

# ANTDOM-XX-CT-WPM GPS ANTENNA

## Functional Specification



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## Overview

Inventek's GPS antenna , part number, ANTDOM-XX-CT-WPM is designed to work with a variety of GPS receivers. The active antenna is waterproof and can be used in a variety of applications including automotive with an impedance of 50 ohms.

The Antenna , P/N ANTDOM-XX-CT-WPM lets you integrate GPS functionality into your product quickly and easily. It's suitable for a wide range of applications, including the most compact:

- Hand-held personal positioning and navigation
- External PDAs, Pocket PCs and other hand-held computers
- Fleet management
- Asset tracking
- Automatic vehicle location

The ANTDOM-XX-CT-WPM world class performance suits it to navigating urban canyons, as well as wide-open spaces. Being lead-free, it complies with the European Union's RoHS (Restriction of Hazardous Substances) directive.

## Mechanical

Table 1 summarizes the dimensions of the Antenna.

Parameter	Value
Circular	45 x 45 mm
Width	14.5±0.1 mm
Color	Black
Weight	110 ± 10G including 5 Meter cable
Ohms	50
Pull Strength	6 Kg

Table 1 Mechanical

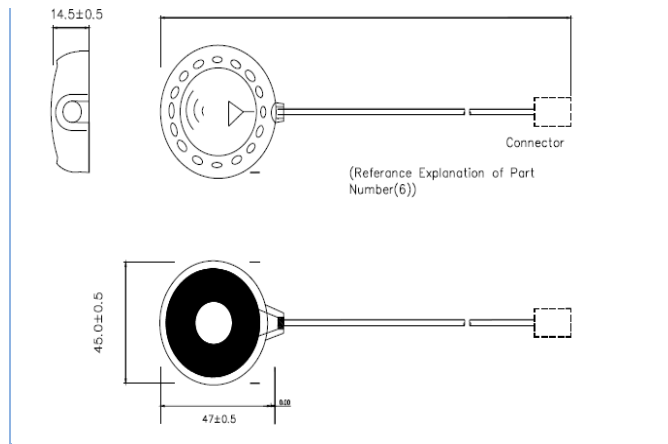


Figure 1 ANTDOM Dimensions (Inches)

## Thermal

Name	
Temperature range	40 to +90 °C
Waterproof	Yes, per IP67 Standard

Table 2 Antenna Temperature

## Power

Table 3 summarizes the Antenna's power requirements.

Parameter	Value
VCC	2.7–5.v V dc
Continuous tracking	10 ma @ 3 Volts

**Table 3 Power Requirements**

You can reduce power consumption by turning on the antenna and only when needed to acquire a fix.

## Patch Characteristics

The Patch characteristics are measured with 70x70 mm ground plane in an anechoic chamber. Active antenna ESD test (working): >16kv (contact discharge with radome)

Patch	Value
Center Frequency	575.42 +/- 1.023 Mhz (with radome and measured by LNA ground plane)
Bandwidth (10 dB return loss)	10 Mhz min
Gain at Zenith	-5.0 dBic typical
Gain at 10 degrees elevation	-1.0 dBic min
Polarization	R.H.C.P
Axial Ratio	1.0 dB Typical

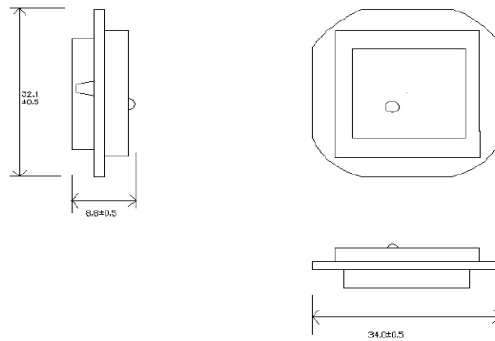


Figure 6 Patch Size

## LNA Characteristics

LNA	Value
Gain	26 to 35 dB ( @ 3volts 30 dB)
Noise figure	1.4 dB Typical (@ 3 volts 1.35dB)
VSWR	DC= 2.0 max

