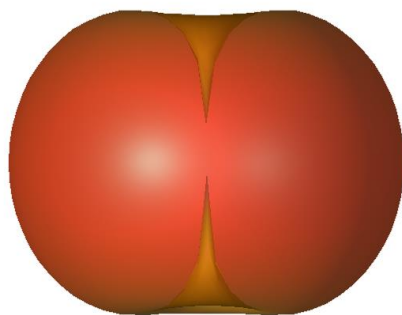
Test Conditions unless otherwise specified: 50 Ohm system

Parameter	Symbol	Min	Typical	Max	Unit
Frequency Range	$f_L - f_H$	0.7	-	10	GHz
-6dB Return Loss Bandwidth	BW_{-6dB}	-	9.3	-	GHz
Gain	@ 500 MHz	-	0.6	-	dBi
	@ 1 GHz	-	2.0	-	dBi
	@ 2.5 GHz	-	1.5	-	dBi
	@ 5 GHz	-	3.4	-	dBi
	@ 7.5 GHz	-	3.3	-	dBi
	@ 10 GHz	-	2.6	-	dBi
Input Return Loss	S11	-42	-10	-6	dB
Voltage Standing Wave Ratio	VSWR	1.1	1.5	3.0	Ratio

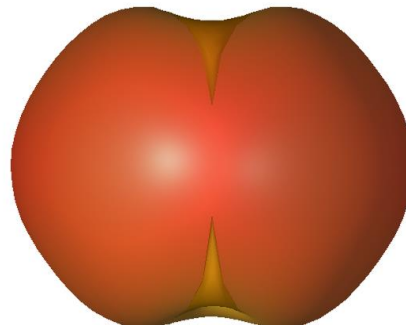
VSWR Response (0 to 6GHz)



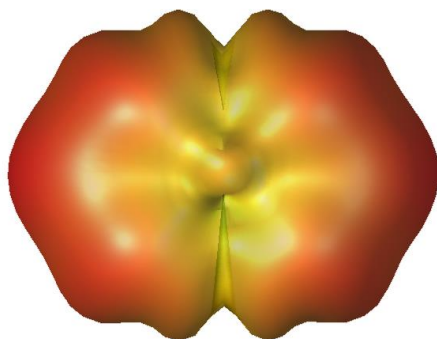
3D Gain Patterns (0.6 to 10GHz)



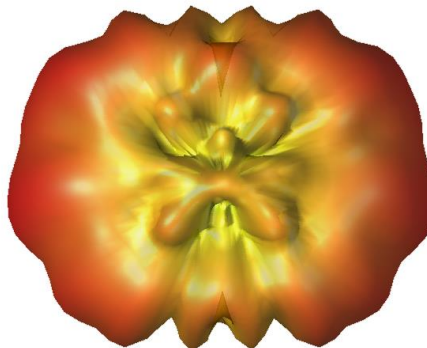
2.0dBi @ 1GHz



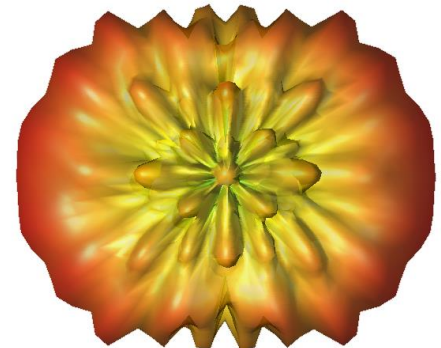
1.5dBi @ 2.5GHz



3.4dBi @ 5GHz



3.3dBi @ 7.5GHz



2.6dBi @ 10GHz

Physical Specifications

Parameter	Value	Unit
Length	120 (4.72)	Millimeter (Inch)
Width	120 (4.72)	Millimeter (Inch)
Height	0.8 (0.03)	Millimeter (Inch)
Weight	26 (0.08)	Gram (Pound)

Accessories



LaNA	NESDR SMART	Variable Gain Amplifier
SKU: 100812	SKU: 100701	SKU: 100826