



# TAOGLAS®



## Datasheet

### Meteor

**Part No:**  
FW.86.B.NTY.M

### Description:

Meteor-868MHz Flexible Whip Monopole Antenna

### Features:

External 868MHz Monopole Antenna  
Rugged Design for Outdoor Use  
Robust Inner Steel Core  
Antenna Height 243mm  
N Type(M) Straight Connector  
IP65 dust and water-resistant  
\*Tested on 30\*30cm Ground Plane  
RoHS Compliant

1. Introduction	3
2. Specifications	4
3. Antenna Characteristics	5
4. Radiation Patterns	7
5. Mechanical Drawing	9
6. Packaging	10
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Changelog	11

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## 1. Introduction



The FW.86 is a flexible 868MHz whip antenna with an N type(M) connector for outdoor use. It features excellent efficiency and high peak gain at 868MHz on a 30\*30cm ground plane.

The antenna was specifically developed for applications such as weather monitoring systems, motion/vibration sensors, pollution monitoring, and border guard monitoring systems.

The FW.86 works at 868MHz with high efficiency, meaning that it allows your radio to consume less power than with a lower efficiency antenna when transferring data.

The whip is made of a flexible inner steel core covered by PE so it is extremely resistant to abrasion and maintains its original shape and RF performance. This rugged design and IP65 rating has been tested by our customers to withstand environmental stress and moderate physical shock in the field.

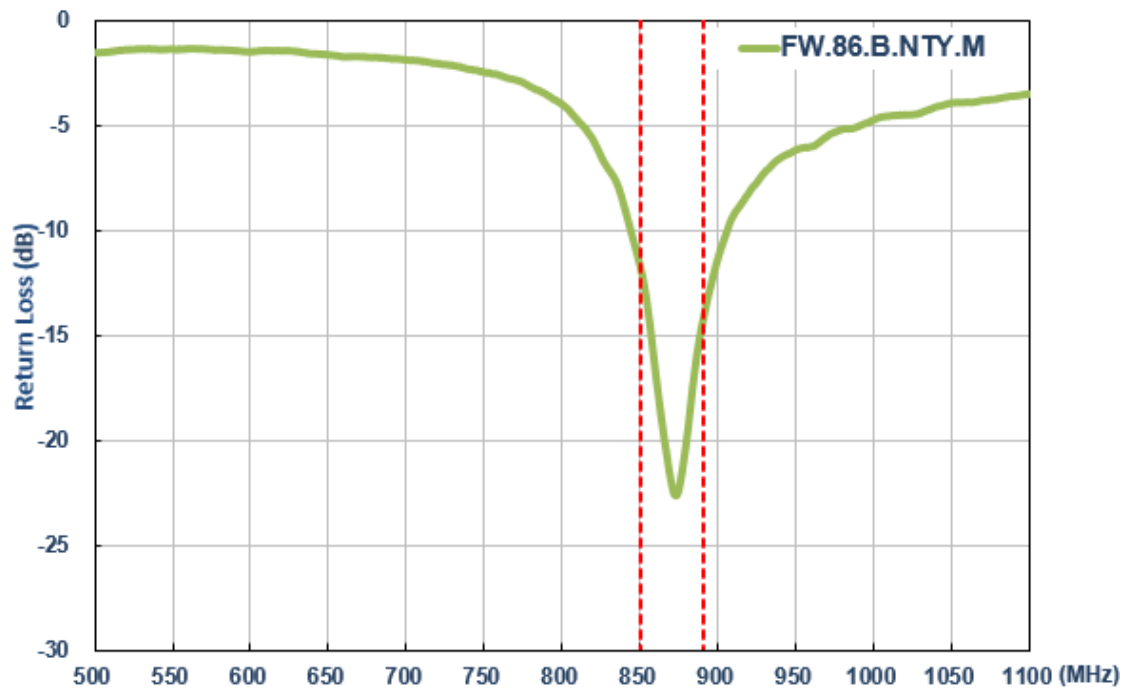
The FW.86.B.NTY.M 868MHz whip antenna, with an N type male connector, provides a simple solution to any outdoor devices where the FW.86 antenna's rugged design and high efficiency can provide the best value to the application.