Saw Filter Out of Band	fo
7 db min	fo ± 20 MHz
20 db min	fo ± 50 MHz
20 db min	fo ± 50 MHz

Table 4 Filer out of Band

## Far field amplitude excluding the LNA gain

Here is an example of Radiation Pattern (Exclude LNA Gain) (90°) Far field amplitude excluding the LNA gain

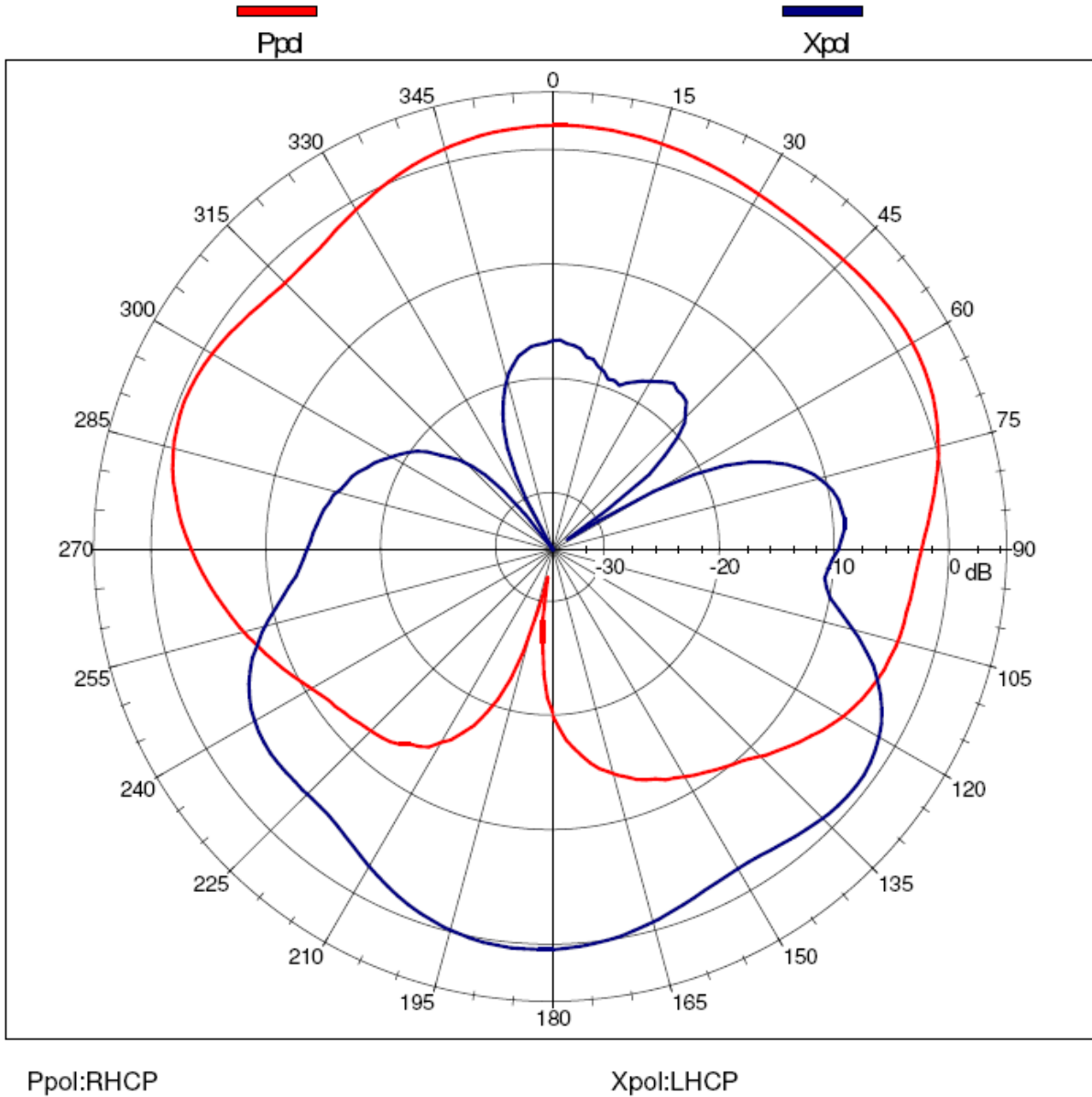
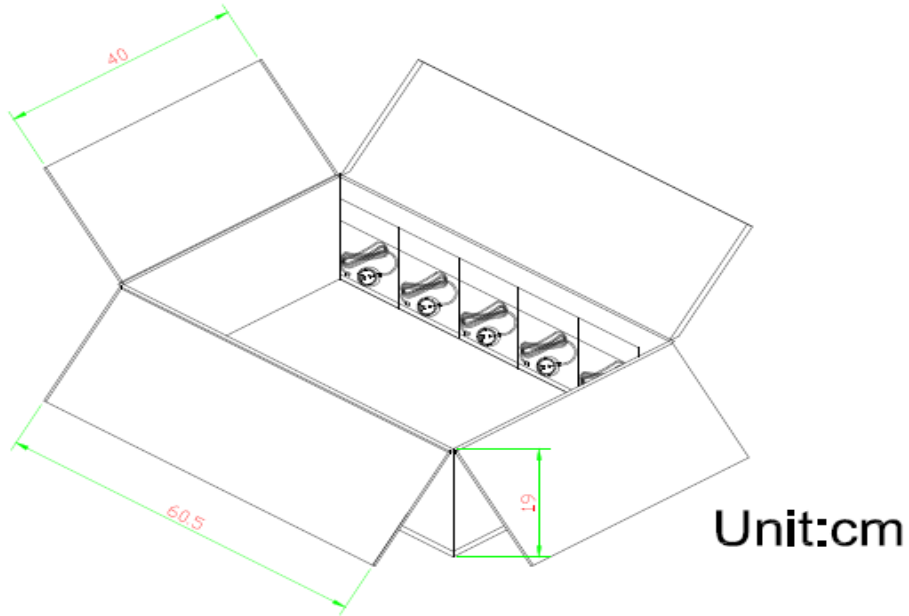


