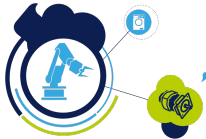
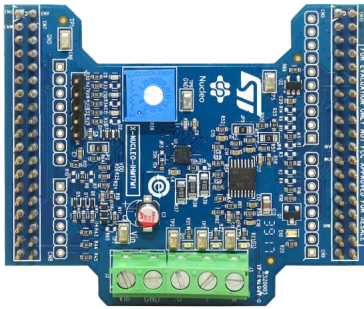


## Low voltage three-phase brushless DC motor driver expansion board based on STSPIN233 for STM32 Nucleo



### Features

- Low voltage range from 1.8 V to 10 V
- Current up to 1.3 A<sub>rms</sub>
- Full overcurrent protection and short-circuit protection
- Thermal shutdown
- Compatible with STM32 Nucleo boards
- Equipped with ST morpho connectors
- Hall/Encoder motor sensor connector and circuit
- Potentiometer available for speed regulation
- RoHS compliant

### Description

The **X-NUCLEO-IHM17M1** is a low voltage three-phase brushless DC motor driver expansion board based on the **STSPIN233** for **STM32 Nucleo**.

It provides an affordable and easy-to-use solution for the implementation of portable motor driving applications such as thermal printers, robotics and toys.

The **X-NUCLEO-IHM17M1** is compatible with the Arduino UNO R3 connector and most STM32 Nucleo boards.

The board is designed for six-step and FOC algorithms with single and three-shunt sensing topology.

#### Summary table

|   |                                  |
|---|----------------------------------|
| Low voltage three-phase brushless DC motor driver expansion board based on STSPIN233 for STM32 Nucleo | <a href="#">X-NUCLEO-IHM17M1</a> |
| Low voltage three phase and three sense motor driver  | <a href="#">STSPIN233</a>        |
| STM32 Nucleo development board  | <a href="#">STM32 Nucleo</a>     |

# 1 X-NUCLEO-IHM17M1 schematic diagram

Figure 1. X-NUCLEO-IHM17M1 circuit schematic (1 of 2)