## 2. Specifications

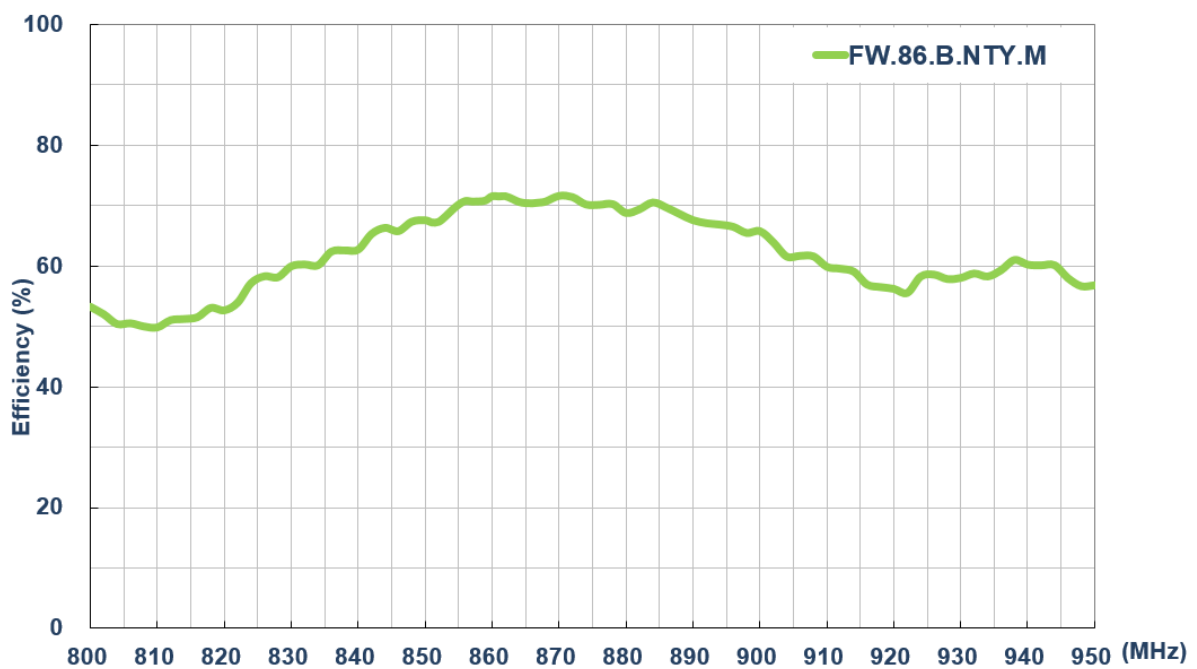
<b>FW.86.B.NTY.M</b>			
Center Frequency	850MHz	868MHz	890MHz
Efficiency	67.52%	70.60%	67.54%
Peak Gain	1.82dBi	2.82dBi	3.58dBi
Average Gain	-1.71dB	-1.51dB	-1.70dB
Impedance	50Ω		
Polarization	Linear		
Radiation Pattern	Omnidirectional		
Input Power	2 W		
Tested Power	10 W		
<b>Mechanical</b>			
Dimensions	243 ± 5.3mm		
Base Diameter	20 ± 0.6mm		
Whip Diameter	6.2 ± 0.6mm		
Casing	ABS		
Connector	N Type(M) Straight		
Weight	48.5g		
Dust and Water Resistance	IP65		
<b>Environmental</b>			
Temperature Range	-40°C to 85°C		
Humidity	Non-condensing 65°C 95% RH		

