



RM46 Hercules Safety MCU controlCARD Status: ACTIVE

TMDXRM46CNCD

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Key Document



MotorWare Software Projects for RM4x Safety MCUs

(v1.00.03.03) (ZIP 120636 KB)

18 Sep 2012 1,322views

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Description

RM46 controlCARDS from Texas Instruments are ideal products for initial software development and short run builds for system prototypes, test stands, and many other projects that require easy access to high-performance controllers. The controlCARDS are complete board-level modules that utilize an industry-standard DIMM form factor to provide a low-profile single-board controller solution. controlCARDS use the same 100-pin connector footprint to provide the analog and digital I/Os on-board controller and are reasonably interchangeable. The RM46CNCD board operates from an external power supply provided via the barrel connector located on the top-front of the card. The expected voltage for the control card is 6.0V to 30.0V as per the input capability of the TPS65381. The control card can be used as part of a motor control kit and offers additional control, connectivity and safety evaluation features.

Features

The TMDXRM46CNCD is meant for use as part of a motor control kit and offers additional control, connectivity and safety evaluation features.

Key features include:

- A Texas Instruments RM46L852 337-ball BGA microcontroller
- A Texas Instruments TPS65381 Safety-Integrated Power Companion
- On board, isolated USB XDS100v2 JTAG emulator
- Optional path to EVM JTAG connector (via DIMM)
- Hardware option for routing N2HET timers or ePeripherals to the DIMM interface – includes HET monitoring of ePeripheral outputs
- 10/100 Mbps Ethernet interface via RJ-45 with same PHY as on the TMDXRM46HDK
- Isolated UART/SCI accessible through a USB Virtual Port (VCP)
- Ignition cycle simulator switch S2 – serves as system reset of TPS and MCU
- LPO_TEST (SW3) push button switch (causes CLKDET hardware fault on MCU)
- LED indicators for xds100 power, activity, target/MCU power, GIOB7 pin activity, Ethernet link and activity, Ethernet speed, and nERROR.
- Soft Reset pushbutton (nRST)
- On board power supply supporting a 6V – 30V DC input and producing the 6V, 3.3V and 1.2V for the MCU

What's Included

The CNCD is made available as part of the DRV8301-RM46-KIT or orderable standalone as TMDXRM46CNCD. The kit contains everything needed to develop and run brushless DC motor control applications utilizing Hercules Safety MCUs. For more information on the kit, please see

www.ti.com/tool/drv8301-RM46-kit. The stand-alone card is shipped with a DVD containing:


- TI GUIComposer runtime environment
- TI MotorWare motor control CCS5 example projects for redundant SMO and Encoder based FOC as well as InstaSPIN™-BLDC
- GUI applications demonstrating the MotorWare projects (as tested on the DRV8301)
- MotorWare™ Documentation
- Hardware Documentation
- HALCoGen
- nowFlash
- nowECC

Order Now

















Part Number	Texas Instruments	Authorized Distributors	Status	Price (US\$)
TMDXRM46CNCD: RM46 Hercules Safety MCU controlCARD				
Contact a Distributor - Select a location -				

Technical Documents







Datasheet (1)

Title	Abstract	Type	Size (KB)	Date	Views
 RM46Lx50 16/32-BIT RISC Flash Microcontroller		PDF	2526	18 Sep 2012	


Application Notes (8)

Title	Abstract	Type	Size (KB)	Date	Views
 Initialization of Hercules ARM Cortex-R4F Microcontrollers (Rev. B)	 Read Abstract	PDF	119	15 Jan 2013	1,556
 Interfacing the Embedded 12-Bit ADC in a TMS570LS31x/21x and RM4x Series MCUs	 Read Abstract	PDF	726	16 Feb 2012	1,367
 Understanding Motor Driver Current Ratings	 Read Abstract	PDF	153	06 Feb 2012	2,803
 Calculating Motor Driver Power Dissipation	 Read Abstract	PDF	56	06 Feb 2012	2,571
 Execution Time Measurement for Hercules ARM Safety MCUs (Rev. A)	 Read Abstract	Multiple Files		04 Nov 2011	604
 Compatibility Considerations: TMS570LS20x/10x to TMS570LS31x/21x (Rev. A)	 Read Abstract	PDF	138	20 Oct 2011	768
 Use of All 1's and All 0's Valid in Flash EEPROM Emulation	 Read Abstract	PDF	81	27 Sep 2011	795
 Optimizing Digital Motor Control Libraries	 Read Abstract	PDF	365	15 Mar 2007	2,328


User Guides (3)

Title	Abstract	Type	Size (KB)	Date	Views
 Safety Manual for TMS570LS12x/11x Hercules ARM Safety Critical MCUs	 Read Abstract	PDF	549	15 Oct 2012	679
 RM46x 16/32-Bit RISC Flash Microcontroller Technical Reference Manual	 Read Abstract	PDF	12380	18 Sep 2012	1,115
 Safety Manual for RM46x Hercules ARM Safety Critical MCUs	 Read Abstract	PDF	558	14 Sep 2012	700

Solution Guides (1)

Title	Abstract	Type	Size (KB)	Date	Views
 Motor Control Solutions Brochure (Rev. F)		PDF	4037	26 Oct 2012	26,839

White Papers (2)

Title	Abstract	Type	Size (KB)	Date	Views
 An Introduction to Software Development for Functional Safety on TI Processors		PDF	1662	16 Sep 2011	2,237