Met4FoF Smartup-Unit Installation FAQ and Pictures

Parts

1x Met4FoF Interface board with STM32F767 Nucleo-board and GPS module (see Figure 1)

1x MPU 9250 Sensor board (xyz acceleration, xyz angular velocity+temperatur) with aprox 20 cm cable (see Figure 2 and 3)

1x MS5837 Sensor board with aprox 1 m cable (see Figure 4 and 5)

Parts not included in delivery

1x CR2032 lithium battary

1x Micro-USB datacable

1x RJ-45 Ethernet cabel

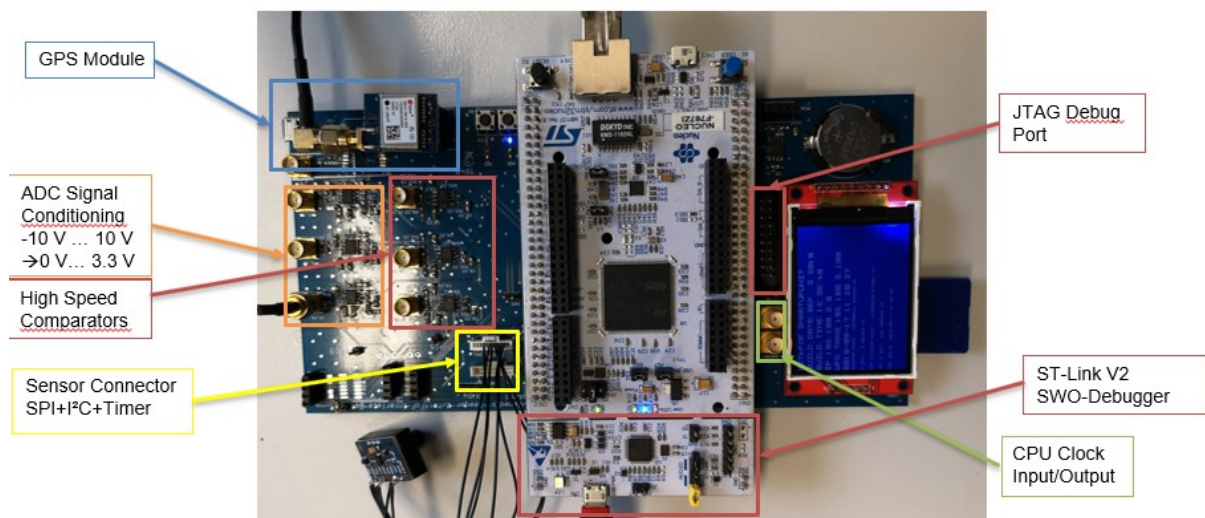1x GPS_Antenna for 3.3 v Supply e.g. Adafruit 960 active GPS antenna