### 3. Antenna Characteristics

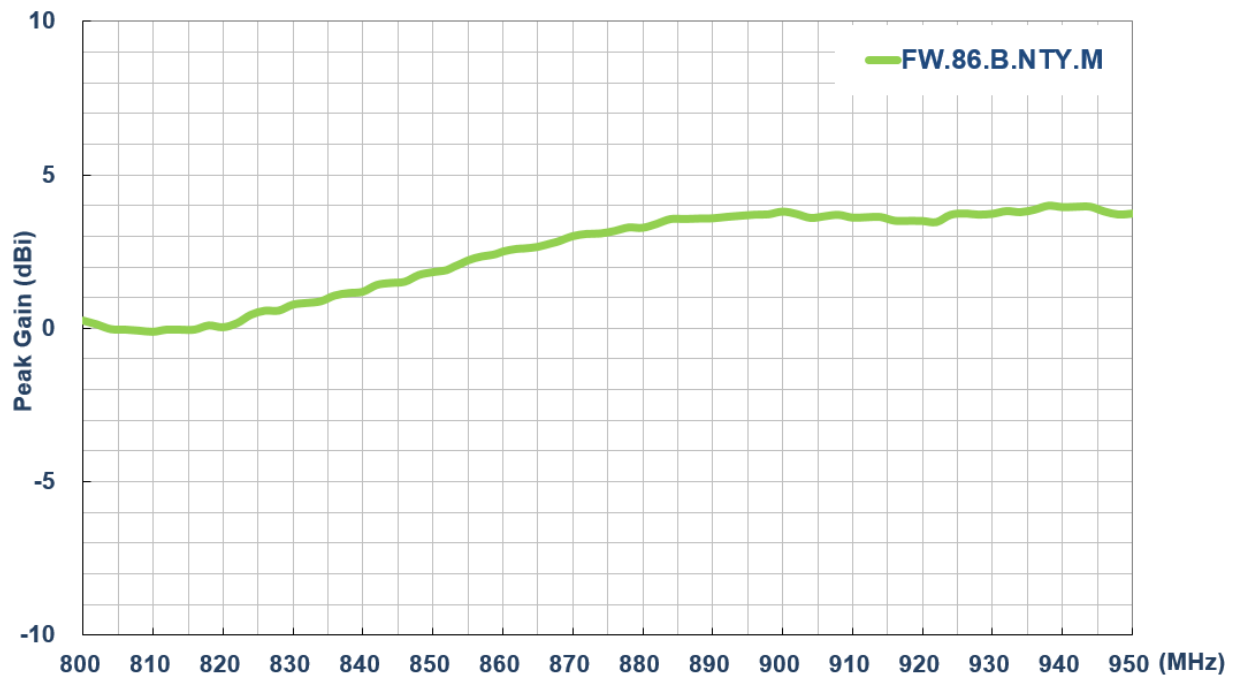
#### 3.1 Return Loss



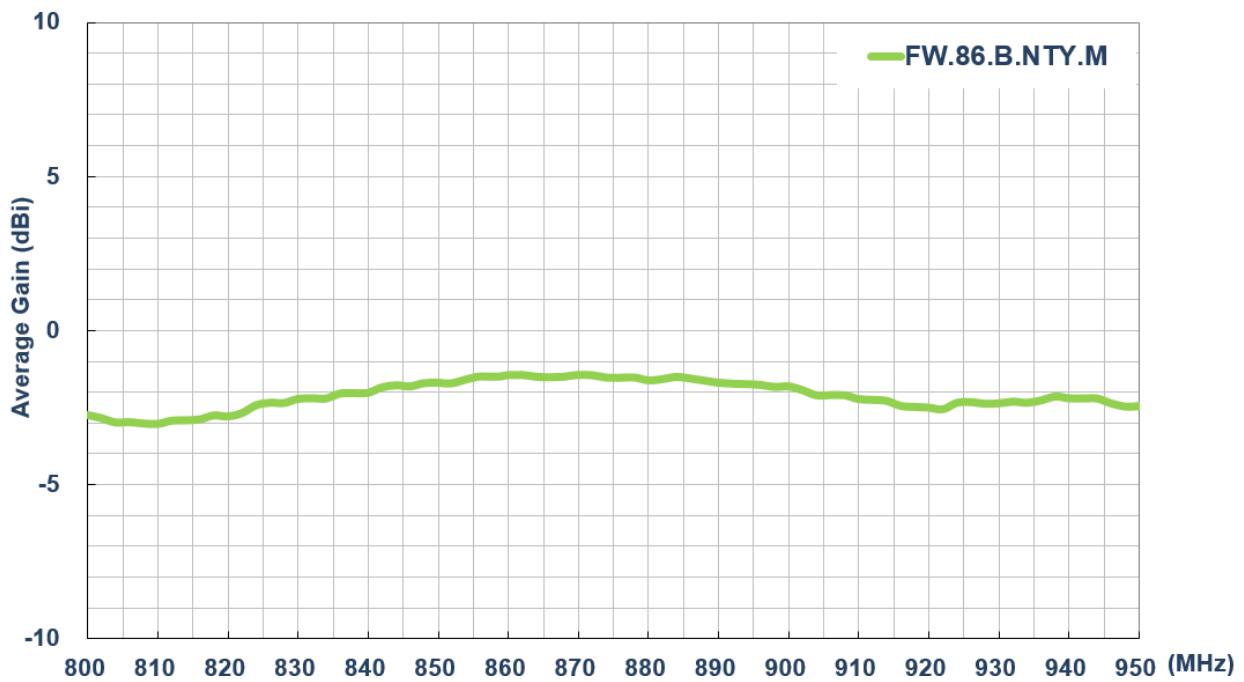
#### 3.2 Efficiency



### 3.3 Peak Gain

