

Arduino GPS Shield

-A high performance GPS shield for Arduino

Overview



Arduino GPS shield is a GPS module breadout board designed for Global Positioning System receiver with SD interface. It is easy to use for recording the position data into SD card. 5V/3.3V compatible operation voltage level make it compatible with Arduino boards, leaf maple, IFlat32 and other arduino compatible boards.

Features

- With Micro SD interface
- Active antenna design with high receive sensitivity, compatible normal antenna
- Extremely fast time to first fix at low signal level
- UART interface
- Operation temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Specifications

| | |
|------------------------|--------------------------|
| PCB size | 55.88mm X 54.1mm X 1.6mm |
| Indicators | PWR, |
| Power supply | compatible with Arduino |
| Communication Protocol | UART |
| RoHS | Yes |

Electrical Characteristics

| Specification | Min | Type | Max | Unit |
|-------------------|------|-------|-----|------|
| Power Voltage | 4.5 | 5 | 5.5 | VDC |
| Input Voltage VH: | 3 | - | 5.5 | V |
| Input Voltage VL: | -0.3 | 0 | 0.5 | V |
| Baud rate | | 38400 | | bps |

Hardware

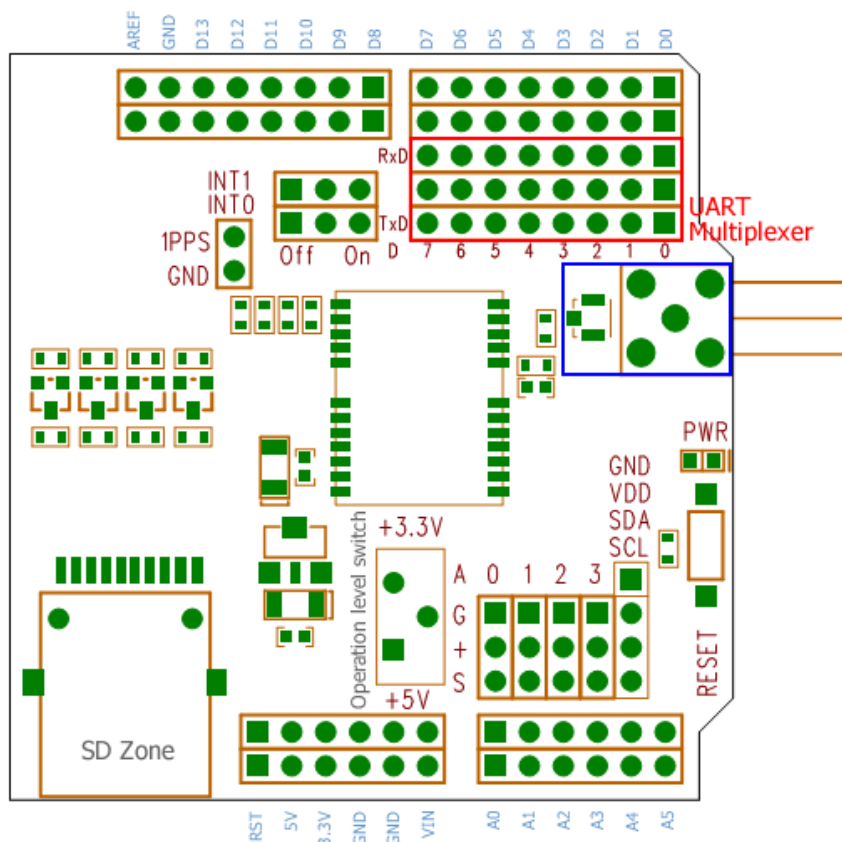


Figure 1 Top Map

| Arduino PIN | Description |
|-------------|-------------|
| D0 | Data |
| D1 | Din |
| D2 | - |
| D3 | - |
| D4 | - |
| D5 | - |
| D6 | - |
| D7 | - |
| D8 | - |
| D9 | - |
| D10 | CSN |
| D11 | MOSI |
| D12 | MISO |
| D13 | SCK |
| A0 | Breakout |
| A1 | Breakout |
| A2 | Breakout |
| A3 | Breakout |
| A4 | IIC_SDA |
| A5 | IIC_SCL |

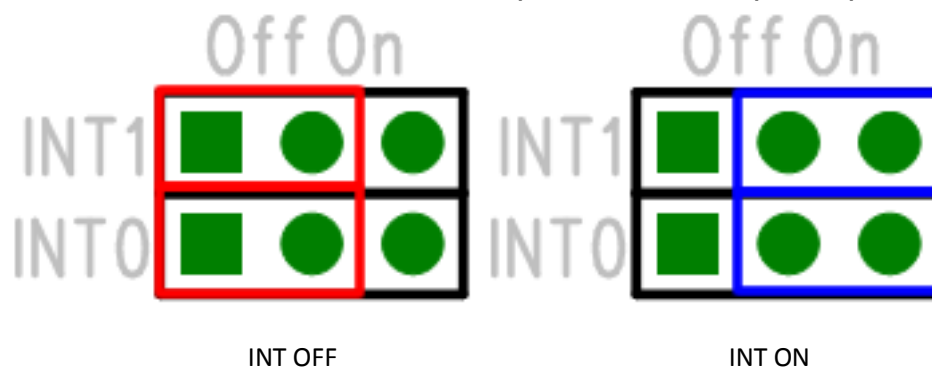
Installation

When install GPS shield to Arduino, please check the operation voltage level of development board. If the voltage is 3.3V (IFLAT32,Leaf maple), set the Operation Level Setting switch to 3.3V. If the voltage is 5V(Arduino), set the Operation Level Setting switch to 5V.

Interrupt Set

The INT0 is the broke out of the external interrupt pin of GPS module, if not use, please set the jumper to OFF as the following figure.

The INT1 is the broke out of the 1PPS output. When the GPS module has tracked to the GPS satellite, this pin will send a pulse per second.



Revision History

| Rev. | Description | Release date |
|------|----------------------------|--------------|
| v1.0 | Initial version | 2012-04-07 |
| v1.1 | Update for GPS shield v1.1 | 2012-05-16 |