



Specification

# SPECIFICATION

Part No. : **AP.17A.07.0040A**

Model No. : **AP.17A.01**

Product Name : **17mm One Stage GPS Active Patch Antenna Module**

Features : 17mm\*17mm\*6.3mm  
40mm 1.13 U.FL (IPEX MHFI)  
3-5V 3.2mA  
15dB LNA  
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

Designed for onboard integration with GPS receivers, this powerful miniaturized GPS Active Antenna module combines an advanced 17mm squared ceramic patch antenna with one stage 15dB LNA and ultra thin cable and connector. Taoglas active antenna modules utilize XtremeGain™ technology for the highest sensitivity in the industry. The AP.17a is optimized for asset tracking, navigation, and remote monitoring applications.

### 2.1 Rated Environmental Conditions

No	Parameter	Specification
2.1.1	Operation Temperature	-20°C to + 65°C
2.1.2	Storage Temperature	-30°C to + 75°C
2.1.3	Relative Humidity	40% to 95%

### 2.2 Electrical Specifications

No	Parameter	Specification
2.2.1	Input Voltage	Min:2.7V Typ.: 3.0V Max: 3.3V
2.2.2	Current Consumption	At 3.0 V Typ.: 3.2mA Max: 5mA

### 2.3 Electrical Specifications- Antenna

No	Parameter	Specification
2.3.1	Frequency Range	1575.42MHz +/- 1.023 MHz
2.3.2	Gain	+1.0dBi Typ. @zenith
2.3.3	Polarization	RHCP
2.3.4	Axial ratio	Max 3.0dB@zenith

### 2.4 Electrical Specifications- LNA

No	Parameter	Specification
2.4.1	Centre Frequency	1575.42MHz +/- 1.023 MHz
2.4.2	Gain	14dB Min. 15dB Typ. (+25°C±5°C)
2.4.3	Noise Figure	1.5dB Typ. (+25°C±5°C) 2.2dB Max. (+85°C)



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2.4.4	Output V.S.W.R.	2.0 Max
2.4.5	Output Impedance	50Ω

## 2.5 Cable & Connector

No	Parameter	Specification
2.5.1	RF Cable	Ø1.13 RF Coaxial Cable L=40mm±2mm
2.5.2	RF Connector	I-PEX(MHF) - U.FL Comp.

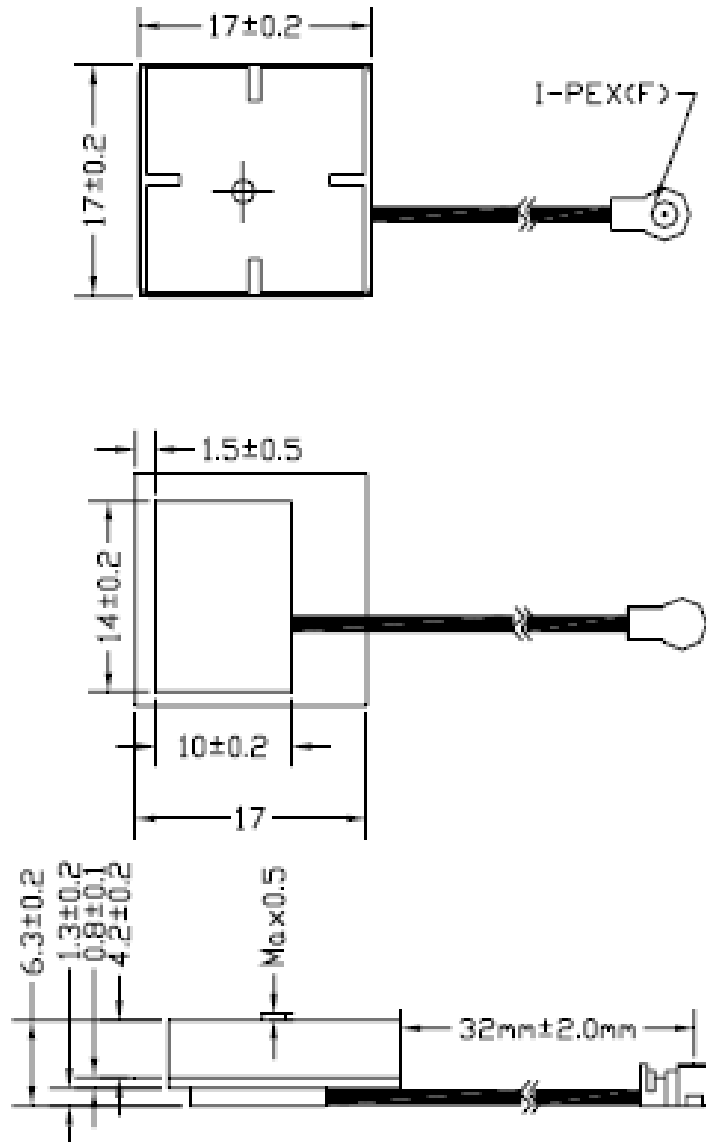
## 2.6 Electrical Specifications- Overall

No	Parameter	Specification
2.6.1	Frequency Range	1575.42MHz +/- 1.023 MHz
2.6.2	Gain	At 90° 15±3dBi Mounted on a 60mm <sup>2</sup> ground plane
2.6.3	Output Impedance	50Ω
2.6.4	VSWR	2.0 Max.



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### 3. Drawing



Unit:mm