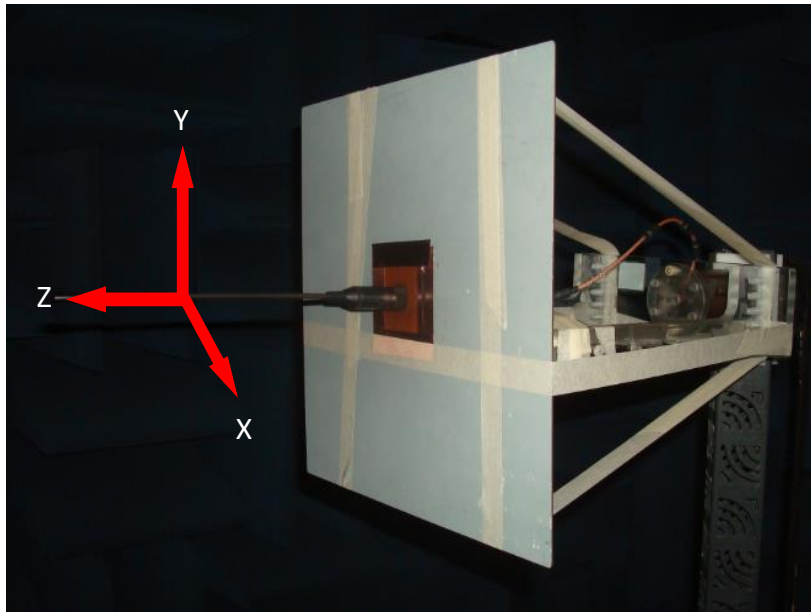


### 3.4 Average Gain



## 4. Radiation Patterns

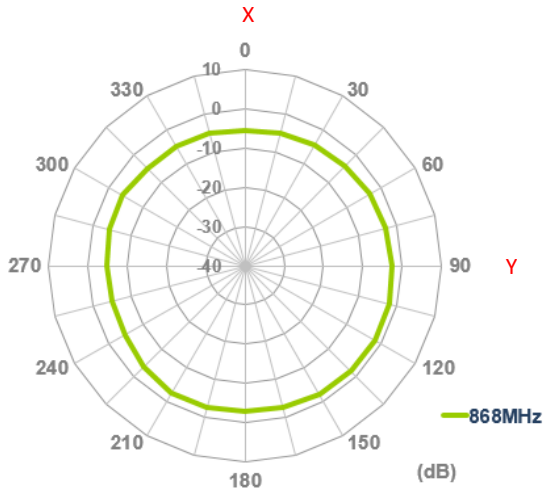
### 4.1 Test Setup



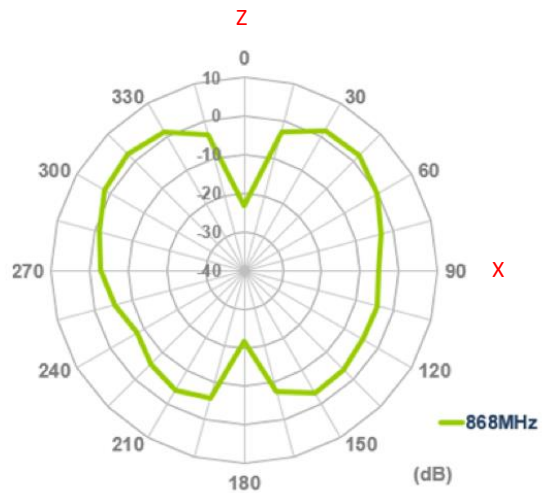
