

# GPS-721

## GPS Receiver and 1 DO, 1 PPS Output Module

### Quick Start Guide

## 1. Introduction

This manual introduces the user to the methods used to implement the GPS-721 module into their applications in a quick and easy way, and will only provide basic instructions. For more detailed information, please refer to the GPS-721 user manual located on the ICP DAS CD-ROM, or download it from the ICP DAS web site:

[https://www.icpdas-usa.com/gps\\_721.html](https://www.icpdas-usa.com/gps_721.html)

## 2. Package Checklist



**One GPS-721 Module**



**Software Utility CD**



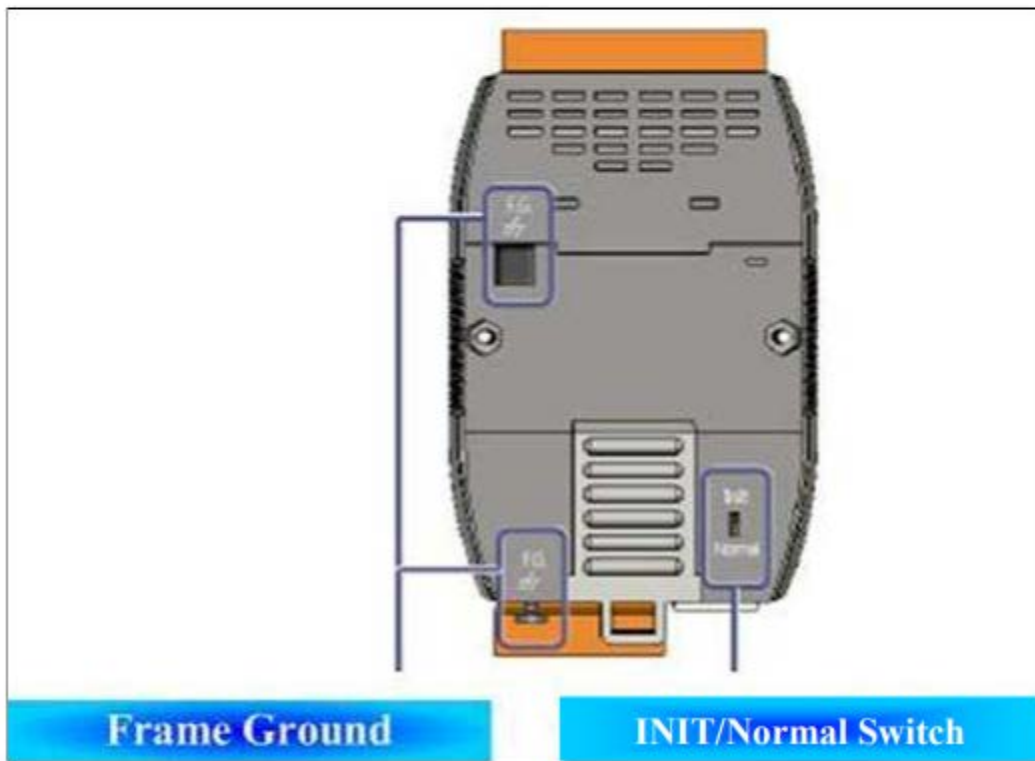
**Quick Start Guide**



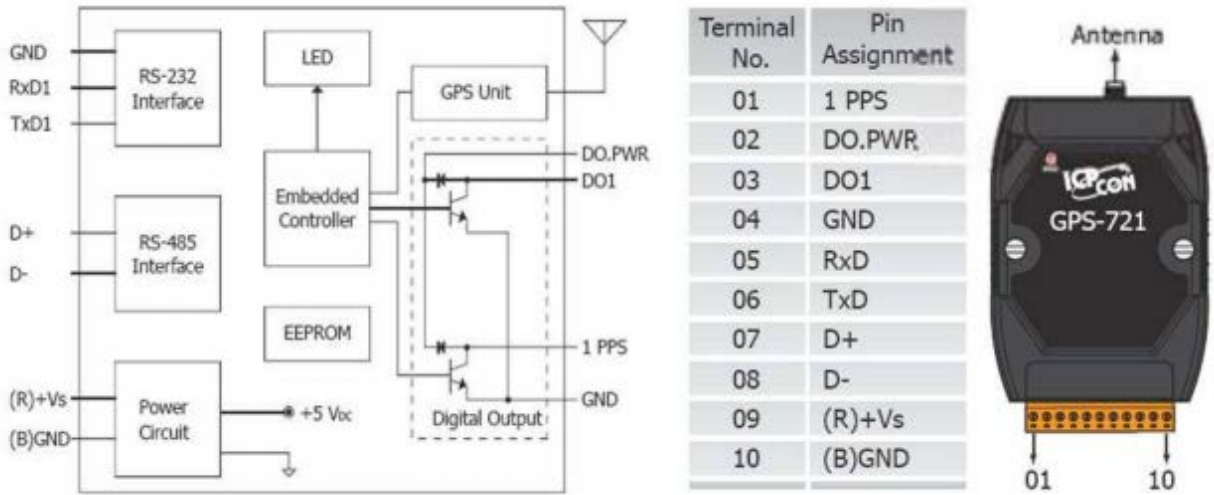
**RS-232 Cable**

Item	Quantity
GPS-721	1
External GPS antenna (ANT-115-03, Length: 5m)	1
RS-232 Cable (CA-0910)	1
Product CD	1
Quick Start Guide	1

