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STR-30-60V-BLDC-MDK-GEVK: 1kW, 30-60V Motor Development Board

The STR-30-60V-BLDC-MDK-GEVK is a comprehensive motor development board and a reference design for drive low voltage 3-phase BLDC motors. The power board consists of 6 NTMFS6H800N MOSFETs for the inverter stage and NCP1034 PWM synchronous buck controller for power conversion. The 3-phase power board is rated for a maximum of 60V DC and consists of all necessary system blocks for a BLDC motor driver. As part of the motor development kit, the power board is compatible with the power Universal controller board enabling high-end control strategies and AI capabilities for industrial motor control. The complete kit is Strata enabled and the graphical user interface can be used to set control parameters for the motor drive.

The STR-30-60V-BLDC-MDK-GEVK comprises of the 1kW, 60V power board, hardware adapter for the UCB, and the Universal controller board (UCB)

For the Power board only, visit STR-30-60V-BLDC-MDK-GEVB

Features and Applications

Features

- Power board for Motor Development Kit (MDK)
- Compatible with the Universal Controller Board (UCB) FPGA/ARM
- Fully compatible with Xilinx® development tools for Zynq®-7000
- Strata Enabled
- Downloadable Trapezoidal control use cases for the UCB
- VIN: 30V - 60V DC
- Compatible with three-phase BLDC motors
- Over current protection (OCP), Over voltage protection (OVP)
- Plug-in connector interface for MCU cards (Arduino DUE footprint)
- Sensored Trapezoidal control strategy implemented
- Strata enabled and available for a quick-start evaluation
- Xilinx® development tools and environments are available for the MDK, such as Vitis and Vivado to program the FPGA

Applications

- Industrial drives and Robots
- Automated Guided Vehicles
- Power Tools
- Fans, Pumps, and Compressors

Evaluation/Development Tool Information

Product	Status	Compliance	Short Description	Parts Used	Action
STR-30-60V-BLDC-MDK-GEVK	Active	Pb-free	1kW, 30-60V Motor Development Board	2N7002L , BAT54HT1G , FAN5331SX , FDMC86116LZ , FPF3380UCX , MBR130T1G , MC74VHC1G03DFT1G , NCP1034DR2G , NCP1729SN35T1G , NCP705MT33TCG , NCP705MTADJTCG , NCP711ASN500T1G , NCP781BMNADJTAG , NCP81075DR2G , NCS20061SQ3T2G , NCS20062DMR2G , NCS20166SN2T1G , NCS21911SN2T1G , NCS2252SQ2T2G , NCT375MNR2G , NSR05F30NXT5G , NTMFS6H800NT1G , S115FA	Buy

Technical Documents

Type	Document Title	Document ID/Size	Rev
Eval Board: BOM	STR-30-60V-BLDC-MDK-GEVB Bill of Materials (ROHS Compliant)	STR-30-60V-BLDC-MDK-GEVB_BOM_ROHS.pdf - 477 KB	0
Eval Board: Gerber	STR-30-60V-BLDC-MDK-GEVB Gerber Layout Files (Zip Format)	STR-30-60V-BLDC-MDK-GEVB_GERBER.zip - 1338 KB	0
Eval Board: Schematic	STR-30-60V-BLDC-MDK-GEVB Schematic	STR-30-60V-BLDC-MDK-GEVB_SCHEMATIC.pdf - 2382 KB	0
Eval Board: Test Procedure	STR-30-60V-BLDC-MDK-GEVB Test Procedure	STR-30-60V-BLDC-MDK-GEVB_TEST_PROCEDURE.pdf - 11418 KB	0
Eval Board: Manual	STR-30-60V-BLDC-MDK-GEVB User Guide	STR-30-60V-BLDC-MDK-GEVB_USER_GUIDE.pdf - 1190 KB	0

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