

# GPT-GPS Module

Preliminary



## GPS Module for SICOM3028GPT

- Designed for the SICOM3028GPT-L2GT,SICOM3028GPT-L2FT,SICOM3028GPT-L3GT,SICOM3028GPT-L3FT and managed by SICOM3028GPT chassis
- 14 channels GPS C/A coding receiver
- High precision stable crystal oscillator with excellent time keeping performance
- One PPS +5V TTL level output with BNC connector
- Supports one 5M/10M frequency input. (optional)
- Supports hot-swap for easy maintenance (only can replace the same type of module)

## Overview

GPS clock synchronization module is specifically designed for SICOM3028GPT series which support PTP protocol. The GPS receiver and precise clock included in the module can provide an extremely precise GPS signal for host switches. The module also can provide high precision clock when the GPS signal is temporarily lost.

## Product Specifications

### Technical Specifications

Receiver	14 channels GPS C/A coding receiver
Sensitivity	
▼ Tracking Sensitivity:	-160 dBm
▼ Acquisition Sensitivity:	-155 dBm
Operating frequency	1575.42MHz±1.023MHz

### Interface

GPS Input:	5VDC, BNC connector
PPS Output:	+5V, 50Ω, adjustable pulse width, BNC connector
Frequency input	5M/10M,Sine waveform, amplitude 1-3.3Vrms,BNC connector

### LED

- LEDs on front panel
- ▼ Satellite positioning LED: Fix
  - ▼ System clock lock LED: Lock

### Power Requirements

Power input	3.3VDC
Power terminal	
▼ A type interface (powered by backplane)	
Power consumption	<4.5W (booting), 3W (operating)

### Physical Characteristics

Housing	Metal
Cooling	Natural cooling, fanless
Dimensions(WxHxD)	122.6mm×20.25mm×106.6mm (4.83×0.80×4.20 in.)
Weight	0.3Kg (0.661 pound)

### Environmental Limits

Operating temperature	0°C to +50°C (32°F to 122°F)
Storage temperature	-20°C to +70°C (-4°F to 158°F)
Ambient Relative Humidity	5%-95% (non-condensing)

### Quality Assurance

Warranty	5 years
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### Approvals

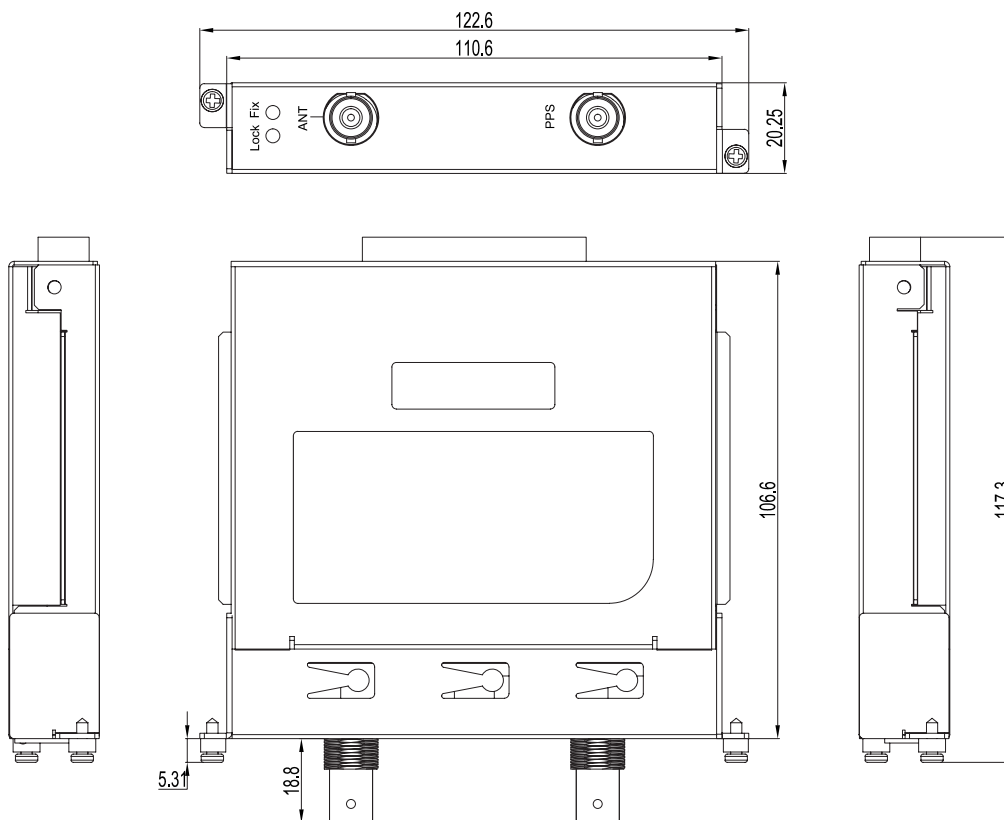
CE (pending),  
FCC (pending)  
Please check Kyland website for the latest updates.

## » GPS Precision Parameters

### SM6.6-GPS-OI

Short term stability (t=1s)	$1 \times 10^{-9}$ s
PPS precision	$\pm 100$ ns
1 day free run precision	$\pm 2 \times 10^{-8}$ s
1 year free run precision	$\pm 4 \times 10^{-7}$ s
GPS clock synchronization precision	$\pm 1 \times 10^{-11}$ s
Clock accuracy for 1 hour free run	$\pm 6$ $\mu$ s
Clock accuracy for 1 day free run	$\pm 865$ $\mu$ s
Clock accuracy for 1 year free run	$\pm 6.3$ s
Time drifts with temperature changes while free run	$\pm 2 \times 10^{-7}$ s (0-50°C)
Lock time	<20 min (Cold boot, typical value)

## » Mechanical Drawing



## » Ordering Information

### Model

SM6.6-GPS-OI-0.5U

SM6.6-GPS-OI-FI-0.5U

### Description

GPS module, one GPS input, BNC connector; one PPS output, BNC connector

GPS module, one GPS input, BNC connector; one 5M/10M frequency input, BNC connector; one PPS output, BNC connector