

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

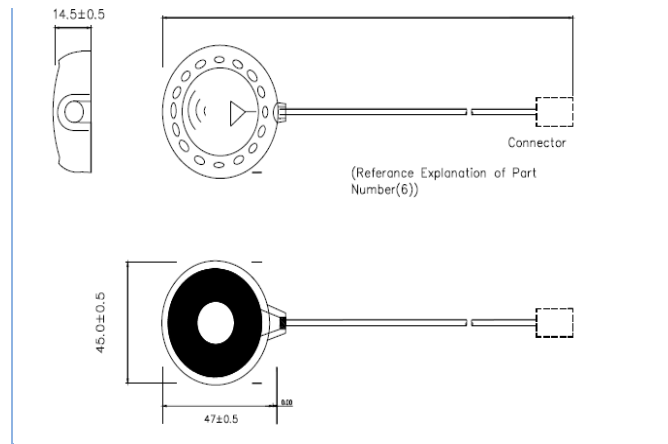


Figure 1 ANTDOM Dimensions (Inches)

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

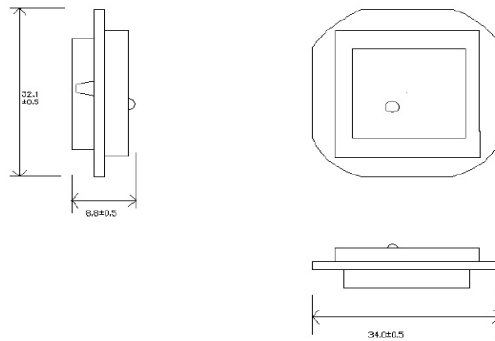


Figure 6 Patch Size

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

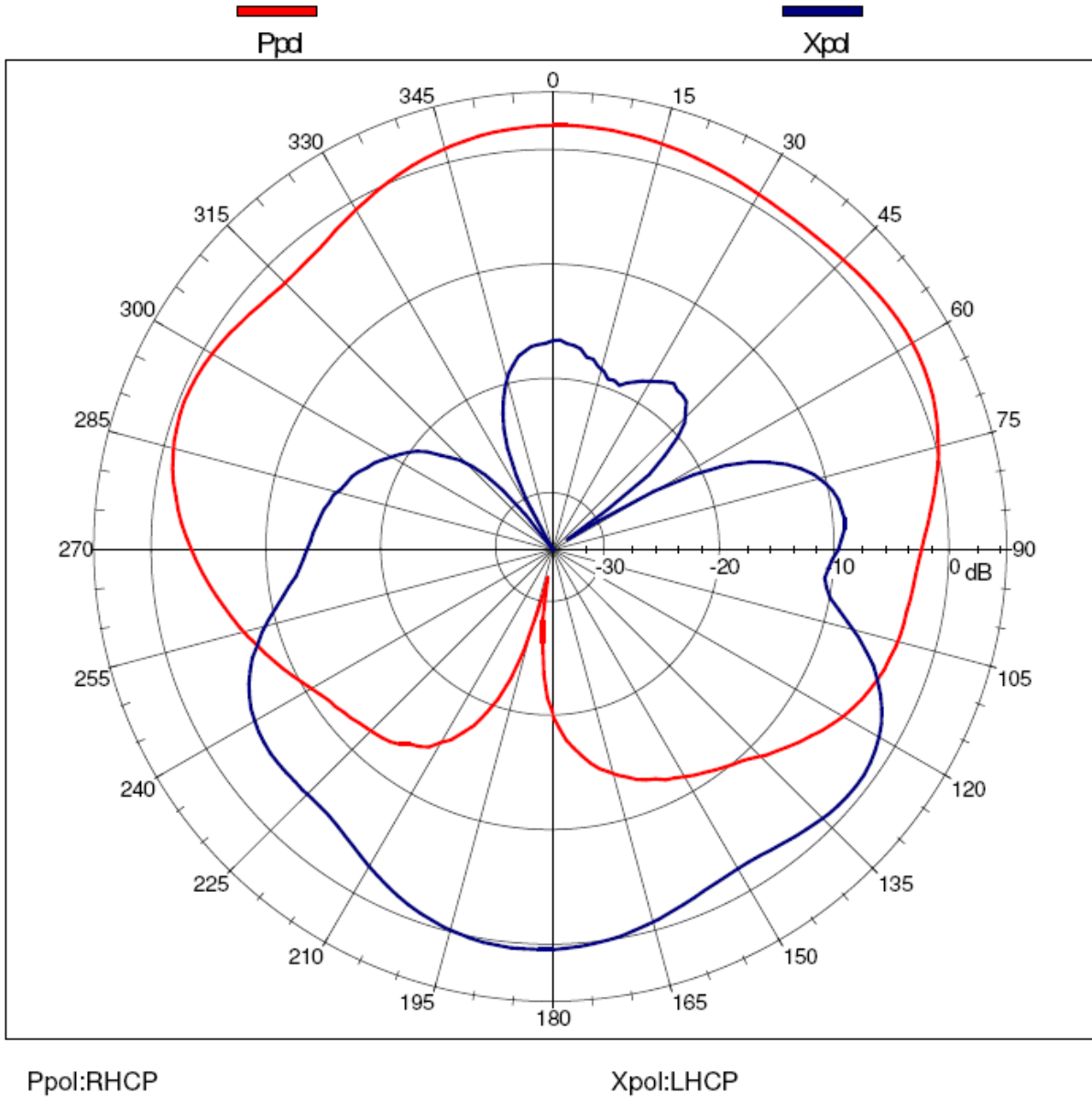
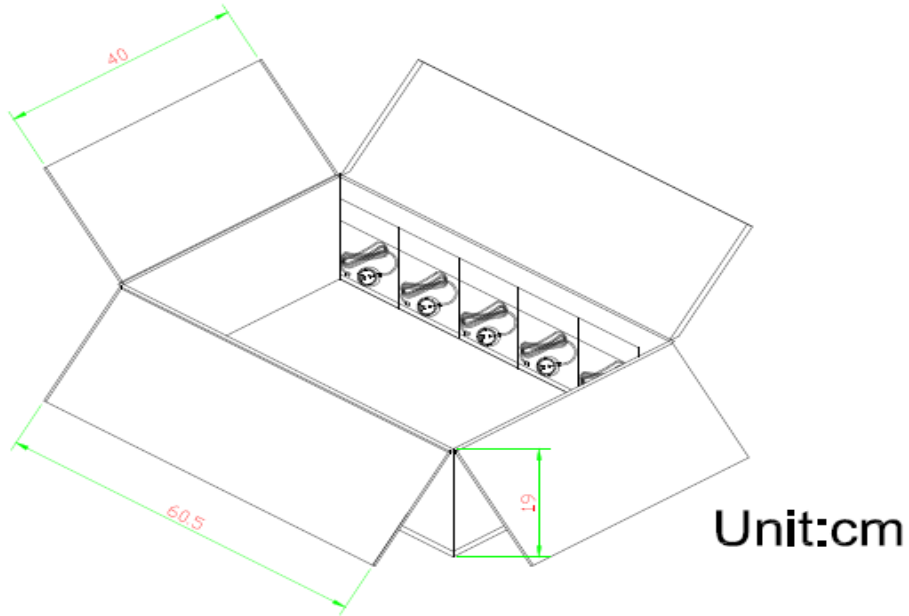
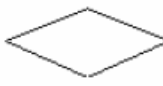



