

ANTDOM-XX-CT-WPM GPS ANTENNA

Functional Specification



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Contents

Contents	3
Overview.....	4
Mechanical	5
Thermal.....	5
Power	6
Patch Characteristics.....	7
LNA Characteristics.....	7
Far field amplitude excluding the LNA gain.....	8
Shipping.....	9
Ordering Information	10
ANTDOM-10-MMCX-WPM Specification	11
Figure 1 ANTDOM Dimensions (Inches)	5
Table 1 Mechanical.....	5
Table 2 Antenna Temperature	5
Table 3 Power Requirements	6
Table 4 Filer out of Band	7
Table 5 Shipping specification	9

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

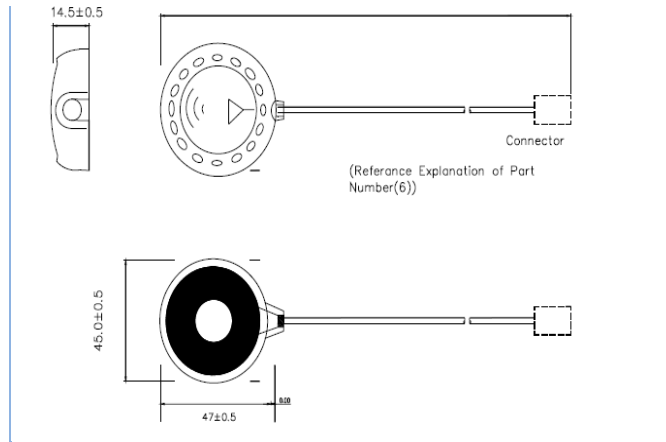


Figure 1 ANTDOM Dimensions (Inches)

