## SPECIFICATION

| Part No. | $: \quad$ AP.12B.07.0057A |  |
| :--- | :--- | :--- |
| Spec No. |  | $: \quad$ AP.12A.01 |
| Product Name | $:$ | 12mm Two Stage Active GPS Patch Antenna |
| Features | $:$ | Ultra Miniature GPS active patch <br> High performance |
| Photo | $:$ | Ultra low power consumption |



### 1.0 Introduction

This miniaturised GPS Active Antenna module combines a tiny 12 mm squared ceramic patch antenna from Cirocomm with a two stage low noise amplifier. It is available as a 'plug and play' format for onboard integration with GPS receiver modules via ultra thin coaxial cable and connector from IPEX.
Only 5.5 mm in height, this new Taoglas active antenna module utilises XtremeGain ${ }^{\text {TM }}$ technology for the highest industry sensitivity.
Designed for use with the new generation of GPS receiver modules using chipsets from SiRF, Ublox, Nemerix, Fastrax, Navsync, Falcom, Telit, Tyco, Siemens etc.

### 2.0 Specification

## Antenna

| Frequency | $1575.42 \pm 1.023 \mathrm{MHz}$ |
| :--- | :---: |
| Antenna Gain | Typ 1.5 dBi @ Zenith(13.4mm*13.4mm Ground Plane) |
| Impedance | $50 \Omega$ |
| Polarization | RHCP |
| Axial Ratio | Max 4.0dB @ Zenith |
| Patch Dimension | $12 \mathrm{~mm} \times 12 \mathrm{~mm} \times 3.5 \mathrm{~mm}$ |

LNA

| Frequency | $1575.42 \pm 1.023 \mathrm{MHz}$ |
| :--- | :---: |
| Gain | Typ. $25 \mathrm{~dB} @ 25^{\circ} \mathrm{C} \pm 5^{\circ} \mathrm{C}$ |
| Noise Figure | Typ. $1.4 \mathrm{~dB} @ 25^{\circ} \mathrm{C} \pm 5^{\circ} \mathrm{C}$ |
|  | Max $1.8 \mathrm{~dB} @ 85^{\circ} \mathrm{C}$ |

Cable* \& Connector

| RF Cable | Coaxial Cable $\psi 1.13 \pm 0.1 \mathrm{~mm}$, length $57 \pm 2.0 \mathrm{~mm}$ |
| :--- | :---: |
| Connector | Ipex MHFI (U.FL) |

## Total Specification

| Frequency | $1575.42 \pm 1.023 \mathrm{MHz}$ |
| :--- | :---: |
| Gain | $23.5 \pm 4 \mathrm{dBic} @ 90^{\circ}$ |
| Output Impedance | $50 \Omega$ |
| Polarization | RHCP |
| Output VSWR | Max 2.0 |
| Input Voltage | Min. 2.5V Max. 5.5V |
| Power Consumption | At 3.0V Typ. 13mA, Max. 15mA |

### 3.0 Technical Drawing



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Tolerancel 4. 0.0 mm