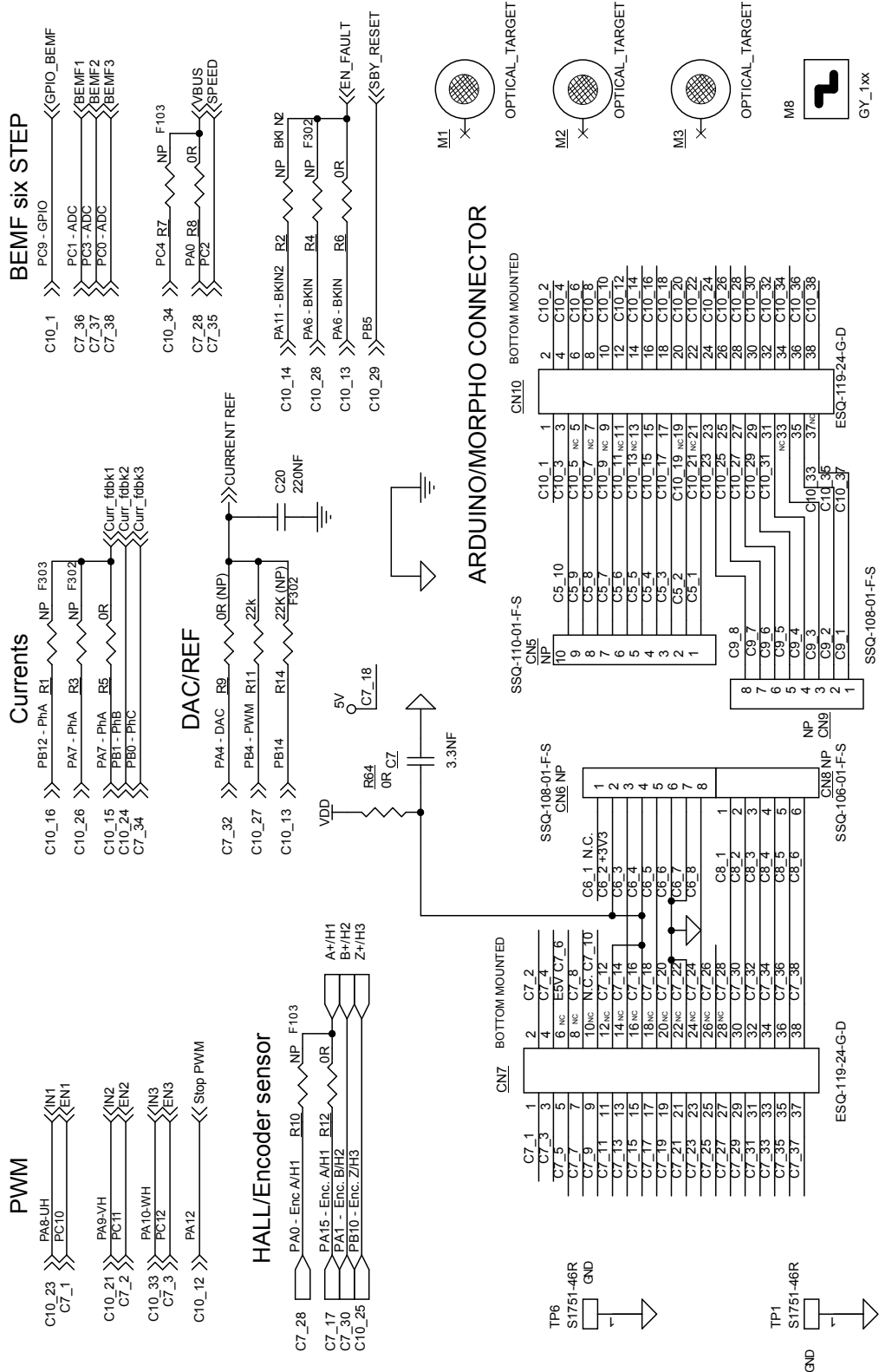
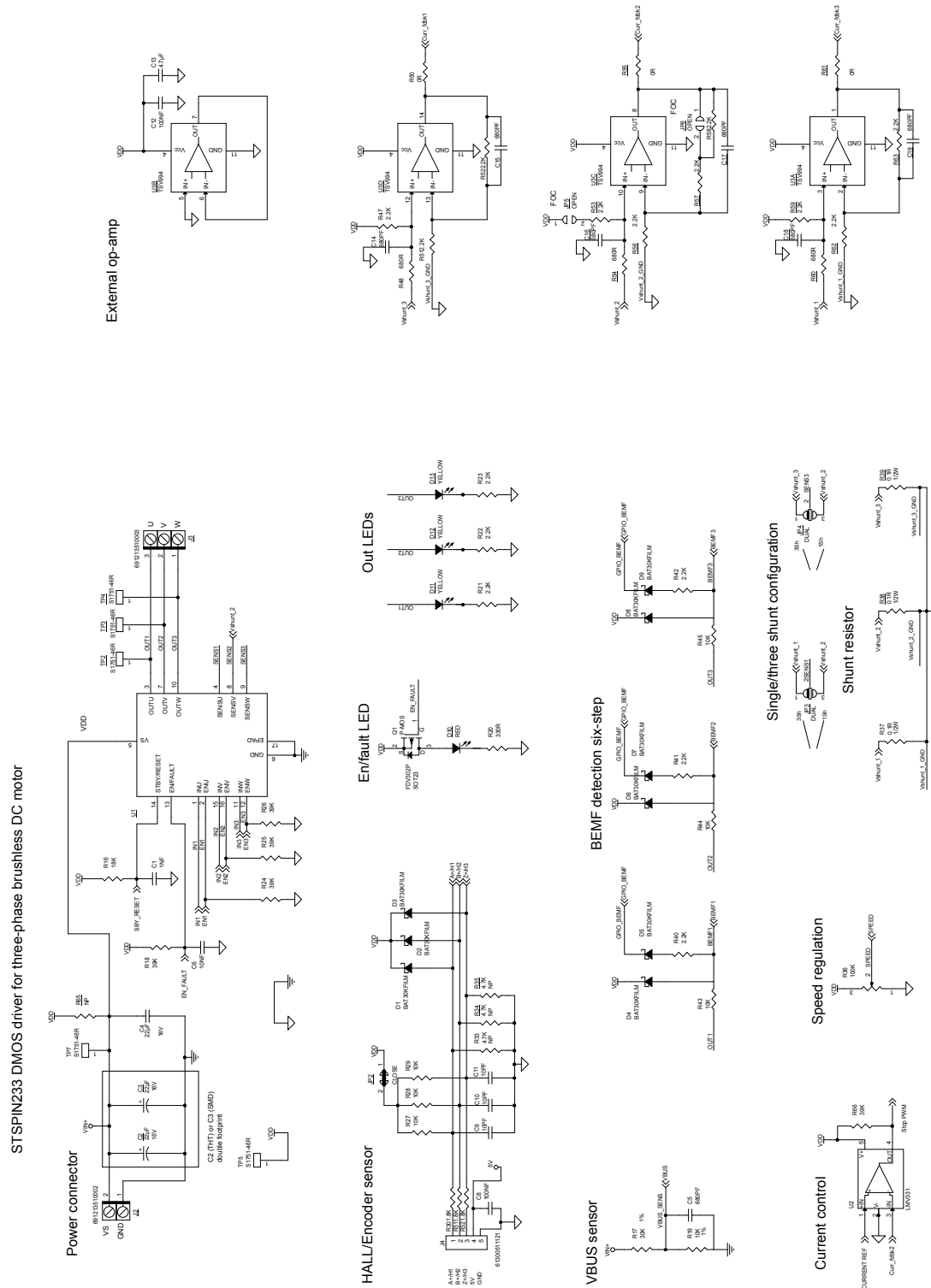


Figure 2. X-NUCLEO-IHM17M1 circuit schematic (2 of 2)



## Revision history

**Table 1. Document revision history**

| Date        | Version | Changes          |
|-------------|---------|------------------|
| 28-Feb-2017 | 1       | Initial release. |

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