Figure 1Met4FoF Interface Board with Analog Parts
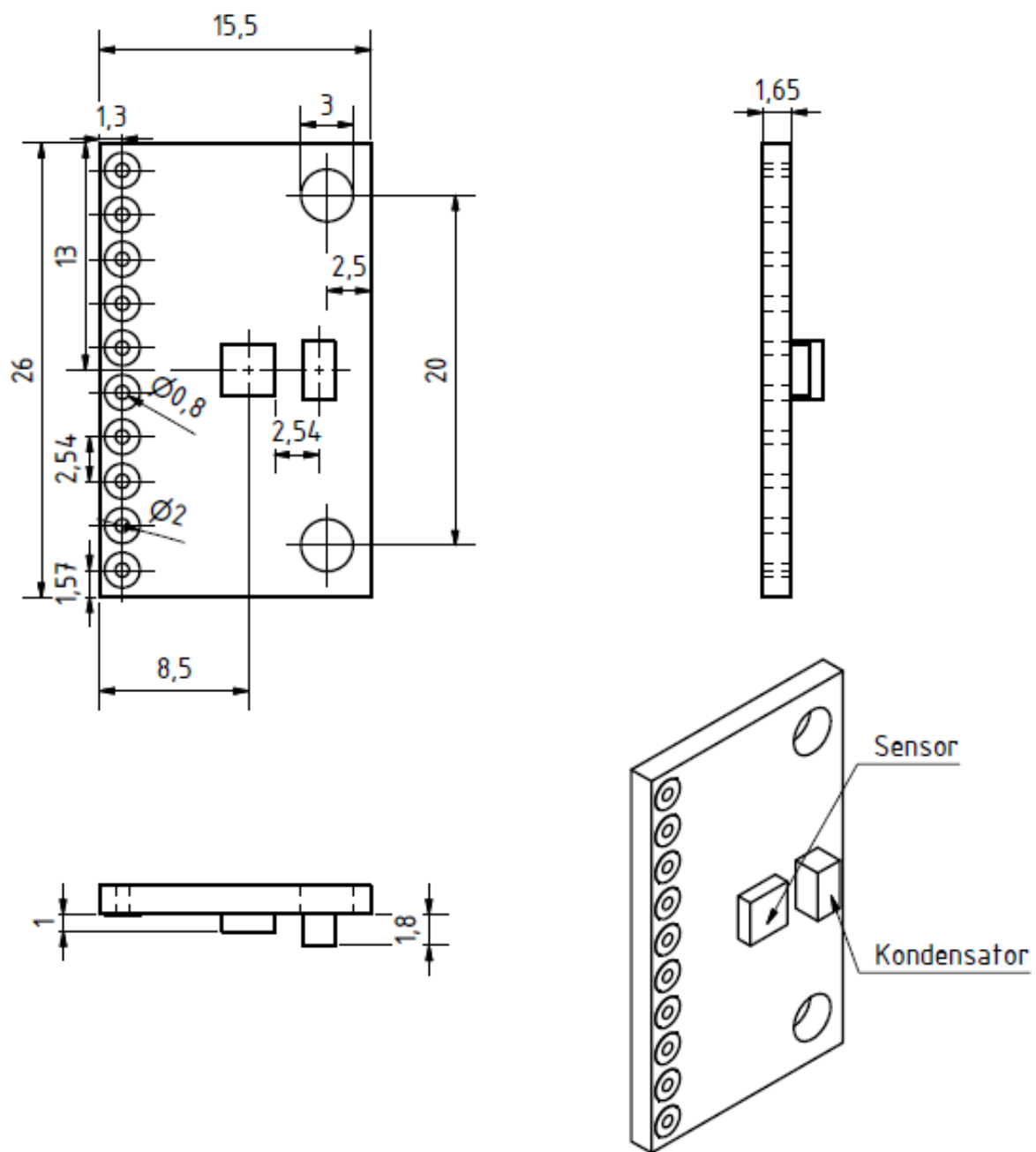
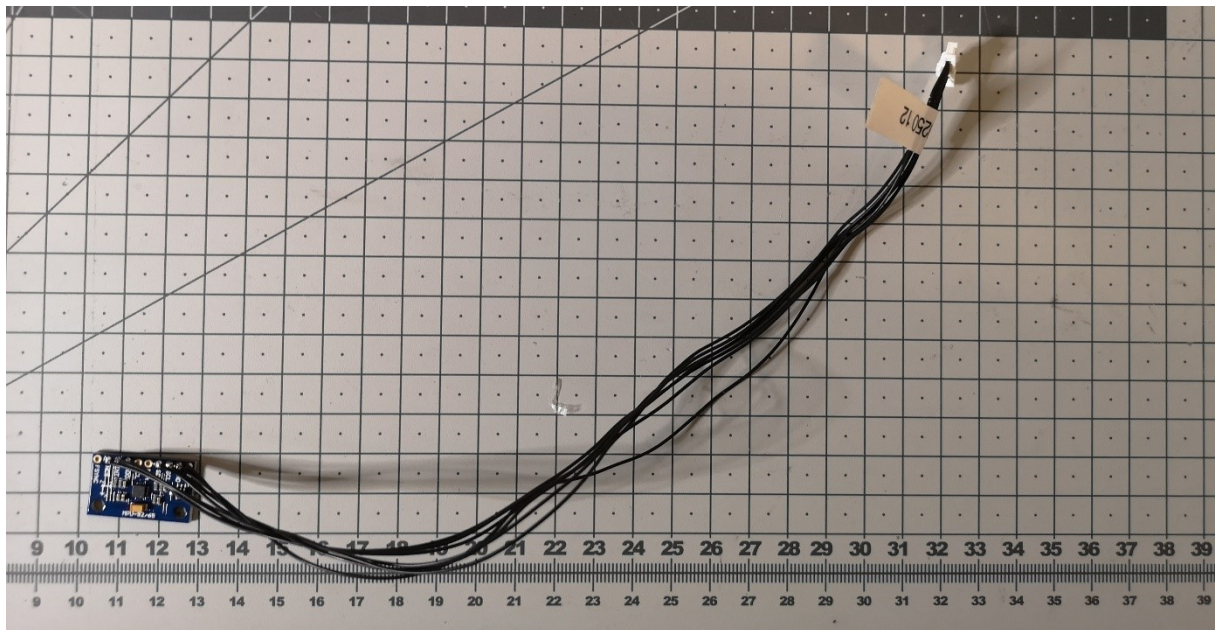*Figure 2 MPU 9250 Sensorboard dimensions (mm)*

