

# MEATR5-05 Outdoor antenna



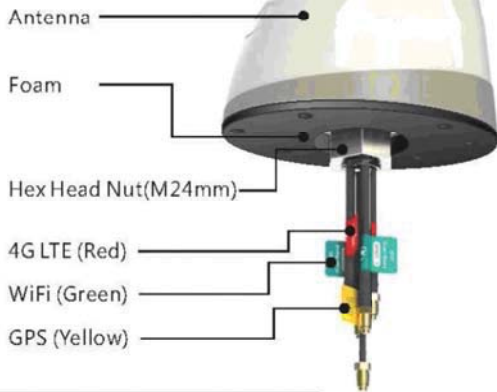
## Introduction

MEATR5-05 is an ALL-IN-ONE highly efficiency antenna, which includes two LTE Full band MIMO Ant, WIFI Dual band MIMO Ant & GPS/GLONASS, use in telematics, transportations and remote monitoring applications ,it has excellent shockproof/ waterproof/wind resistance and it's easy to install this will reduce maintenance cost °

## Installation

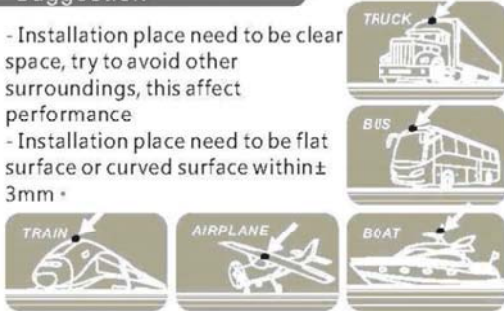
# Silence Scout Antenna Installation

## Product:



## Suggestion

- Installation place need to be clear space, try to avoid other surroundings, this affect performance
- Installation place need to be flat surface or curved surface within  $\pm 3\text{mm}$



Fast  
Accurate  
Reliable

## Installation

### Step 1

- Chose installation place
- Drill a hole, diameter between 25mm~30mm.

### Step 2

- Correct direction for installation.

### Step 3

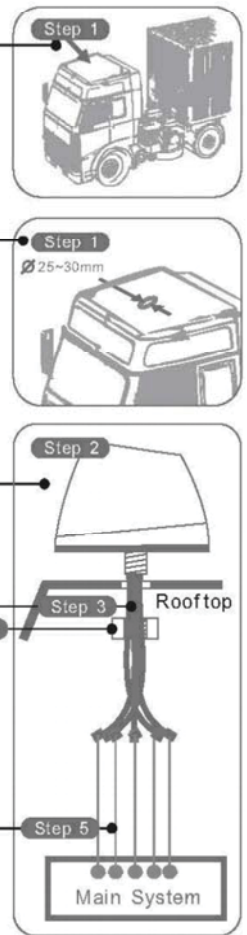
- Cables go down to the hole.

### Step 4

- Put on hex head nut and lock it tight.

### Step 5

- Plug SMA connecter in to system.



SIZE: L 160 x W106 x H102mm

Waterproof Level: IP67

Material: PC-540 PC/ABS Alloy

Operating Temperature:  $-40^{\circ}\text{C} \sim +80^{\circ}\text{C}$

## Introduction

### Test Condition

Antenna	Length	Cable	Connector
LTE full band MIMO 1	3M	CFD-200	SMA
LTE full band MIMO 2	3M	CFD-200	SMA
Wi-Fi dual band MIMO 1	3M	CFD-200	SMA
Wi-Fi dual band MIMO 2	3M	CFD-200	SMA
GPS	3M	RG-174	SMA

### LTE Full Band

Frequency	Peak Gain	Efficiency	VSWR	Polarisation	Impedance	Radiation Pattern
698~960MHz	3.4dBi	78%	$\leq 3$	Linear	50Ω	Omni
1710~2170MHz	4.0dBi	95%	$\leq 3$	Linear	50Ω	Omni
2500~2600MHz	3.8dBi	68%	$\leq 3$	Linear	50Ω	Omni