### 3. Appearance



### 3. Block Diagram & Pin Assignments

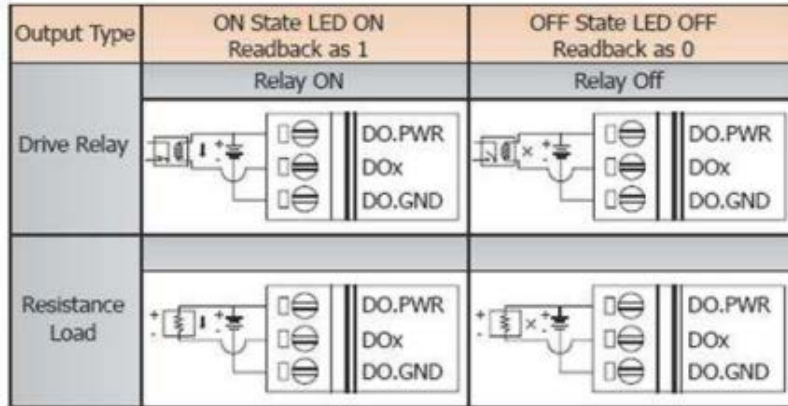


### 4. LED Indicators

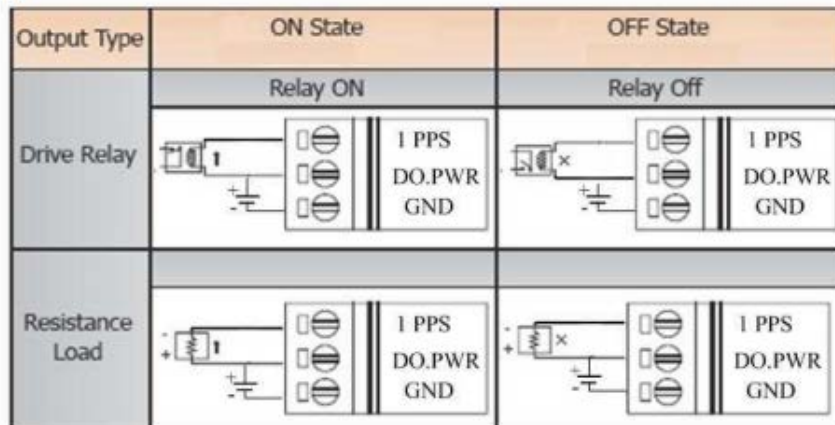
LED	Status	Description
Sys.	ON	The module is operating / functioning correctly.
	OFF	There is an error with the module. The module has encountered an error.
DO1	ON	Digital Output is active.
	OFF	Digital Output is off.
S1	ON	The number of signals received from GPS satellites is less than 5.
	OFF	Module can't receive any GPS signals.
S2	ON	The number of signals received from GPS satellites is 5 ~ 8 or above.
	OFF	The number of signals received from GPS satellites is less than 5.
S3	ON	The number of signals received from GPS satellites is more than 8.
	OFF	The number of signals received from GPS satellites is less than 8.
1 PPS	ON	The PPS is on.
	OFF	The PPS is off.

