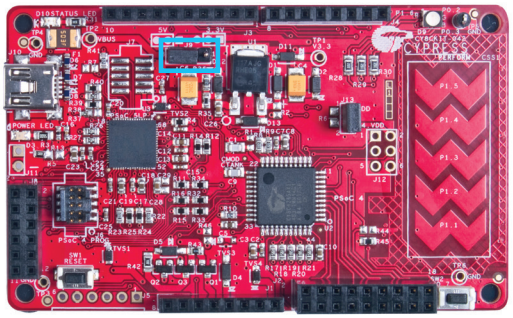
CY8CKIT-037 PSoC®4 MOTOR CONTROL



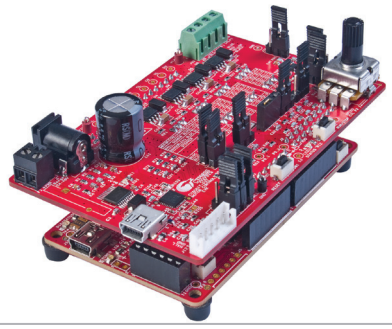
1

KIT CONTENTS: CY8CKIT-037 Motor Control Evaluation Board, USB Standard-A to Mini-B cable, Configuration Jumpers, Fuse, BLDC motor (BLY172S-24V-4000) with sinusoidal back electromotive force, 24-V/2.1-A AC-DC Adapter, Screwdriver, Quick Start Guide



2

- The CY8CKIT-037 EVK board is intended to be used with the CY8CKIT-042 PSoC® 4 Pioneer Kit
- Set VDD to 5 V with J9 on CY8CKIT-042 Kit



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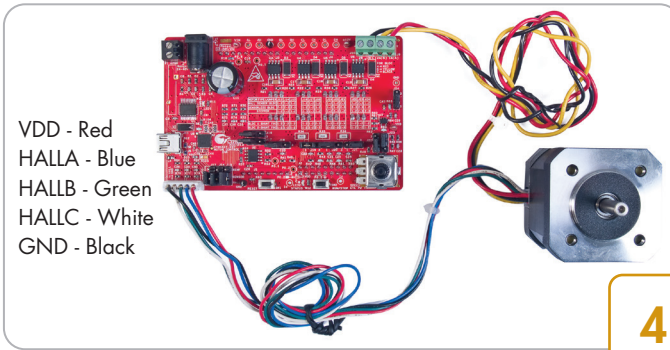
- Connect the CY8CKIT-037 EVK board to the CY8CKIT-042 board through connectors J1, J2, J3, and J4



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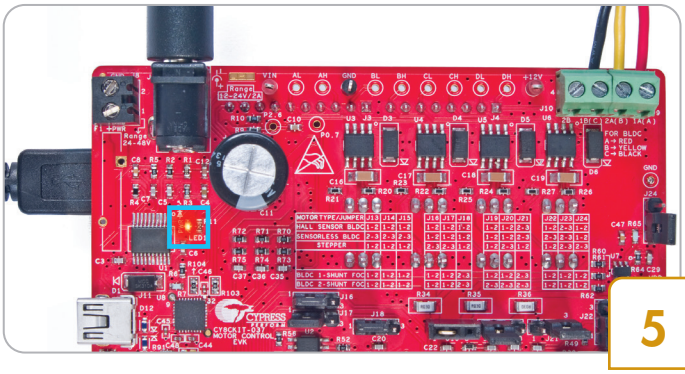
- Connect the Hall Sensor connector to J12 on CY8CKIT-037
- Confirm that Jumper J13-24 are as per "HALL SENSOR BLDC" motor type as printed on the EVK board
- Connect the motor windings to J9 and J10 using the screwdriver
- For the motor provided with the kit, the color coding of motor windings is: A > Red, B > Yellow, C > Black



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- Connect the power adapter provided with the kit to CY8CKIT-037 at connector J7; connect the other end of the adapter to any 100~240 V AC power socket
- Red LED indicates power ON. If not glowing, then fix the fuse F2 correctly on the bottom side
- Connect the USB cable provided with the kit to CY8CKIT-042 at connector J10; connect the other end of the USB cable to your PC