### Wi-Fi Daul Band

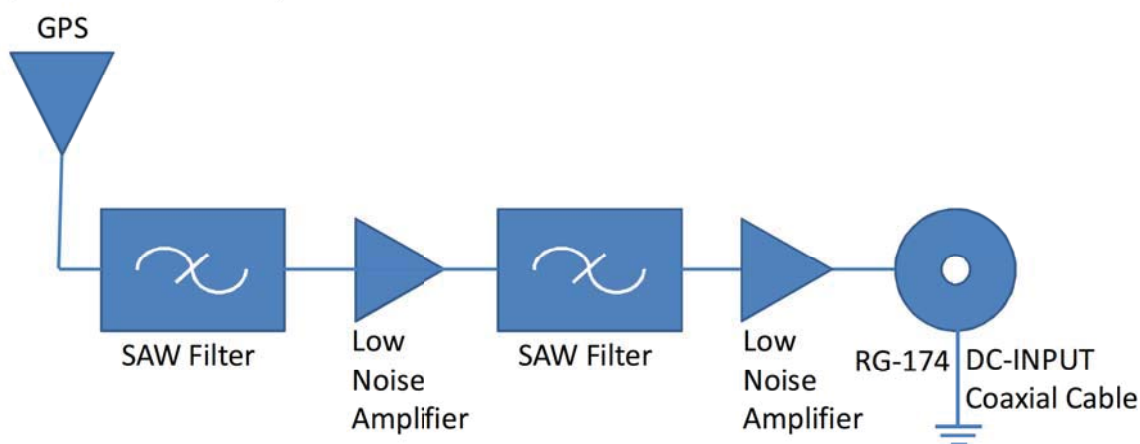
Frequency	Peak Gain	Efficiency	VSWR	Polarisation	Impedance	Radiation Pattern
2400~2483MHz	4.0dBi	80%	$\leq 3$	Linear	50Ω	Omni
5150~5850MHz	4.0dBi	68%	$\leq 3$	Linear	50Ω	Omni

### GPS Patch

Frequency	Peak Gain	Efficiency	VSWR	Polarisation	Impedance	Radiation
1575.42MHz	4.0dBi	50%	$\leq 2$	RHCP	50Ω	Omni

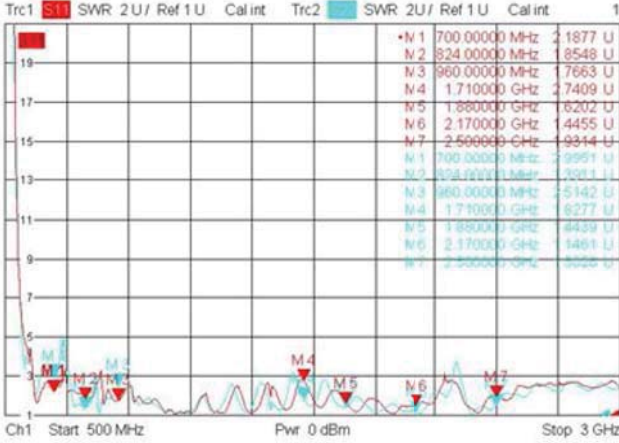
### GPS LNA

Frequency	Voltage	Current	VSWR	Noise Figure	Gain	Impedance
1575.42MHz	3.3~5VDC	15mA	$\leq 2$	2.5	30dBi	50Ω

