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Three Phase BLDC Motor Kit with DRV8312 and Piccolo MCU

(ACTIVE) DRV8312-C2-KIT

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Description

The DRV8312-C2-KIT is a motor control evaluation kit for spinning three-phase brushless DC (BLDC) and brushless AC (BLAC) - often referred to as permanent magnet synchronous (PMSM) - motors. The DRV8312-C2-KIT is a high-performance, power-efficient, cost-effective sensorless field-oriented control (FOC) and sensored/sensorless trapezoidal commutation platform that speeds development for quicker time to market. Applications include sub-50-V and 7-A brushless motors for driving medical pumps, gates, lifts and small pumps, as well as industrial and consumer robotics and automation.



Features

DRV8312 three phase inverter integrated power module base board supporting up to 50V and 6.5A with controlCARD interface -C2000 Piccolo F28035 controlCARD (pre-flashed with code to spin all motors using GUI)- GUI- Isolated XDS100 Emulation, UART, SPI, CAN Connectivity- 1 BLDC/BLAC NEMA17 55W Motor- 24 V power supply- USB Cable- USB Stick with Quick Start GUI, Documentation, and CCStudio v4.x Integrated Development Environment - All software, hardware documents (schematics, gerbers, BOM) and updates are freely available through the C2000 development desktop tool: [controlSUITE](#)

What's Included

- 1 NEMA17 BLDC/PMSM 55W Motor
- 24V wall power supply (with adapters)
- DRV8312 baseboard with controlCARD slot
- Piccolo Isolated F28035 controlCARD
- USB Cable
- o USB Stick with GUI, CCStudio IDE, Quick Start Guide, and link to controlSUITE for all documentation

Order Now

Part Number	Buy from Texas Instruments or Third Party	Buy from Authorized Distributor	Status
DRV8312-C2-KIT: Three Phase BLDC Motor Kit with DRV8312 and Piccolo MCU	\$299.00(USD) In Stock Typically Ships in 1 to 3 Business Days Buy from TI	Pricing may vary. Buy from distributor	ACTIVE
Contact a Distributor	<input type="text" value="California"/>	<input type="button" value="Go"/>	

TI's [Standard Terms and Conditions for Evaluation Modules](#) apply.

Technical Documents

Application Notes (1)


Title	Abstract	Type	Size (KB)	Date	Views
InstaSPIN(tm) BLDC Lab	Read Abstract	PDF	1434	15 Nov 2011	3,635

User Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
TMS320C2000 Motor Control Primer (Rev. A)	Read Abstract	PDF	21	05 Feb 2011	6,420

Title	Abstract	Type	Size (KB)	Date	Views
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Solution Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
 Motor Control Solutions Brochure (Rev. G)		PDF	2102	31 Oct 2014	15,958

Related Products

Software (1)

Name	Part Number	Software Type
controlSUITE™ Software Suite: Essential Software and Development Tools for C2000™ Microcontrollers	CONTROLSUITE	Software Libraries

Design Kits & Evaluation Modules (3)

Name	Part Number	Tool Type
DRV8412 Integrated Motor Driver for Brushed and Stepper Motors with Piccolo F28035 controlCARD	DRV8412-C2-KIT	Evaluation Modules & Boards
F28035 Piccolo controlCARD	TMDSCNCD28035	Evaluation Modules & Boards
F28035 Piccolo Experimenter's Kit	TMDSDOCK28035	Evaluation Modules & Boards

TI Devices (22)

Part Number	Name	Product Family
DRV8312	6.5A Three Phase Brushless DC Motor Driver with Inrush Protection (PWM Ctrl)	Brushless DC (BLDC) Drivers
TMS320F28020	Piccolo Microcontroller	Real-time Control
TMS320F280200	Piccolo Microcontroller	Real-time Control
TMS320F28021	Piccolo Microcontroller	Real-time Control
TMS320F28022	Piccolo Microcontroller	Real-time Control
TMS320F28023	Piccolo Microcontroller	Real-time Control
TMS320F28026	Piccolo Microcontroller	Real-time Control
TMS320F28027	Piccolo Microcontroller	Real-time Control
TMS320F28030	Piccolo Microcontroller	Real-time Control
TMS320F28031	Piccolo Microcontroller	Real-time Control
TMS320F28032	Piccolo Microcontroller	Real-time Control
TMS320F28033	Piccolo Microcontroller	Real-time Control
TMS320F28034	Piccolo Microcontroller	Real-time Control
TMS320F28035	Piccolo Microcontroller	Real-time Control
TMS320F28062	Piccolo Microcontroller	Real-time Control
TMS320F28063	Piccolo Microcontroller	Real-time Control
TMS320F28064	Piccolo Microcontroller	Real-time Control
TMS320F28065	Piccolo Microcontroller	Real-time Control
TMS320F28066	Piccolo Microcontroller	Real-time Control
TMS320F28067	Piccolo Microcontroller	Real-time Control
TMS320F28068	Piccolo Microcontroller	Real-time Control
TMS320F28069	Piccolo Microcontroller	Real-time Control


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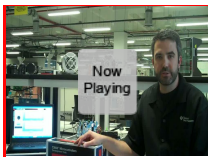
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Spinning Three-Phase Brushless Motors: DRV8312 Eval Kit

Watch Ryan Kehr, applications manager for TI's Motor Drive Business Unit, demonstrate the DRV8312-C2-KIT, a complete motor control evaluation kit for spinning brushless DC (BLDC) and permanent


Posted: 12-Apr-2011
Duration: 02:50
Views: 3475
Tags: trapezoidal control, c2000, amplifiers & linear, motor drivers, tms320f28035 microcontroller, industrial automation, MOTOR DRIVE,

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- [Tiva™ C Series ARM® Cortex-M MCUs](#)
- [Development Tools](#)

Training & events

Name	Type	Available During
Georgia Tech MOOC: Control of Mobile Robots Learn how to make mobile robots move in effective, safe, predictable, and collaborative ways using modern control theory.	On-Line Training	On Demand
SimpleLink™ Wi-Fi CC3100 and CC3200 Project 0 Series - 5 Part Series Learn about using Software Tools for SimpleLink™ Wi-Fi CC3100 Boosterpack and CC3200 Launchpad	On-Line Training	On Demand
TI-RTOS Update Learn about the latest TI-RTOS features and more in-depth understanding of this TI software tool.	On-Line Training	On Demand
Designing with Ultra Low Power Segmented Displays Learn about designing Ultra-low Power Segmented Displays and MSP430	On-Line Training	On Demand

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