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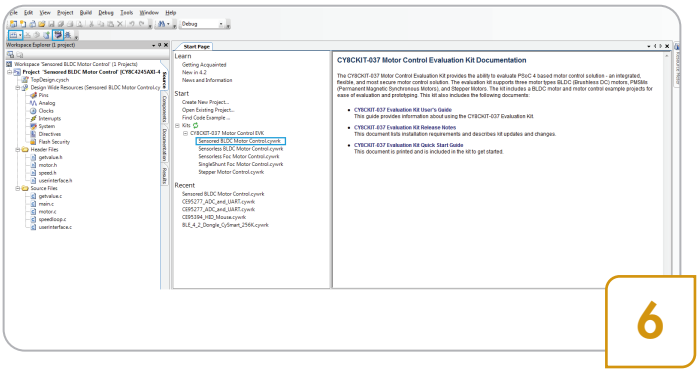
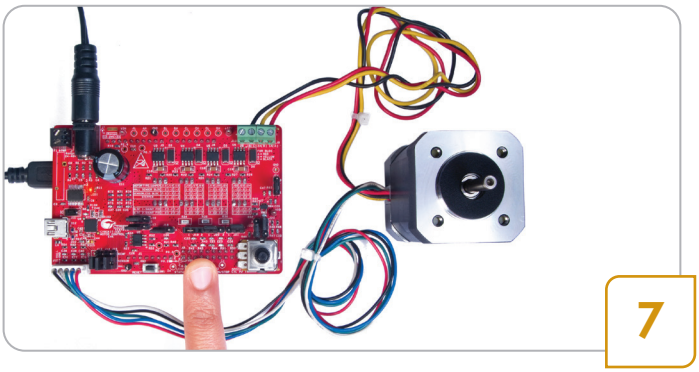


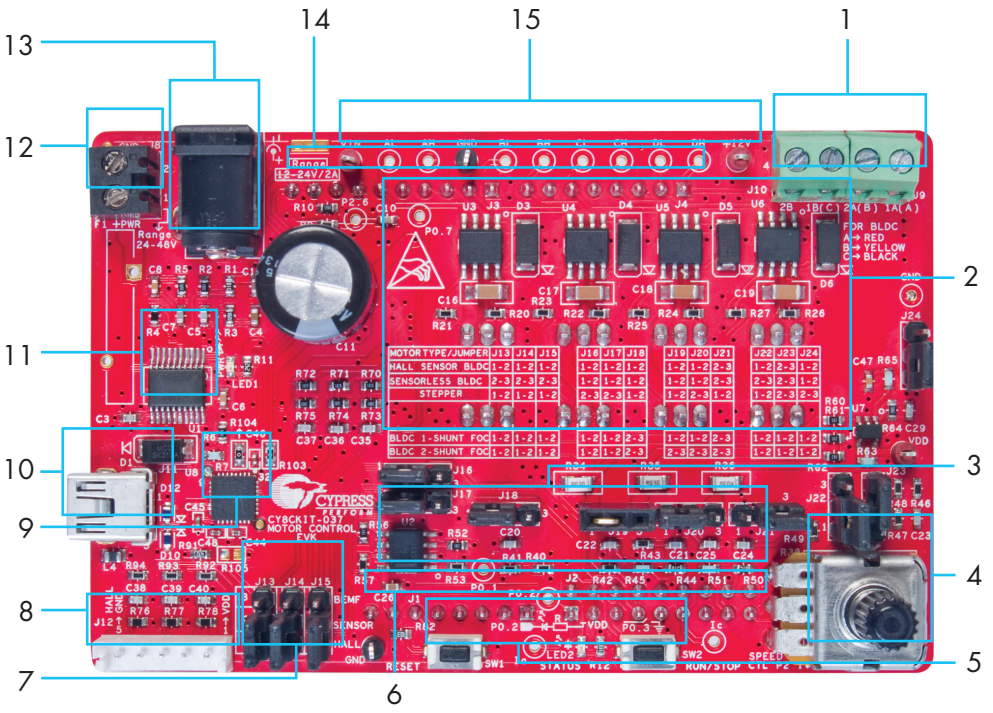
- Download the ***CY8CKIT-037*** Complete setup from www.cypress.com/CY8CKIT-037 and install it on your PC
- Launch PSoC Creator™
- On the PSoC Creator Start Page, click ***Sensored BLDC Motor Control.cywrk*** under Kits > CY8CKIT-037 Motor Control EVK
- Select a location to save the code example and click OK.
- Sensored BLDC Motor Control Project will open in the Workspace Explorer
- Click the Program button on the Build/Program toolbar to program the PSoC device



- Press the switch SW1 to reset the EVK board. LED2 stops blinking after reset
- Press the switch SW2 to start the BLDC motor
- Vary the position of the potentiometer R38 to change the motor speed
- Press SW2 to stop the motor

Caution: Do not remove jumpers while the kit is powered

CY8CKIT-037 Motor Control EVK Board Details



1	Motor Winding Connector
2	PWM Driver for Dual H-Bridge Circuit
3	Current Chopper and Processing Circuit
4	Potentiometer to Change Motor Speed
5	Reset Button, Status LED and Run/Stop Button
6	Arduino™ Connectors to CY8CKIT-042
7	Hall and BEMF Selection Jumpers
8	Hall Sensor Interface Connector
9	USB Serial Chip
10	USB Connector to PC
11	12 V DC/DC Switching Regulator
12	24-48 V DC Power Supply Connector
13	12-24 V/2 A Power Jack
14	Arduino Connectors to CY8CKIT-042
15	Test Points

For the latest information on motor control products, visit www.cypress.com/CY8CKIT-037

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