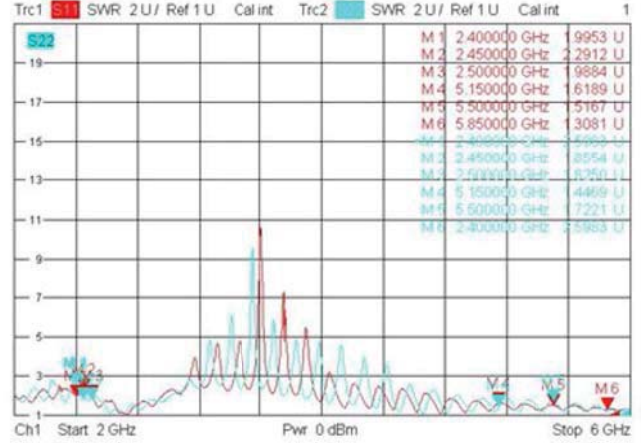


### VSWR and Isolation

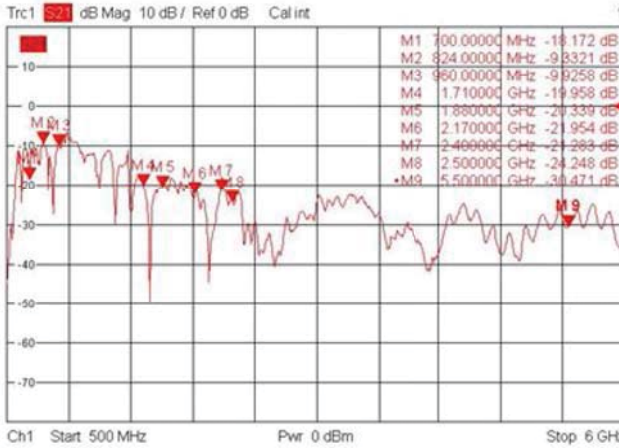
### LTE Antenna VSWR



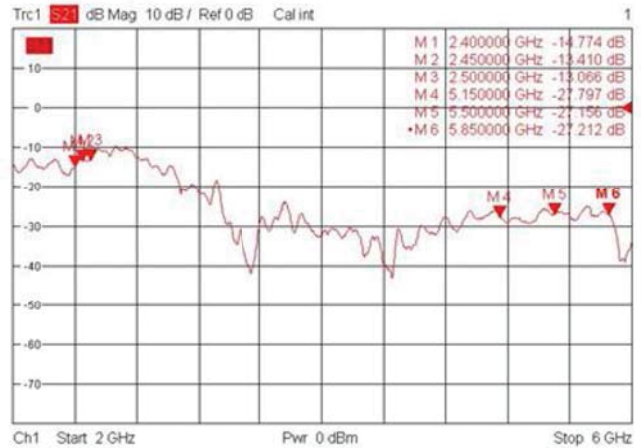
### Wi-Fi Antenna VSWR



### LTE Antenna Isolation MIMO



### Wi-Fi Antenna Isolation MIMO



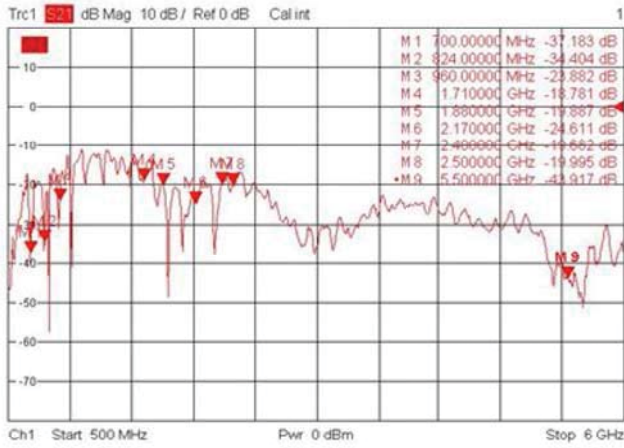
### LTE 1 vs Wi-Fi 1 Isolation



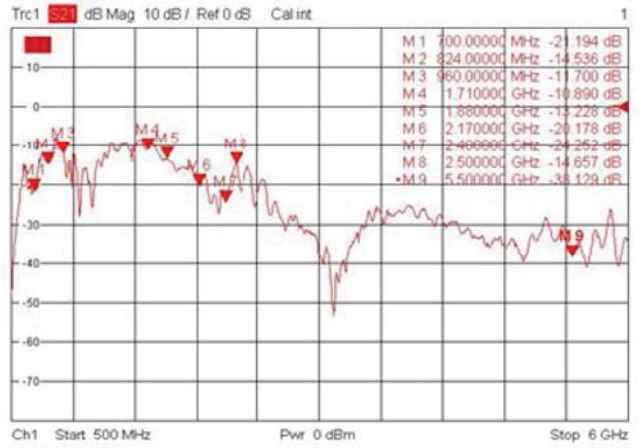
### LTE 1 vs Wi-Fi 2 Isolation



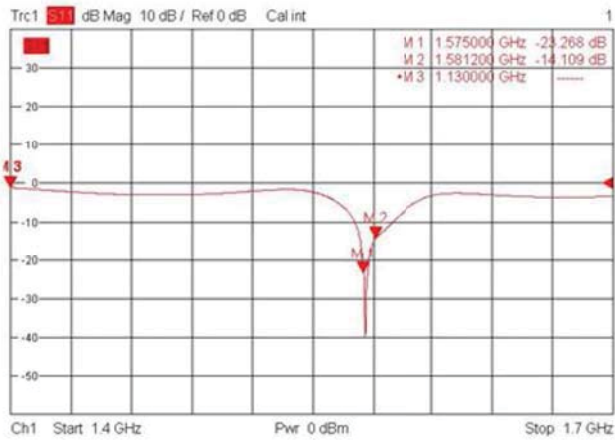