On 30x30 cm ground plane

4.2 3D and 2D Radiation Patterns (On 30cm\*30cm Ground Plane)

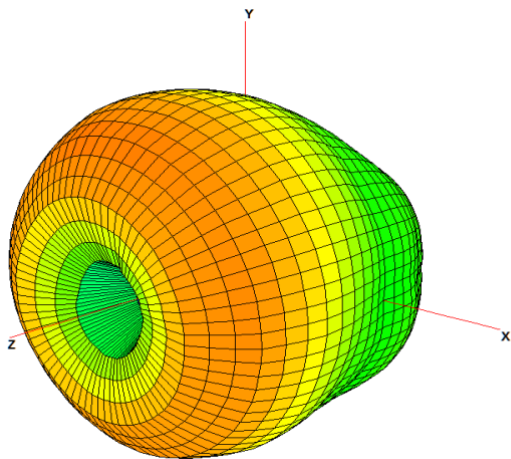
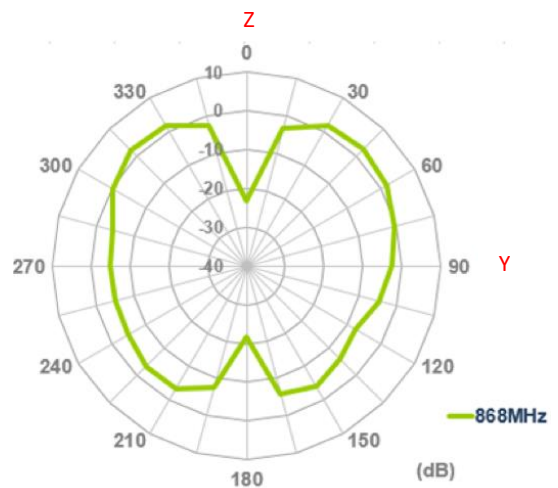
XY Plane