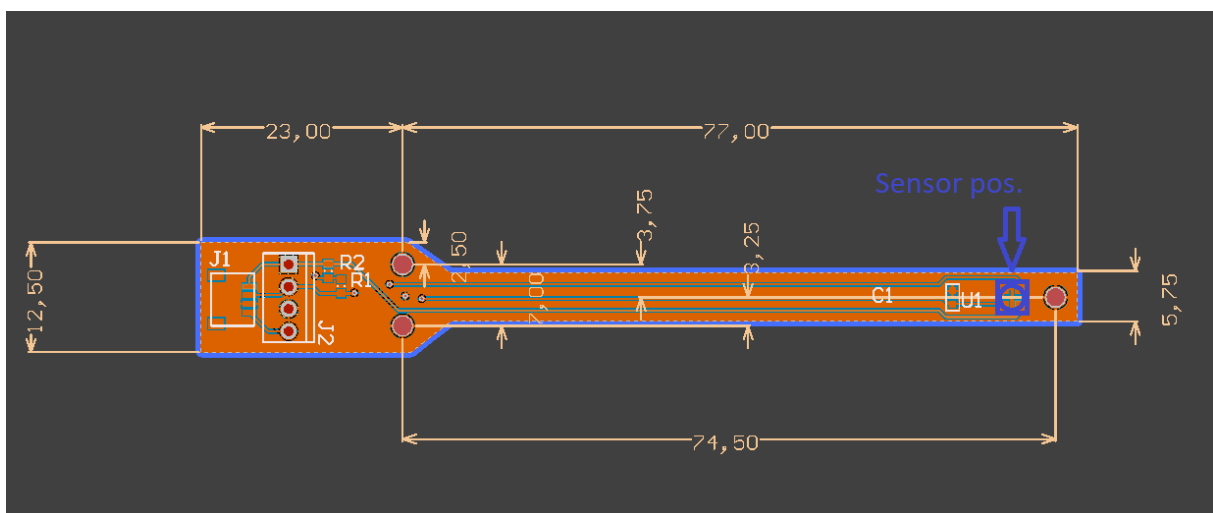*Figure 3 MPU 9250 with aprox. 20 cm cable*

Figure 4 MS5837 board dimensions (mm) Sensor is mounted on blue position at the end of the small part
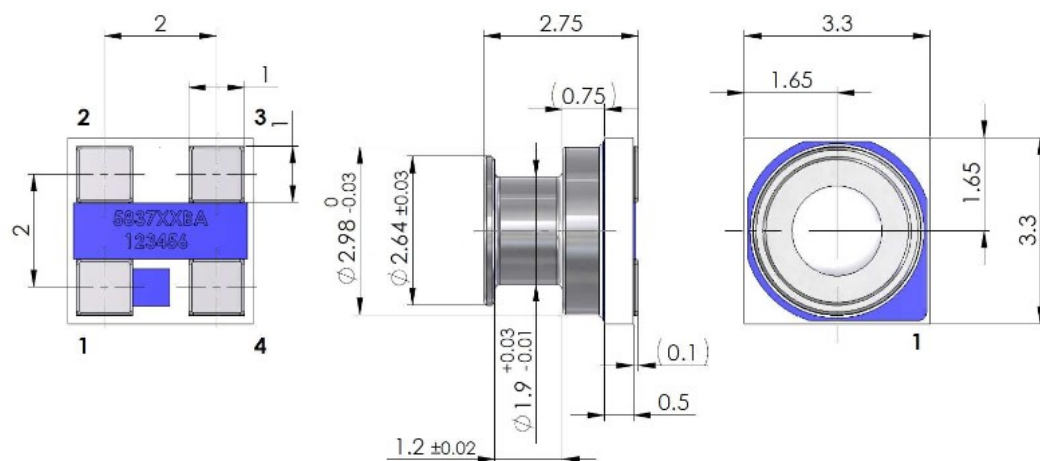