### LTE 2 vs Wi-Fi 1 Isolation



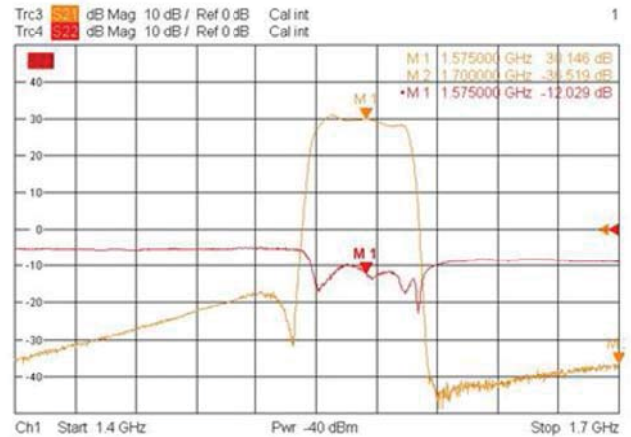
### LTE 2 vs Wi-Fi 2 Isolation



### GPS S11



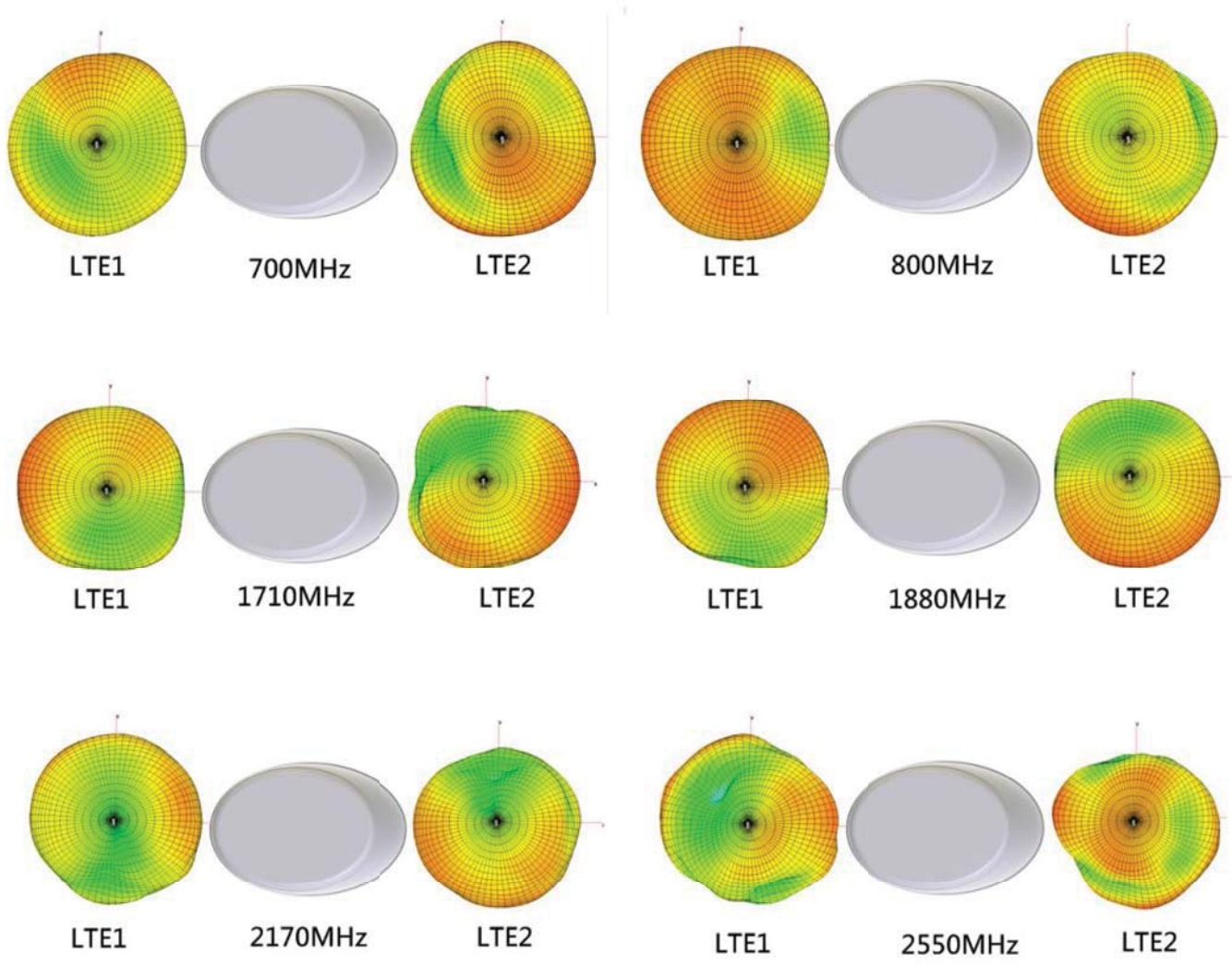
### GPS LNA



## Radiation

### LTE antenna Radiation Pattern

for reference only

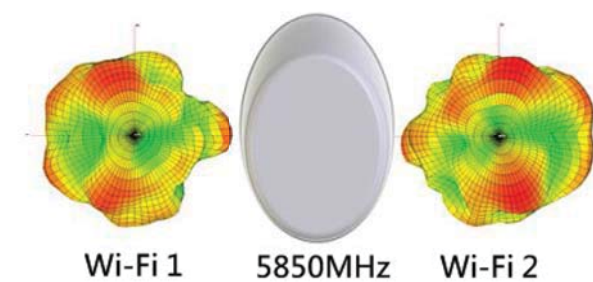
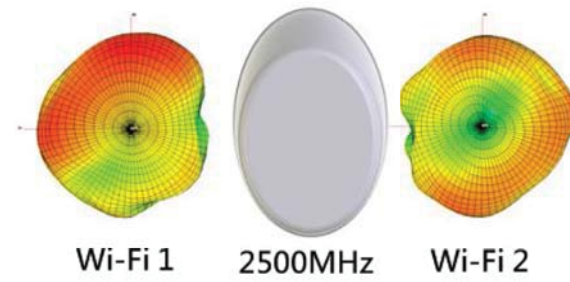
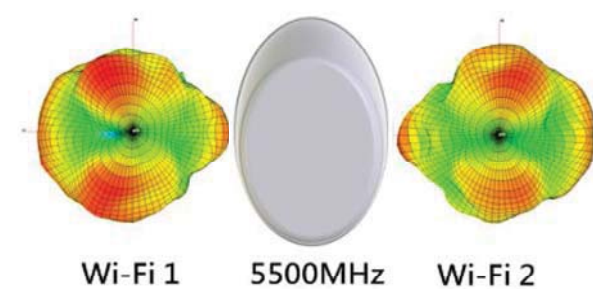
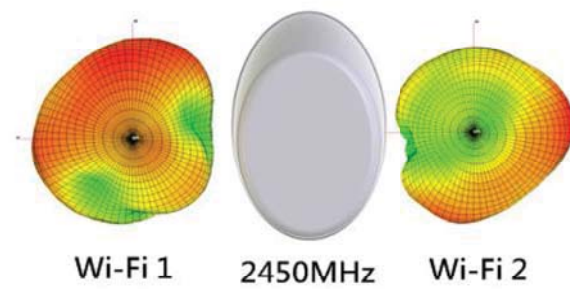