XZ Plane



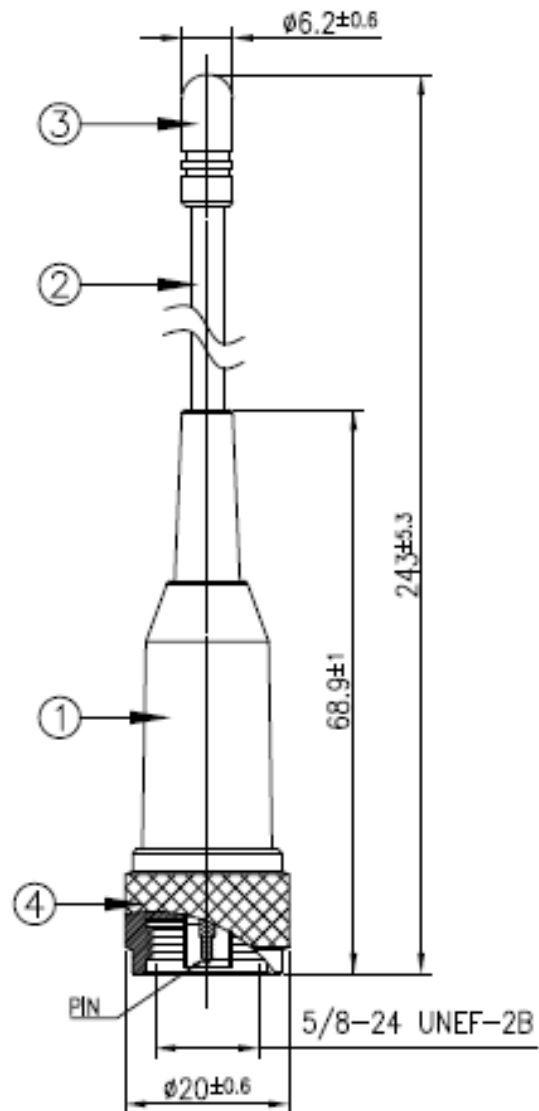
YZ Plane



3D Radiation Pattern @ 868MHz



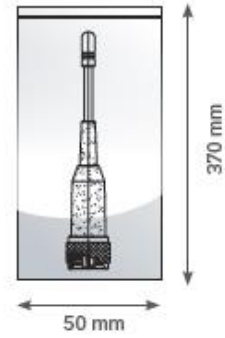
## 5. Mechanical Drawing (Units: mm)



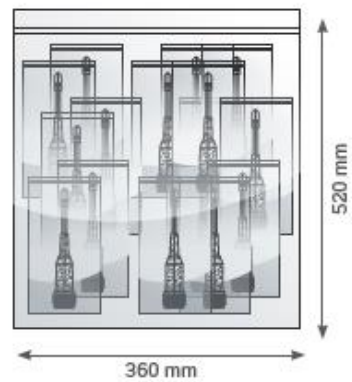
	Name	P/N	Material	Finish	QTY
1	Housing	000113A000002A	ABS	Black	1
2	Flexible Whip	001113A000002A	Steel+PE Jacket	Black	1
3	Cap	000713A000002A	POM	Black	1
4	N Type (M)ST	211014A000002A	Brass	Black	1

## 6. Packaging

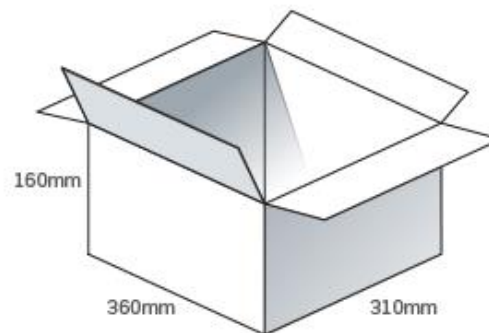
1pcs FW.86.B.NTY.M per PE Bag  
 Bag Dimensions - 50\*370mm  
 Weight - 40g



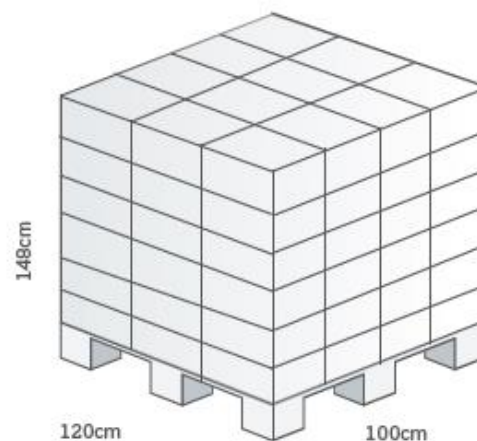
50 PE Bags per Large PE Bag  
 50 pcs FW.86.B.NTY.M per Large PE Bag  
 Large PE Bag Dimensions - 360\*520mm  
 Weight - 2.5Kg



150 pcs FW.86.B.NTY.M per Carton  
 Carton Dimensions - 360\*310\*160mm  
 Weight - 7.5Kg



Pallet Dimensions:  
 120\*100\*148cm  
 72 Cartons Per Pallet  
 12 Cartons Per Layer  
 6 Layers



Changelog for the datasheet

**SPE-16-8-080 - FW.86.B.NTY.M**

<b>Revision: B</b>	
Date:	2019-08-16
Changes:	Updated to new format
Changes Made by:	Dan Cantwell

**Previous Revisions**

<b>Revision: A (Original First Release)</b>	
Date:	2016-12-20
Notes:	
Author:	Andy Mahoney