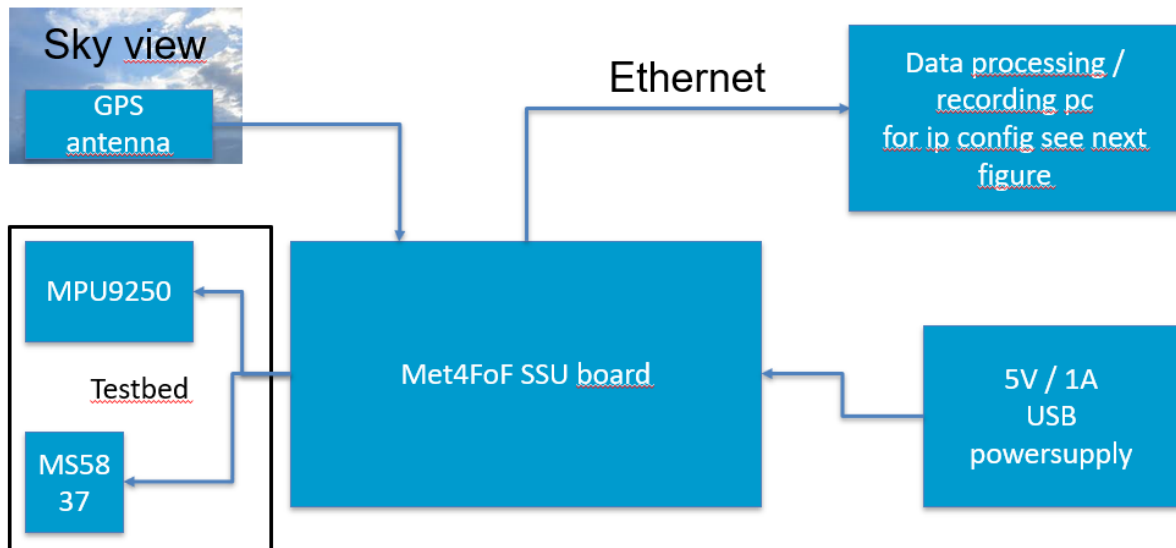*Figure 5 S5837 actual sensor dimensions mm*

Figure 6 Met4FoF SSU Connection diagram

Tabelle 1 Ethernet configuration for point to point connection

Parameter	Met4FoF SSU board	PC
ip adress	DHCP/192.168.0.10	192.168.0.200
subnetmask	DHCP/255.255.255.0	255.255.255.0
gate Way	DHCP/----	----

FAQ

Q. Can the GPS antenna cable be extended?

A. Yes the antenna cable can be extended. RG58 or RG 174 high frequency coaxial cable is well suited for this. With 15 m cable and antenna with sky view constant reception was possible.

Q. Does the antenna have to be mounted outside a building?

A. It is important that as much sky area as possible is visible from the antenna position. Between the antenna and the sky there may still be plastic or glass if it is thin. It does not necessarily have to be optically transparent.

Q. Can the GPS cable be routed through a window?

A. If it is ensured that no sheep edges cut the cable, this is possible to a limited extent. The window should not be reopened/closed after the cable has been routed through, as the cable will continue to be destroyed. In the normal case the gain in signal strength is worth this risk.

Q. Does the board need to be powered via USB?

A. No. It is also possible to supply the board with 5V via pin header. The USB cable does not necessarily have to be connected to a PC.

Q. The MPU 9250 connection cable is very short it can be extended.

A. That hasn't been tested yet. The sensor is connected via a 10 MHz SPI bus, which is susceptible to interference. Therefore, when extending the sensor, care should be taken to ensure shielding and good cable characteristics.

