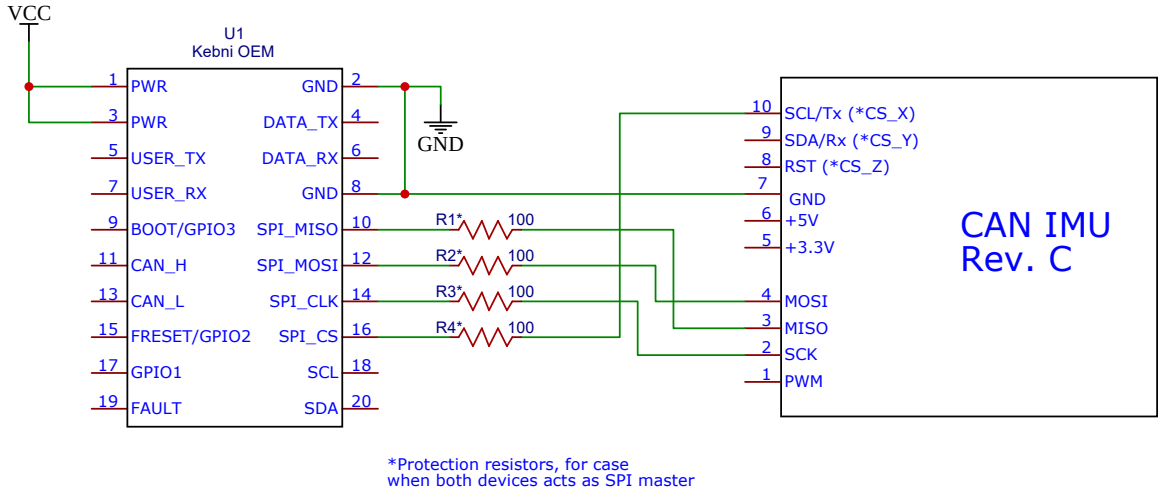
CAN_IMU rev.C and Kebni SensAltion AHRS/INS

Kebni SensAltion AHRS / **INS** sensor is supported in the **CAN_IMU Rev.C** (or later versions having an external SPI interface).

Electrical connection

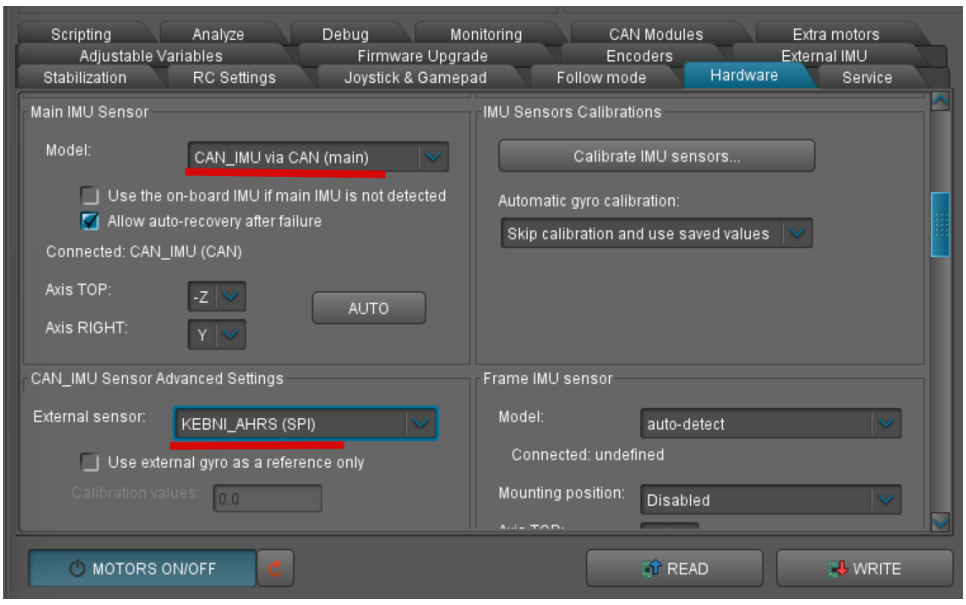


WARNING: make electrical connection only after loading a special firmware (see below in this manual). The stock CAN_IMU firmware may cause permanent damage for both modules!

Configuration

1. Update Basecam controller to the 2.73.7 or later firmware using GUI - "Firmware update" (it may be needed to enable "Experimental" flag to show this version).

2. Connect the CAN_IMU module to the main controller by CAN cable, selecting it as a main IMU in the GUI - "Hardware" tab, "Main IMU sensor". Write settings, disconnect and connect GUI again to load additional settings related to the CAN_IMU. Select KEBNI_AHRS as an external sensor, write and restart the system.



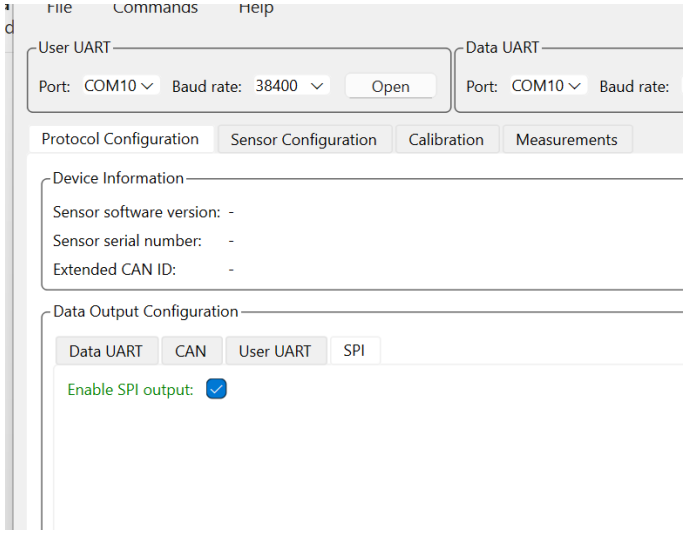
3. Load **a special firmware**, compatible with the Kebni sensor, to the CAN_IMU module using Basecam GUI - "Firmware update" - "Connected modules".

> Firmware link: https://www.basecamelectronics.com/files/CAN_IMU/CAN_IMU_1_53_Kebni.bin
> A newer version may be available. Check the CAN_IMU product page, “Download” section, “External sensors” – “Kebni SensAltion”

4. Connect the Kebni sensor to a desktop PC via UART as recommended by the manufacturer, and configure it sending the following commands to the terminal:

```
$PKEBB*XX
$PKEBW,6,o0001s1E033032031043042041053052051 4C34C24C14D34D24D14E34E24E14F34F
24F13004004106736726836826936 92x*XX
$PKEBS*4F
$PKEBB*5E
```

Enable SPI output in the application provided by the manufacturer:



5. Connect the Kebni sensor to the SPI port of the CAN_IMU module. **WARNING:** It is strongly recommended to use a 100 Ohm series resistor to protect both devices. If the CAN_IMU is misconfigured, the SPI interface may operate in “master” mode.

If configured properly, the IMU gauge panels in the GUI (2.73.8 or later) will show attitude/heading data from the Kebni sensor. You can view the current status of the sensor in “Debug” – “Requests system state”.