

GPS Clock Synchronization Module



- 14 channels GPS C/A coding receiver
- High precision stable crystal oscillator with excellent time keeping performance
- One GPS signal input with BNC connector
- One PPS +5V TTL level output with BNC connector
- Interface module for SICOM6028GPT, SICOM6424PT, SICOM3028GPT, SICOM3424PT

Overview

GPS clock synchronization module is specifically designed for switches including SICOM6028GPT, SICOM6424PT, SICOM3028GPT, and SICOM3424PT, which support PTP protocol. The GPS receiver and precise clock included in the module can provide an extremely precise GPS signal for host switches. GPS clock synchronization module provides one GPS signal input port and one PPS output port.

Technical Specifications

Interface

GPS Input: 5VDC, BNC connector
PPS Output: +5V, 50Ω, adjustable pulse width, BNC connector

LED

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

Precision Parameters

Model name: SM6.6-GPS-OI-0.5U
Short term stability (t=1s): 1×10^{-9}
PPS precision: $\pm 100\text{ns}$
1 day free run precision: $\pm 2 \times 10^{-8}$
1 year free run precision: $\pm 4 \times 10^{-7}$
GPS clock synchronization precision: $\pm 1 \times 10^{-11}$
Clock accuracy for 1 hour free run: $\pm 6\mu\text{s}$
Clock accuracy for 1 day free run: $\pm 865\mu\text{s}$
Clock accuracy for 1 year free run: $\pm 6.3\text{s}$
Time drifts with temperature changes while free run: $\pm 2 \times 10^{-7}$ (0-50°C)
Lock time: <20min (Cold boot, typical value)

Physical Characteristics

Housing: Metal, fanless
Protection Class: IP40
Dimension (WxHxD): 122.6x20.3x106.8mm (4.83x0.80x4.20 in.)
Weight: 0.3Kg (0.661 pound)

Signal Receiving Sensitivity

Receiver: 14 channels GPS C/A coding receiver
Tracking Sensitivity: -160 dBm
Acquisition Sensitivity: -155 dBm
Operating frequency: $1575.42\text{MHz} \pm 1.023\text{MHz}$

Power Requirements

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

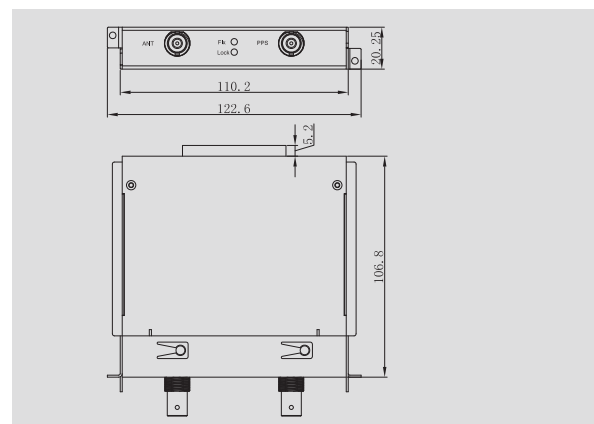
Environmental Limits

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

Warranty

5 years

Mechanical Drawing



Ordering Information

SM6.6-GPS-OI-0.5U = GPS Clock Synchronization Module