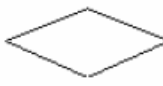

Figure 3 [Radiation Pattern \(Exclude LNA Gain\) \(90°\)](#)



## Shipping

- Each antenna is individually packaged in Plastic bags
- All bags are sealed, impulse sealer
- 100 units per box
- All material and components are ROHS compliance



605		400		
				200
 C/NO.	ITEM NO. QTY: PCS. N.W.: KGS. G.W.: KGS. GUFT:1.2	 C/NO.	ITEM NO. QTY: PCS. N.W.: KGS. G.W.: KGS. GUFT:1.2	190
				200

Tolerances: X=+/-10mm

unit:mm

Table 5 Shipping specification

## Ordering Information

The Antenn is RoHS-compliant and you can custom configure the cable length, type and connector type. Min orders are required for custom builds. Please specify the corresponding part number when ordering.

Build a part number:

The following ordering configurations are available by order:

P/N: ANTDOM-XX-CT-WPM

(XX) = Cable length 05: 5 Meters , 10: 10 Meters , xx: Custom length in meters

(CT) = Connector Types

00 : No connector

01: SMA plug (Male) (standard)

02: SMA jack (Female)

xxx: Custom connector

Ordering Part number sequence example (WP = Waterproof) (M= Magnetic)

ANTDOM-05-01-WPM (5 meter cable with Male SMA, waterproof & magnet)

NTDOM-05-01-WP (5 meter cable with Male SMA, waterproof & no magnet)

Standard Parts:

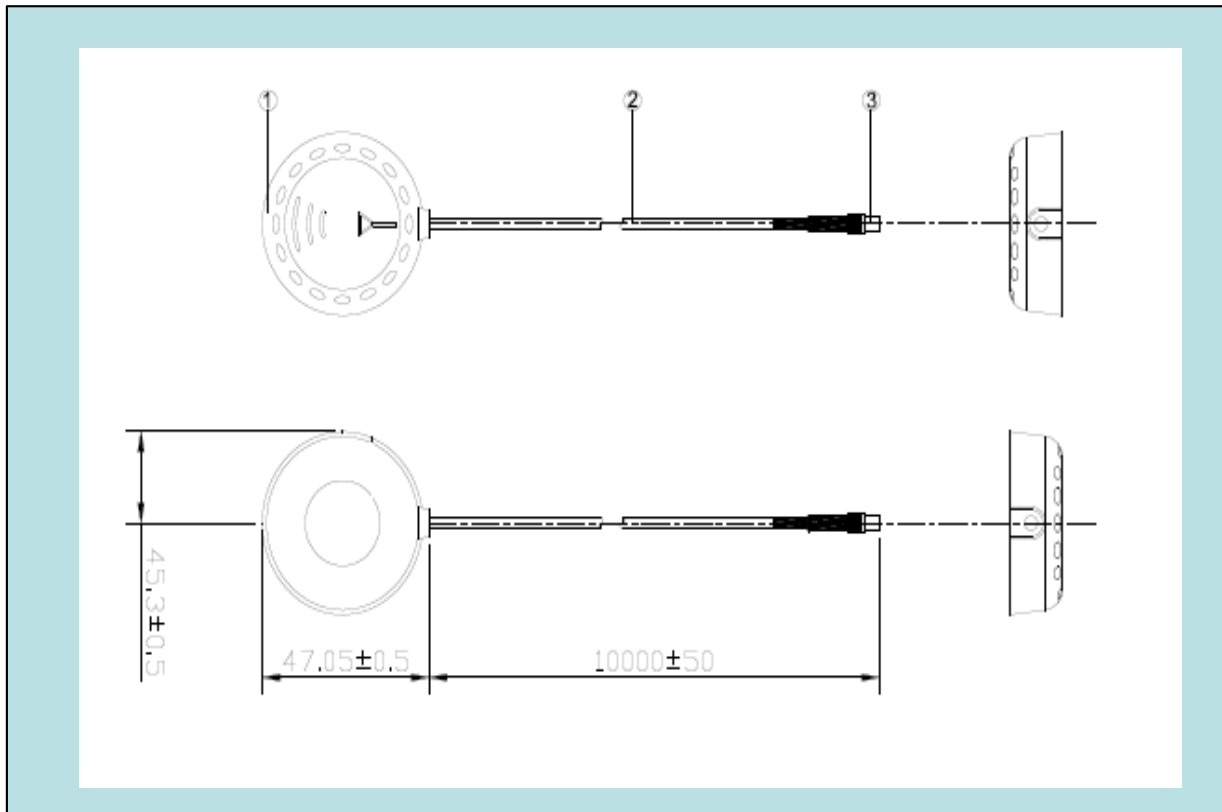
Part No.	Antenna Type	Connector Type	Cable Length	Magnetic
ANTDOM-05-01-WPM	Active Dome	Male SMA	5 Meter	Yes
ANTDOM-05-01-WP	Active Dome	Male SMA	5 Meter	No
ANTDOM-10-MMCX-WPM	Active Dome	Male MCX	10 Meter	Yes

## ANTDOM-10-MMCX-WPM Specification

The Antennas is RoHS-compliant and you can custom configure the cable length, type and connector type. Min orders are required for custom builds. Please specify the corresponding part number when ordering.

### MMCX ACTIVE PATCH

GPS Active Dome Antenna , MMCX, 10 M RG-174 cable, Waterproof and magnetic bottom



1	Dome	ABS+PC	Black
2	Cable	RG-174	10050mm
3	MCX Plug	Brass	Au Plated
4	Shrink Tub	PVC	Black

**Not to Scale**                      **Unit :** mm  
**Title:** GPS MMCX Water Proof

**PN:** ANTDOM-10-MMCX-WPM  
**ROHS**

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