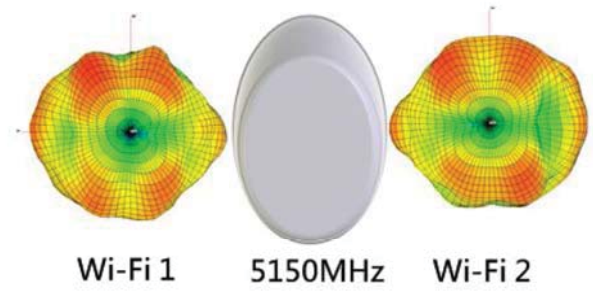
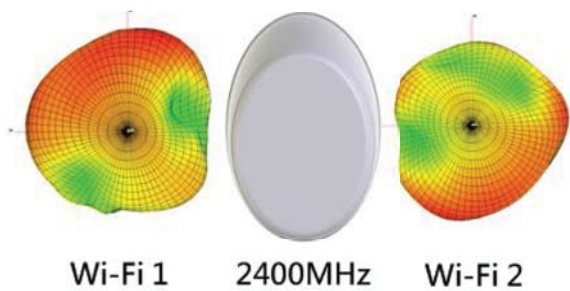


**LTE Antenna**

Frequency (MHz)	700	800	1710	1880	2170	2550
Efficiency (%)	80.4	80.8	95.6	51.1	53.1	68.9
Gain (dBi)	3.2	3.0	4.1	3.7	3.5	3.8

**Wi-Fi Antenna Radiation Pattern**

for reference only



**Wi-Fi Antenna**

Frequency (MHz)	2400	2450	2500	5150	5500	5850
Efficiency (%)	82.6	80.8	74.4	68.4	67.5	58.2
Gain (dBi)	4.2	4.4	4.3	3.2	4.1	3.5