Figure 3 [Radiation Pattern \(Exclude LNA Gain\) \(90°\)](#)

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:

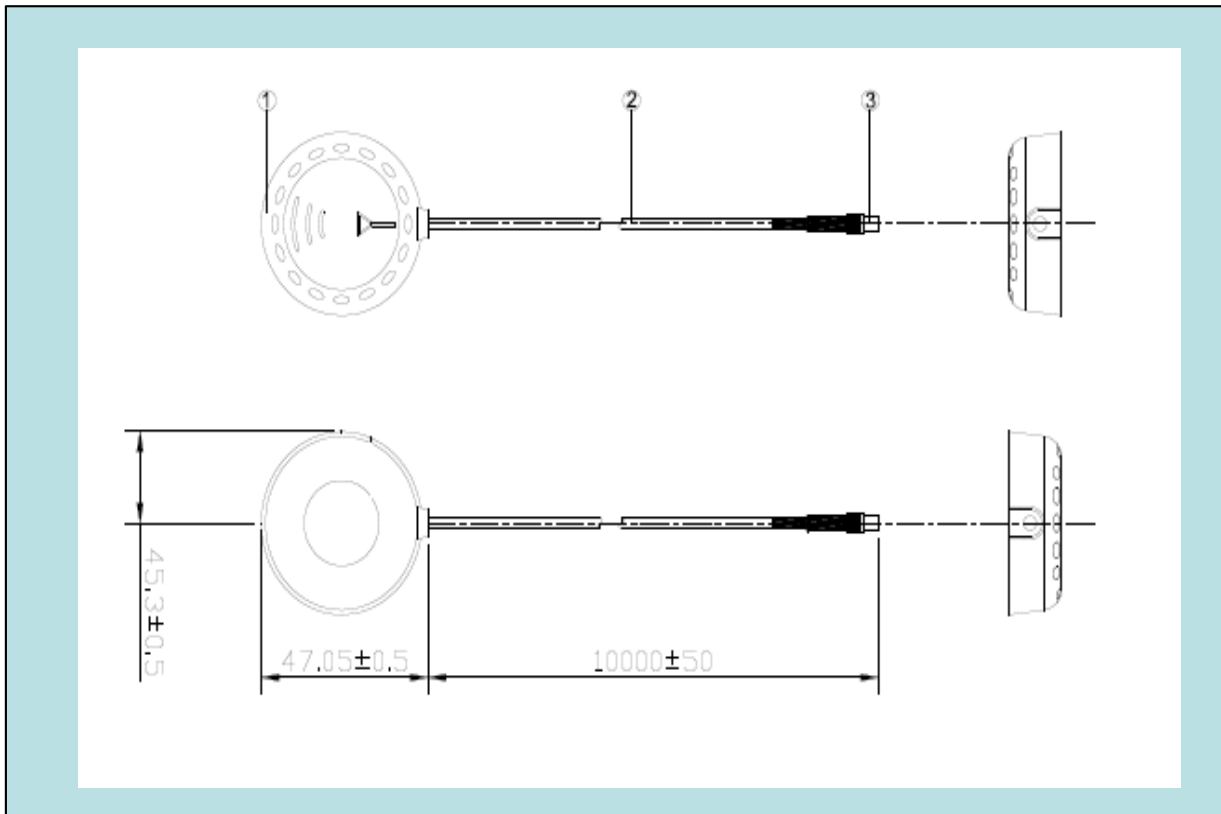
Part No.	Antenna Type	Connector Type	Cable Length	Magnetic
ANTDOM-05-01-WPM	Active Dome	Male SMA	5 Meter	Yes
ANTDOM-05-01-WP	Active Dome	Male SMA	5 Meter	No
ANTDOM-10-MMCX-WPM	Active Dome	Male MCX	10 Meter	Yes

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

PN: ANTDOM-10-MMCX-WPM
ROHS

Title: GPS MMCX Water Proof

Mouser Electronics

Authorized Distributor

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[ANTDOM-05-01-WPM](#)

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