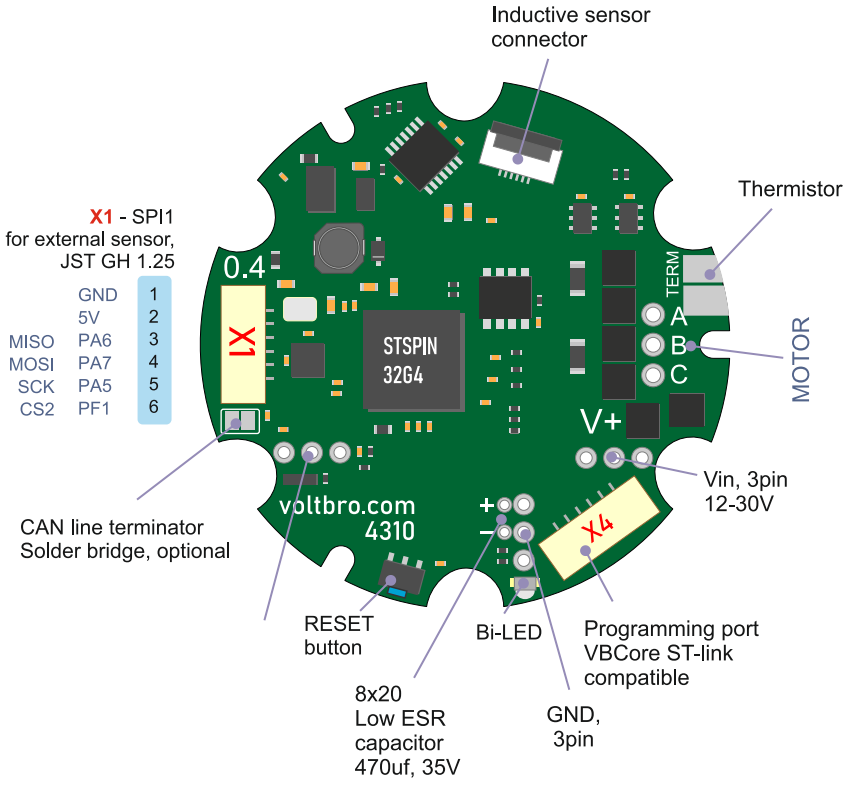
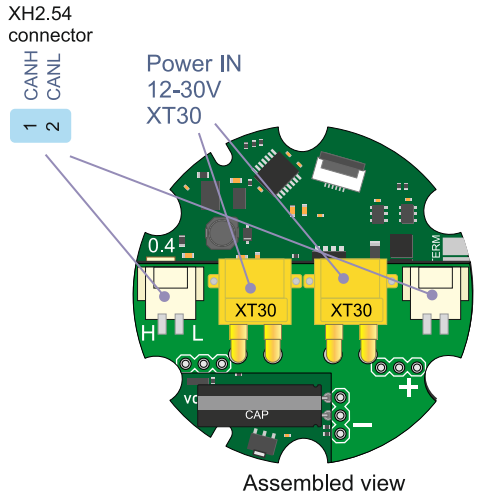
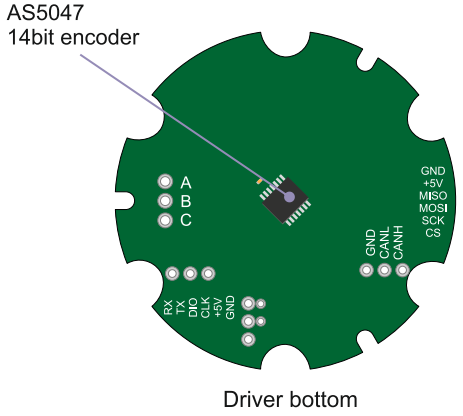
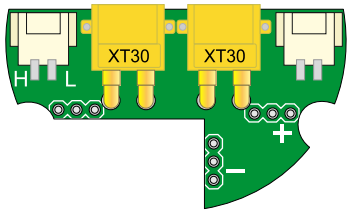
VBCore M4310 BLDC motor Driver 10A v0.4









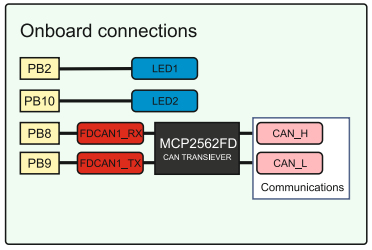
NOTES:

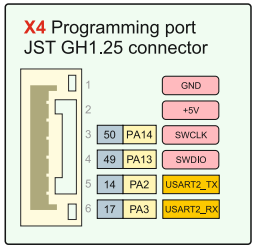
1. The controller consists of two boards: the main controller board and a connectors board.

2. Firmware configuration is performed via the serial port.

VBCore M4310 BLDC Driver v0.4

- VIN: 12-30V
- MAX CURRENT: 10A
- DRIVER & MCU: STM STSPIN32G4
- Control loop encoder AS5047P
- Ext. SPI interface
- Output Inductive encoder: NCV77320
- Current control
- I2C EEPROM
- CAN / CAN-FD
- Dimensions: 48x48mm





VBCores

www.vbcores.com

Electronics for robotics research and development

Controller

STSPIN32G4 High performance 3-phase motor controller with embedded STM32G4 MCU

Inductive Position Sensor

NCV77320

Controll	PIN	Notes
MISO	PB4	SPI3
MOSI	PB5	SPI3
SCK	PB3	SPI3
CS	PD2	SPI3

Rotor position Sensor

AS5047p, 14bit

Controll	PIN	Notes
MISO	PA6	SPI1
MOSI	PA7	SPI1
SCK	PA5	SPI1
CS	PA4	SPI1

EEPROM

256K, AT24C256C

Controll	PIN	I2C
A0, A1, A2	GND	
Address		0x50
SCL	PA9	I2C2_SCL
SDA	PA8	I2C2_SDA

Voltage control

Resistive voltage divider 1:16

Controll	PIN	ADC
V input	PB0	ADC1