



Specification

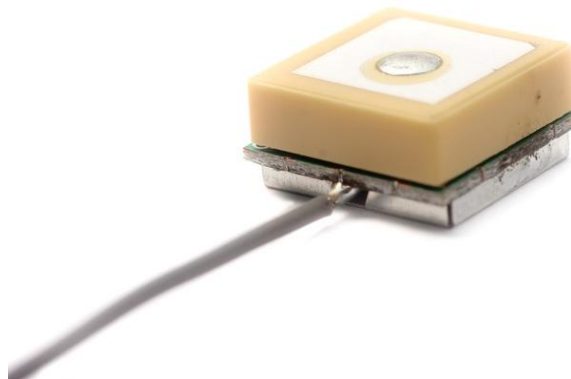
# SPECIFICATION

Part No. : **AP-13B-01**

Product Name : **13mm One Stage GPS Active Patch Antenna Module**

Features : 13mm\*13mm\*7.1mm  
80mm 1.13 IPEX MHFI (U.FL)  
3V +/-0.5 11mA  
15dB LNA  
Noise 1.3dB typical  
Tested in Free space  
ROHS Compliant

Photo :



## REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	May 11 <sup>th</sup> 2007	All	New format	TW Product Centre	Ronan Quinlan



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## 1.0 Introduction

The AP13b is a small form factor one stage LNA 15dB active GPS antenna for internal applications. This miniaturized GPS Active Antenna module combines a tiny 13mm squared ceramic patch antenna with a two stage low noise amplifier. It is available as a 'plug and play' format for onboard integration on mobile compact GPS devices via ultra thin coaxial cable and connector.

Only 13mm\*13mm\*7.1mm in height, this new Taoglas active antenna module utilises *XtremeGain™* technology for the highest industry sensitivity.

Designed for use with the new generation of GPS receiver modules using chipsets from SiRF, Ublox, Navsync, Nemerix, Fastrax, Falcom, Telit, Tyco, Atmel etc.

## 2.0 Rated Environmental Conditions

2.1.1	Operation Temperature	-40°C to + 85°C
2.1.2	Storage Temperature	-40°C to + 90°C
2.1.3	Relative Humidity	10% to 95%

## 3.0 Electrical Specifications

### LNA

3.1.1	Input Voltage	3.0 V ± 0.5
3.1.2	Centre Frequency	1575.42MHz ± 1.023 MHz
3.1.3	Gain	15dB typical @ 3V
3.1.4	Output V.S.W.R.	2.0 Max
3.1.5	Power Consumption	At 3.0 V      Typ: 11 mA.



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## 4.0 Patch Antenna

4.1	Dimensions	13mm*13mm*4mm
4.2	Frequency Range	1575.42 ± 1.023 MHz. (when covered by a radome and measured on 13mm*13mm ground plane)
4.3	Bandwidth	10MHz min (@ <-10dB return loss)
4.4	Gain	90° : - 1 dBic max. 10° : -7.0 dBic typical.
4.5	Polarization	RHCP
4.6	Axial Ratio	90° : 3dB typical

## 5.0 Cable & Connector

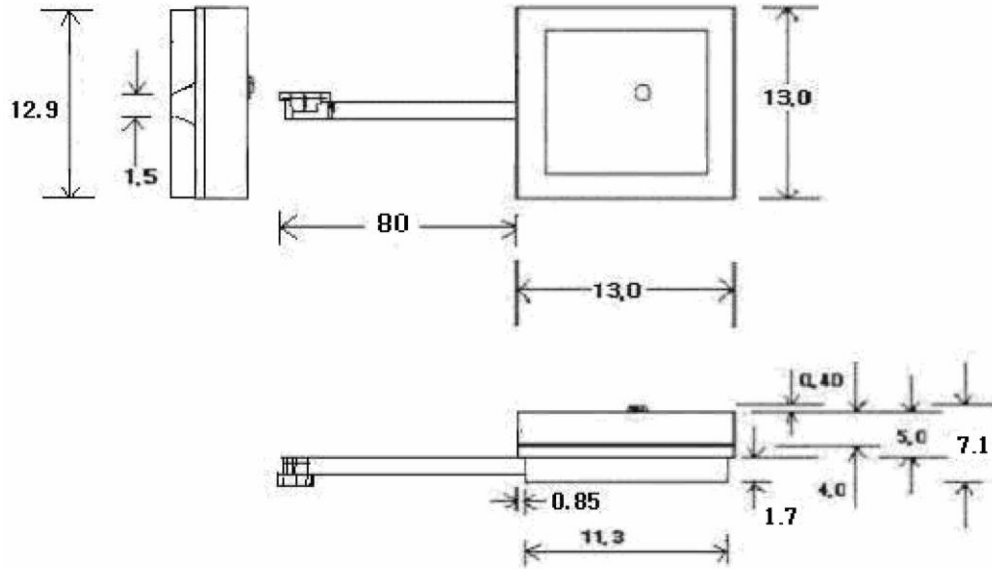
5.1	RF Cable	1.13 Mini Coax	
		Cable Length	83mm ± 5cm
5.2	RF Connector	Iplex MHFI (U.FL)	
5.3	Impedance	50 Ohms	

## 6.0 Mechanical Specifications

6.1	Dimensions	13*13*7.1mm
6.2	Weight	5 ±0.5 g (typ)



## 7.0 Dimensions and Drawing



unit:mm