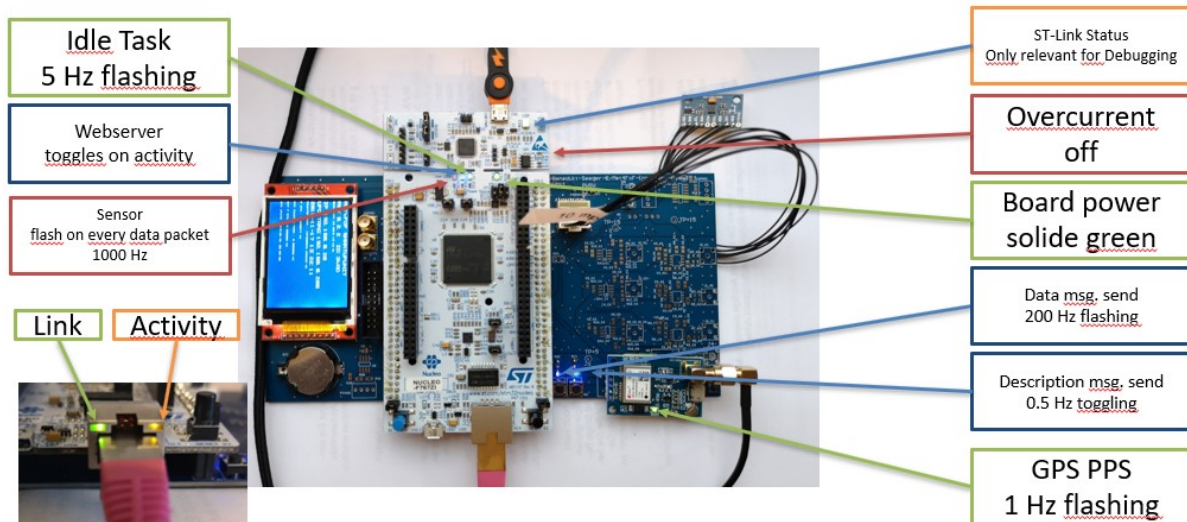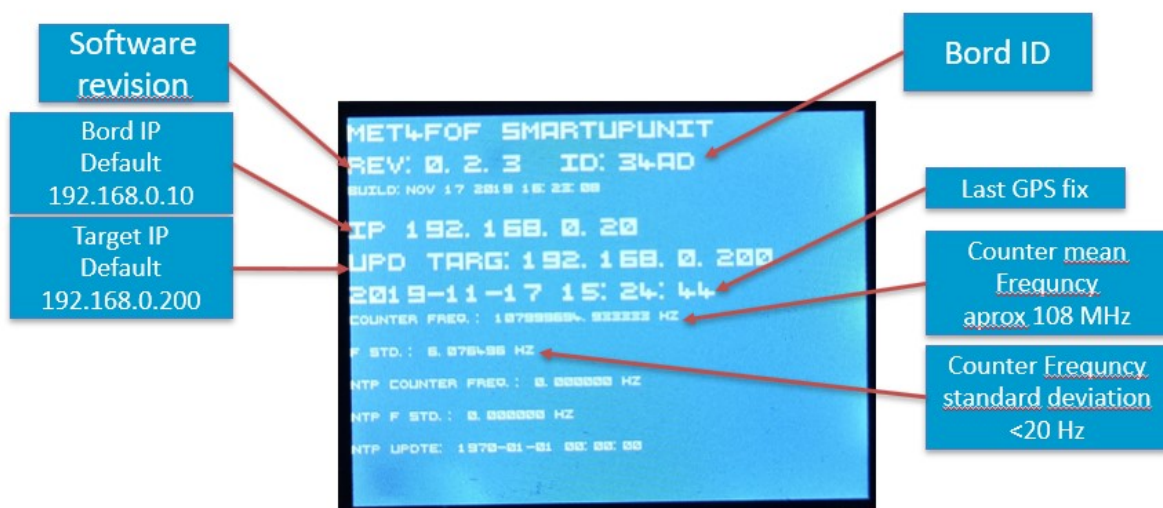Q. What do all the LEDs and stuff on the display mean?

Figure 7 LED meaning and normal operation

Figure 8 Information on LCD