

Activation of EULER-NAV BAHRS driver on PX4 Autopilot Version 1.0



© 2025 AMS Advanced Air Mobility Sensors UG

Table of contents

1 Introduction.....3

2 Enabling the driver.....3

3 Wiring instructions.....4

4 Contact details.....4

1 Introduction

This document provides step-by-step instructions for enabling the driver for EULER-NAV Baro-Inertial AHRS on PX4 Autopilot.

Driver source code can be found in the following subfolder of the main git repository of the PX4 Autopilot project:

https://github.com/PX4/PX4-Autopilot/tree/main/src/drivers/ins/eulernav_bahrs

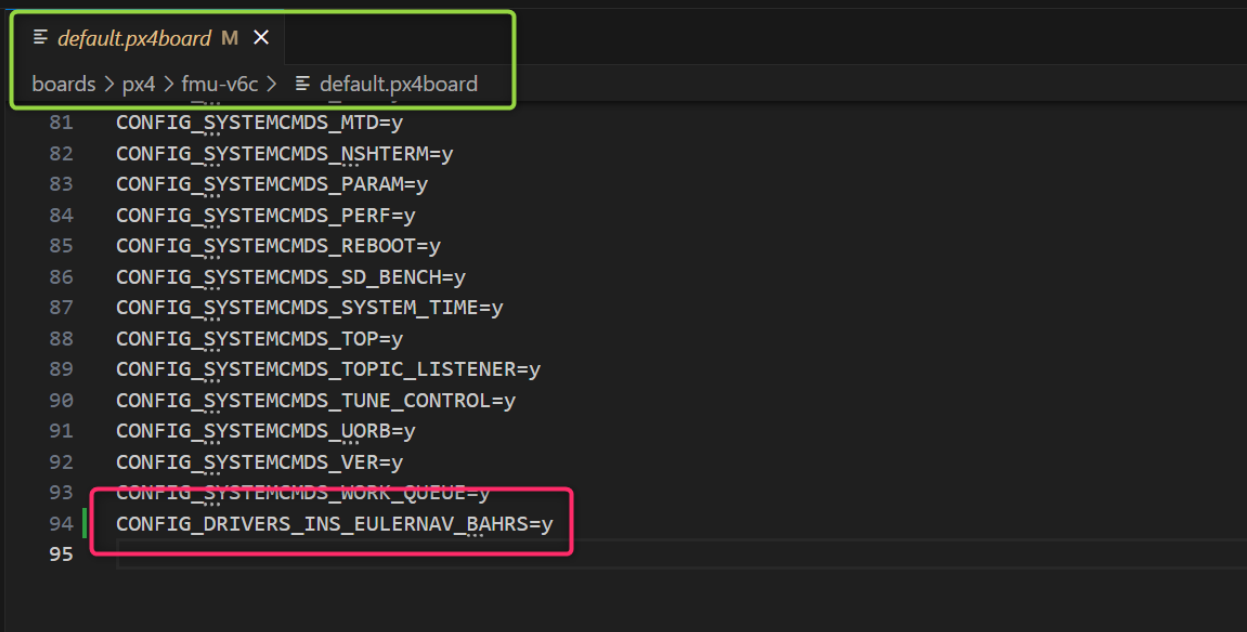
2 Enabling the driver

The latest PX4 Autopilot does not include external INS driver modules by default because of FLASH capacity limitations.

To include the driver into a built for your hardware, add this line to the dedicated board configuration file:

```
CONFIG_DRIVERS_INS_EULERNAV_BAHRs=y
```

Example for Pixhawk v6c:



```
boards > px4 > fmu-v6c > default.px4board
81 CONFIG_SYSTEMCMDS_MTD=y
82 CONFIG_SYSTEMCMDS_NSHTERM=y
83 CONFIG_SYSTEMCMDS_PARAM=y
84 CONFIG_SYSTEMCMDS_PERF=y
85 CONFIG_SYSTEMCMDS_REBOOT=y
86 CONFIG_SYSTEMCMDS_SD_BENCH=y
87 CONFIG_SYSTEMCMDS_SYSTEM_TIME=y
88 CONFIG_SYSTEMCMDS_TOP=y
89 CONFIG_SYSTEMCMDS_TOPIC_LISTENER=y
90 CONFIG_SYSTEMCMDS_TUNE_CONTROL=y
91 CONFIG_SYSTEMCMDS_UORB=y
92 CONFIG_SYSTEMCMDS_VER=y
93 CONFIG_SYSTEMCMDS_WORK_QUEUE=y
94 CONFIG_DRIVERS_INS_EULERNAV_BAHRs=y
95
```

Now you can build firmware for your board. Example for Pixhawk v6c (execute in terminal from the repo root):

```
make px4_fmu-v6c_default
```

Please note that you may need to deactivate unnecessary modules in order for the executable to fit into the available microcontroller FLASH.

Once the firmware is built, program the firmware into your board as usually using QgroundControl GUI. To automatically start the driver on power-on, add the following line to the *extras.txt* file located in the folder */etc* on the SD card plugged into your Pixhawk board:

```
eulernav_bahrs start -d <com-port-name>
```

When connecting the EULER-NAV BAHRs to the GPS2 port of Pixhawk v6c board the COM port name is */dev/ttyS6*. If the file */etc/extras.txt* is not present present on SD, create it manually.

3 Wiring instructions

1. BAHRS GND (pin 4 or 8) → GPSX or TELEMX GND
2. BAHRS VCC (pin 7) → GPSX or TELEMX GND
3. BAHRS UART/RS232 TX → GPSX or TELEMX RX
4. BAHRS UART/RS232 RX → GPSX or TELEMX TX

If you are using a EULER-NAV device with RS232 interface, use RS232 to UART converter to adjust TTL voltage levels.

4 Contact details

Still have questions, or need technical support? Reach out to us! Email: info@euler-nav.com.