## 5. Wiring

### DO wiring

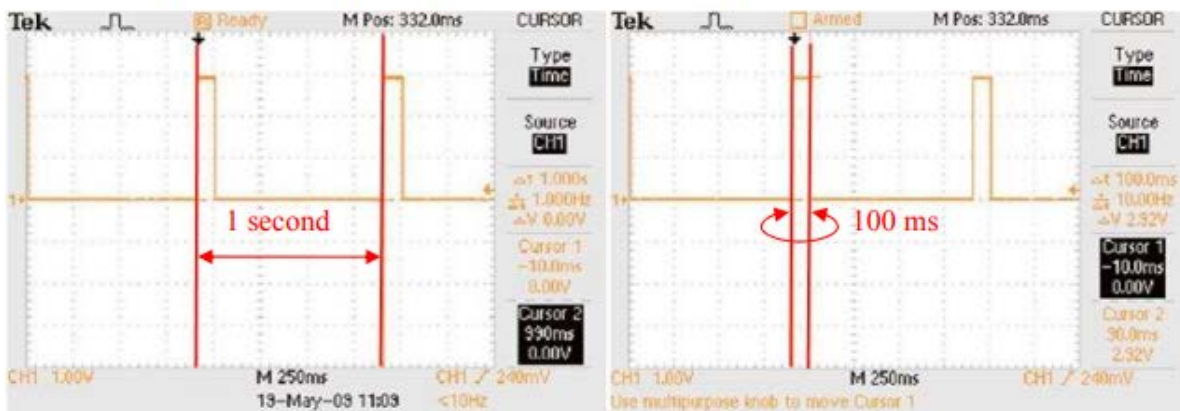


### PPS wiring

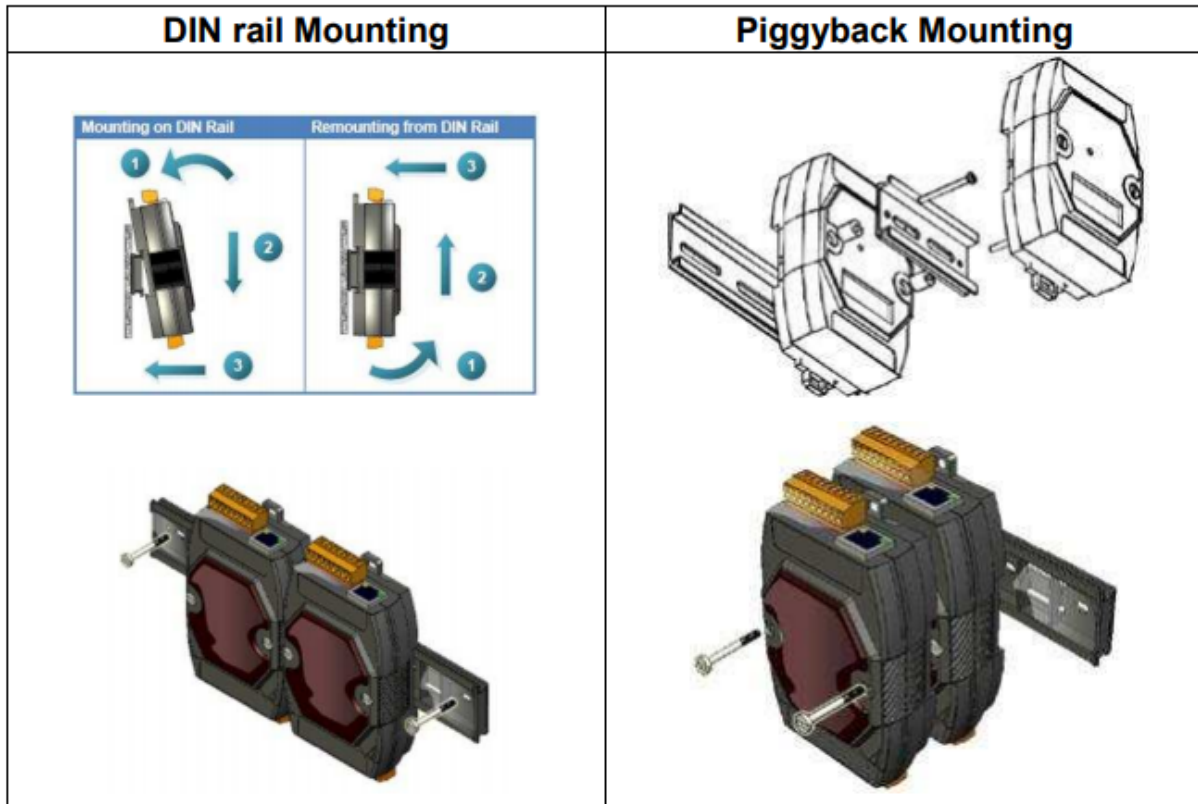


### ● PPS output

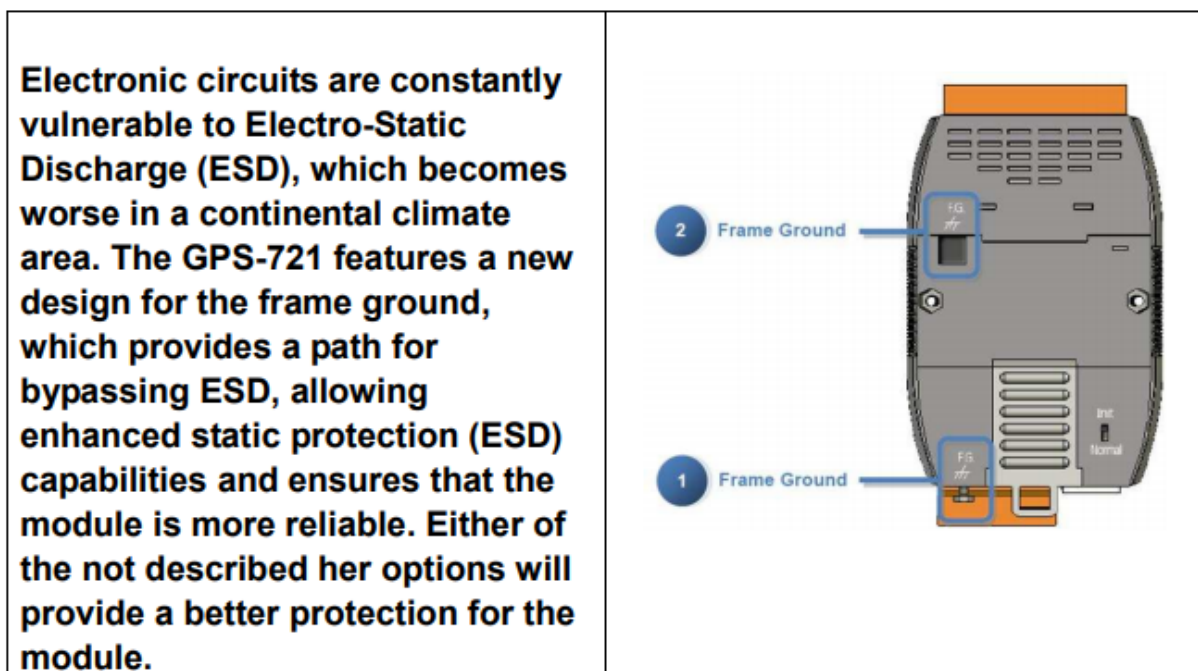
The PPS would output the pulse when receiving effective GPS signals. That would output 100 ms pulse per second. The figure is as follows.



● **Mounting**



● **Frame Ground**



Default address and communication parameters:

- Protocol: DCON
- Module address: 01 (INIT mode: 00)
- Communication Baud Rate: 9600 bps
- Checksum: Disabled

## Quick Start



1. Refer to the pin assignments for details of how to install the power and antenna.
2. Connect the module to the RS-485 network using the DATA+ and DATA terminals. If the host is only equipped with an RS-232 interface, then an RS-232 to RS-485 converter will be required. The GPS-721 supports RS-232 connections.
  - By setting GPS-721 to INIT mode, the default settings can be used to connect to the GPS-721.
3. Configure the module by sending the %AANNTTCCFF command. See Section 2.1 of the User Manual for details.
  - ICP DAS provides two free tools, the DCON Utility and Send232.exe.



**Making Data Acquisition Easy**

CAGE/NCAGE CODE: 3FNFO

4. You can implement the functions of the modules using the following DCON commands.
  
5. If the host is a PC with a Windows operating system installed, the DCON Utility can be used to allow easy configuration and reading of data. The DCON Utility can be downloaded from the ICP DAS website (<http://www.icpdas-usa.com>). The documentation for the DCON Utility can be found in the "Getting Started For I-7000 Series Modules" manual.

Note: If the GPS-721 is unable to receive GPS signals, check the position of the antenna or install the GPS antenna in an open environment. DCON Command Table