OriginGPS GNSS Shield for Arduino UNO Board

How to install and connect

The OriginGPS GNSS Shield for Arduino UNO Board

The GNSS Shield – P/N ORG1510-R01-SHD

The OriginGPS GNSS shield is based on the OriginGPS ORG1510-R01 GNSS module, and was designed to help developers design and integrate products with GNSS receiver capabilities. OriginGPS' GNSS shield is Arduino-compatible with the Arduino UNO board, and can also interface with additional Arduino boards cores. The shield supports GPS and GLONASS constellations simultaneously. For the GNSS module specifications, please refer to the ORG1510-R01 datasheet.

Easily attaches

The OriginGPS shield is easily attached to the Arduino board by placing the shield on top of the board/s, and pressing gently till you hear a click. The OriginGPS GNSS shield enables you to navigate to your Arduino projects wherever they are.

OriginGPS GNSS Shield attached to Arduino UNO Board

Immediately connects

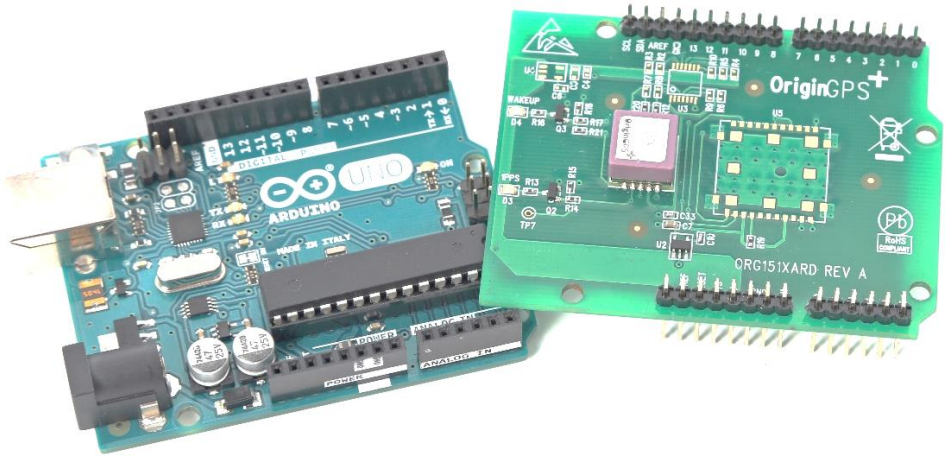
1. Download the zip file for the OriginGPS GNSS Shield here.
2. Place your GNSS shield on top of your Arduino board, or on top of any additional boards.
3. Once the GNSS module receives power from the Arduino board, it will send asynchronous NMEA messages (ASCII) to the Arduino board.
4. When the time displayed in the GPS NMEA messaging is incrementing, the GNSS shield is working properly.

Product info

- The Arduino's serial connector (parallel to digital pins 0 and 1) is used to upload firmware and transfer data from the Arduino board to the PC - not to the shield.
- The shield receives 5V power from pins 2 and 5 on the board.
- The GND is connected to pins 6, 7 of the power connector.
- Digital pins 11 and 12 are for UART communication between the board and the shield.
    - Digital pin 11 is OriginGPS module's Tx, and Arduino's Rx.
    - Digital pin 12 is OriginGPS module's Rx, and Arduino's Tx.
- The default baud rate of the ORG1510-R01 module between the GNSS module and the Arduino board is 4,800 bps, and is suffice to transmit all standard NMEA messages.
- The baud rate of the serial communication between the board and the PC is 115,200 bps.

Troubleshooting tips

1. If your module fails to get a fix after 1 minute, try the following:
    a. Move outdoors to avoid signal degradation from nearby devices.
    b. Verify the GNSS Shield is placed on top of any boards so that the signal is not blocked.
    c. Remove all other boards from the Arduino board, as they might radiate frequencies affecting the GPS.
2. Testing requiring signal reception should be conducted outdoors or with a GPS repeater to prevent erroneous results caused by signal degradation.



OriginGPS GNSS Shield and Arduino UNO Board – the perfect combination for any location

Send us any questions you may have to: support@origingps.com

OriginGPS develops fully-integrated, miniaturized GPS/GNSS, and integrated IoT solutions. For over a decade, our experts have been developing ultra-sensitive, reliable, high performance modules with the smallest footprint on the market, and supporting a range of verticals, such as wearables, drones, asset tracking, smart cities, automotive and IoT. origingps.com