TMS570LS12 Hercules Safety MCU controlCARD

TMDX570LS12CNCD

Description

TMS570 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. The controlCARDs use the same 100-pin connector footprint to provide the analog and digital I/Os on-board controller and are reasonably interchangeable. The TMS570LS12 controlCARD includes the TPS65381 safety companion PMIC. The host system needs to provide a minimum single 6V power rail to the controlCARD via the barrel connector for it to be fully functional. The control card can be used as part of a motor control kit and offers additional control, connectivity and safety evaluation features.

Features

- A Texas Instruments TMS570LS1227 337-ball BGA microcontroller
- On board TPS65381 Safety Power Management Companion
- On board USB XDS100v2 JTAG emulator with isolation
- 10/100 Mbps Ethernet interface via RJ-45 with same PHY as on the TMDX570LS12HDK
- Hardware option for routing the N2HET or eTimers to the DIMM interface
- Isolated UART/SCI accessible through a USB Virtual Port (VCP)
- LPO_TEST push button switch (causes CLKDET hardware fault on MCU)
- LED indicators for xds100 power, activity, target/MCU power, HET pin activity, Ethernet link and activity, Ethernet speed, nERROR and ENDRV.
- Reset pushbuttons for IGN cycle (PORRST) and nRST
- 5V ADC input configuration

What's Included

The CNCD is made available as part of the DRV8301-LS12-KIT or orderable standalone as TMDXLS12CNCD. The kit contains everything needed to develop and run brushless DC motor control applications utilizing Hercules Safety MCUs.

The stand-alone card is shipped with a DVD containing:

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