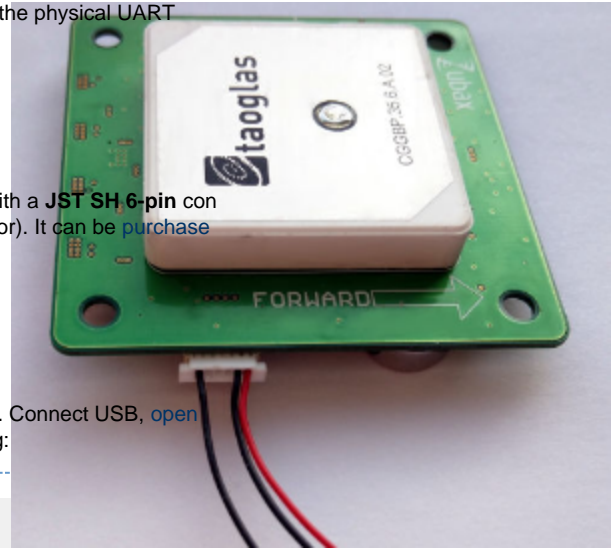


# NMEA output over UART

This article shows how to make Zubax GNSS output the navigation data via the physical UART port.

## Parts needed

The only part that will be needed (aside from one Zubax GNSS) is a cable with a **JST SH 6-pin** connector on one end (also known as **DCD-M** (Dronecode Debug Mini) connector). It can be [purchase](#) [d from many sources online](#). The cable is pictured on the right.



## Configuring Zubax GNSS

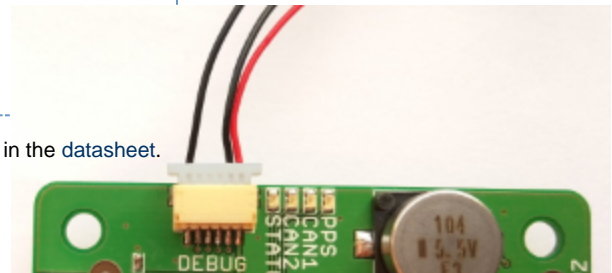
The NMEA output over UART is disabled by default, so we need to enable it. Connect USB, [open the command-line interface \(CLI\)](#) at 115200 baud, then execute the following:

### Enabling NMEA UART output

```
cfg set nmea_uart_on 1
cfg save
reboot
```

If necessary, also enable the altimeter or configure other features, as shown in the [datasheet](#).

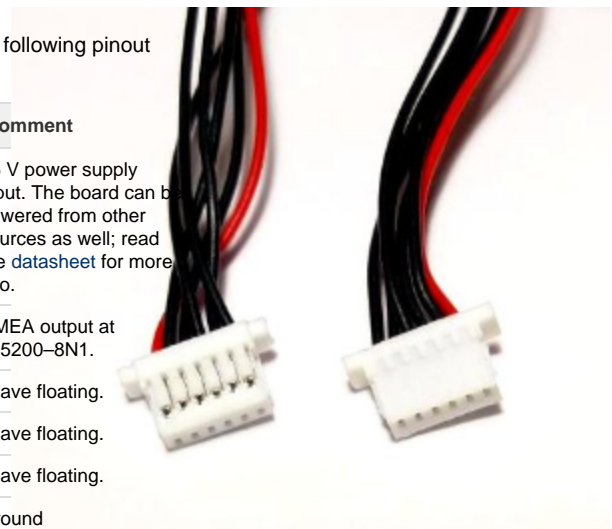
The NMEA output should be kept disabled if it is not used.



## Connecting to the UART port

Connect one end of the cable to Zubax GNSS 2's DroneCode port using the following pinout specification.

Pin	Type	Name	Comment
1	Power	+5VDC	+5 V power supply input. The board can be powered from other sources as well; read the <a href="#">datasheet</a> for more info.
2	OUT	UART_TX	NMEA output at 115200-8N1.
3	N/C		Leave floating.
4	N/C		Leave floating.
5	N/C		Leave floating.
6	GND	GND	Ground



Connect the other end of the cable to your hardware, and configure the UART interface as follows:

- Baud rate: 115200
- Byte size: 8
- Parity: None
- Stop bits: 1

## Testing

Now power on the device, and your hardware should be able to read the NMEA stream coming out

of the UART port. A sample NMEA output is provided below.

### NMEA output example

```
$GPRMC,072626.30,A,0036.27144,N,00042.93538,E,1.097,235.8,141215,,*35
$GPGGA,072626.30,0036.27144,N,00042.93538,E,1,14,1.44,239.382,M,13.2,M,,*5E
$GPGSV,4,1,15,08,52,283,17,10,80,126,26,14,27,155,34,15,15,039,08*74
$GPGSV,4,2,15,16,00,216,16,18,49,073,13,21,25,109,22,22,77,181,25*7F
$GPGSV,4,3,15,27,59,219,15,32,03,232,16,01,74,188,27,02,19,214,17*76
$GPGSV,4,4,15,08,47,047,22,23,29,145,21,24,80,177,18*4A
$HCHDG,266.0,,,,*40
$YXXDR,P,0.98966,B*57
$YXXDR,C,29.9,C*7F
$GPRMC,072626.36,A,0036.27143,N,00042.93547,E,1.402,235.8,141215,,*34
$GPGGA,072626.36,0036.27143,N,00042.93547,E,1,15,1.44,239.467,M,13.2,M,,*5A
$GPGSA,A,3,08,10,14,18,21,22,27,01,02,23,24,12,2.24,1.44,1.71*04
$HCHDG,266.2,,,,*42
$YXXDR,P,0.98968,B*59
```