

Available soon



GPS-721

GPS Receiver and 1 DO, 1 PPS Output Module

Features

- MediaTek solution
- Support 32-channel GPS
- Capable of SBAS (WAAS, EGNOS, MSAS)



Introduction

GPS-721 module features high sensitivity, low power and ultra small form factor. This GPS module is powered by MediaTek solution, it can provide you with superior sensitivity and performance even in urban canyon and dense foliage environment.

Applications

- Satellite time correction
- Personal positioning and navigation
- Automotive navigation
- Marine navigation

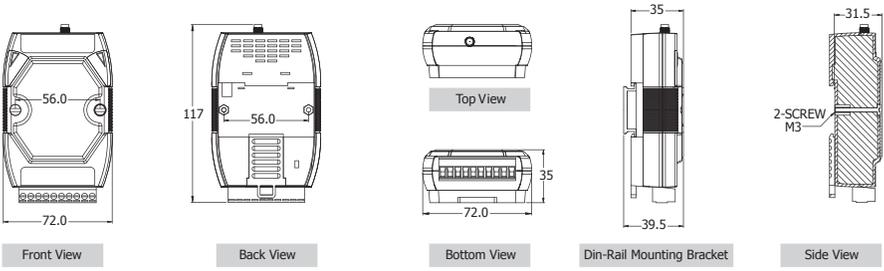
I/O Specifications

Digital Output	
Output Channel	1 (Sink)
Output Type	Non-isolated Open Collector
Output Current	100 mA
Load Voltage	+5 V _{oc} ~ +30 V _{oc}

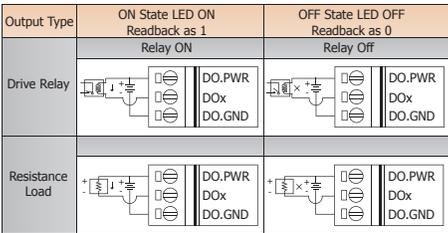
System Specifications

GPS Receiver	
Chip	MediaTek solution
Frequency	L1 1575.42 MHz, C/A code
Support Channel	32
Position Accuracy	Capable of SBAS (WAAS, EGNOS, MSAS)
Max. Altitude	<18,000 m
Max. Velocity	<515 m/s
Acquisition Time	Cold Start (Open Sky) = 42 s (typical)
Sensitivity	Tracking=Up to -158 dBm
	Cold start=Up to -142 dBm
Protocol Support	NMEA 0183 version 3.01
GPS Output	
1 PPS	Pulse per second output (Default 100 ms pulse/sec)
RS-232 Interface	GPS information output
LED Indicators	
Power/Communication	1 LED
GPS	3 LEDs
Power	
Protection	Power reverse polarity protection
Frame Ground for ESD Protection	Yes
Required Supply Voltage	+10 V _{oc} ~ +30 V _{oc} (non-regulated)
Power Consumption	2.5 W
Mechanical	
Dimensions (W x H x D)	72 mm x 117 mm x 35 mm
Weight	200 g
Housing	Plastic
Environment	
Operating Temperature	-25 °C ~ +75 °C
Storage Temperature	-40 °C ~ +80 °C
Humidity	5 ~ 95% RH, non-condensing

Dimensions (Unit: mm)



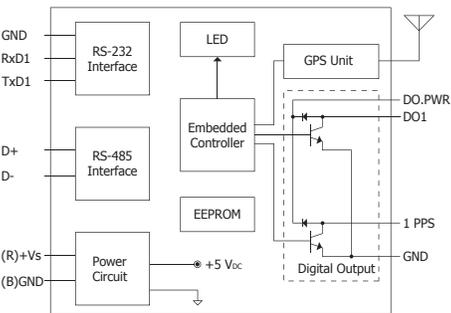
Wiring



Pin Assignments

Terminal No.	Pin Assignment
01	1 PPS
02	DO.PWR
03	DO1
04	GND
05	RxD
06	TxD
07	D+
08	D-
09	(R)+Vs
10	(B)GND

Internal I/O Structure



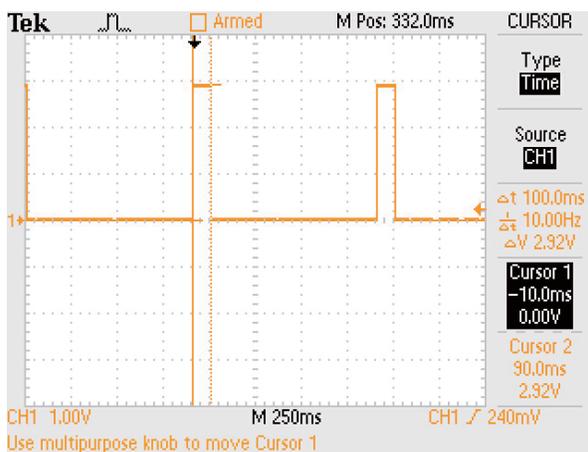
Ordering Information

GPS-721 CR GPS Receiver and 1 DO, 1 PPS Output Module (RoHS)

Accessories

ANT-115-03 CR 4P181K0000001 GPS Active External Antenna (SMA Plug) (RoHS)

1 Pulse Per Second (Pulse duration is 100 ms/sec)



The Global Positioning System can also be used as a time reference for radio clocks, but require an accurate 1PPS output to be reliably used for time signals.

A Pulse per second (PPS) is an electrical signal that very precisely indicates the start of a second. PPS signals are output by various types of precision clock, including some models of GPS receivers. Depending on the source, properly operating PPS signals have an accuracy ranging from a few nanoseconds to a few milliseconds.

PPS signals are used for precise timekeeping and time measurement. One increasingly common use is in computer timekeeping, including the NTP protocol. Because GPS is considered a stratum-0 source, a common use for the PPS signal is to connect it to a PC using a low-latency, low-jitter wire connection and allow a program to synchronize to it: this makes the PC a stratum-1 time source. Note that because the PPS signal does not specify the time, but merely the start of a second, one must combine the PPS functionality with another time source that provides the full date and time in order to ascertain the time both accurately and precisely.