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

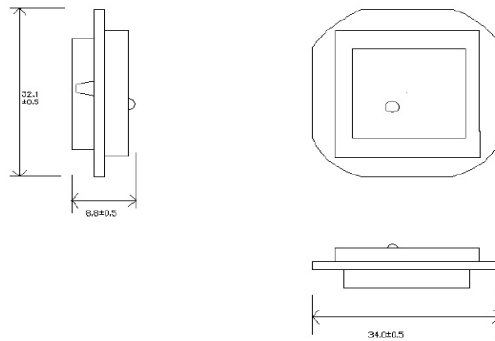


Figure 6 Patch Size

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

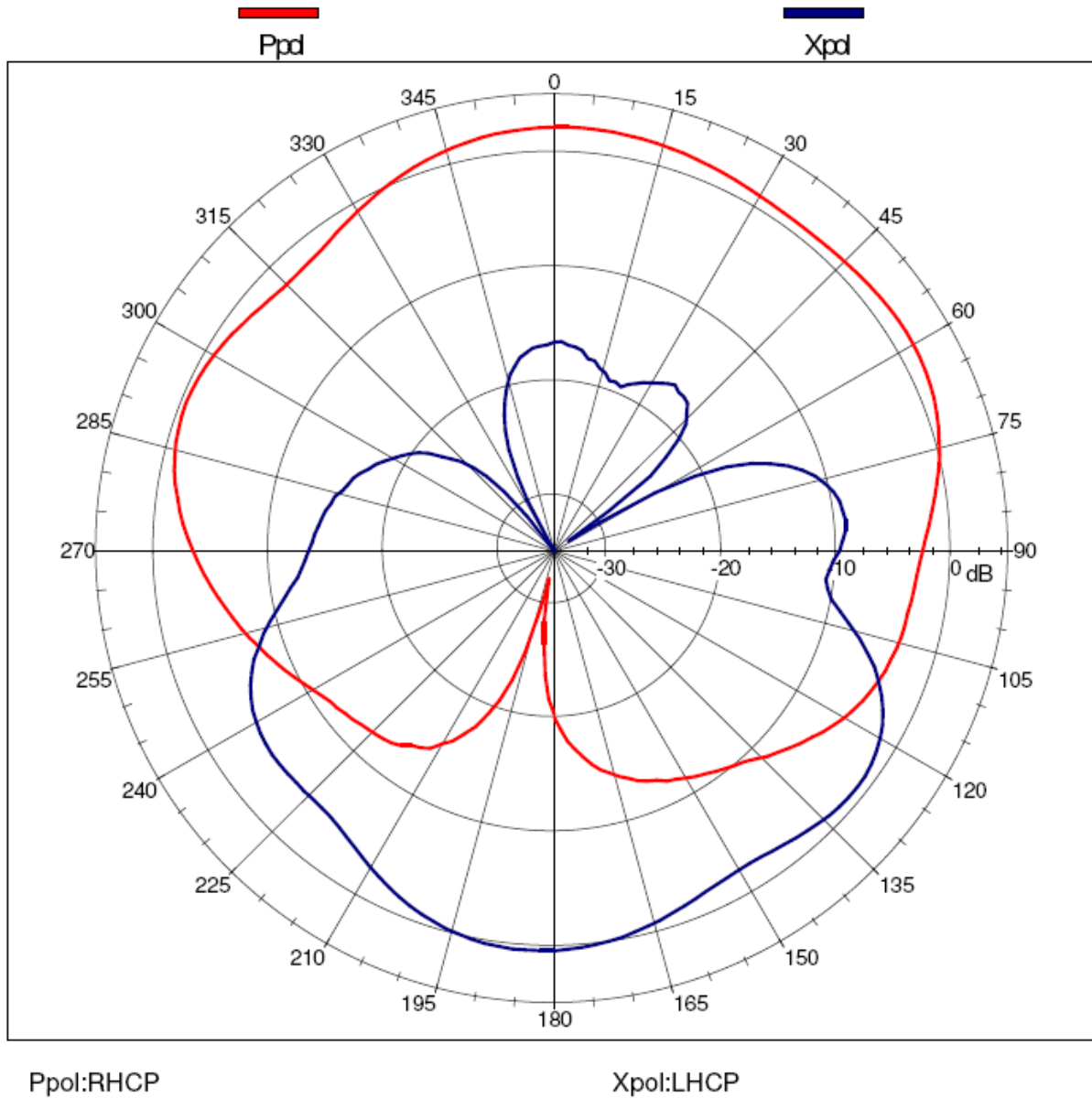
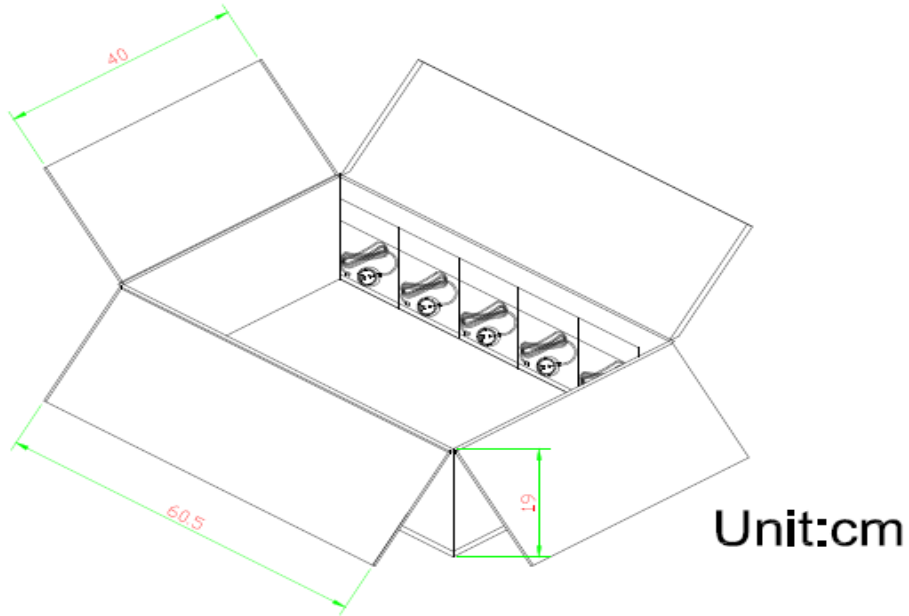
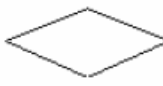



Figure 3 [Radiation Pattern \(Exclude LNA Gain\) \(90°\)](#)

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

