

Dear Avnet Customer,

Thank you for selecting the Zynq Intelligent Drives Kit II, featuring ZedBoard™ and the Analog Devices AD-FMCMOTCON2-EBZ high performance servo module. Combining the Xilinx Zynq®-7000 AP SoC ARM® dual-core Cortex™-A9 + 28 nm programmable logic with the latest generation Analog Devices high-precision data converters and digital isolation, this kit enables single chip integration of high performance motor control with dual Gigabit Ethernet industrial networking connectivity. Model-Based Design for Zynq is supported using Simulink®, Embedded Coder®, and HDL Coder™ from MathWorks.

Kit Includes:

- Avnet ZedBoard 7020 baseboard
- Analog Devices AD-FMCMOTCON2-EBZ Module
- 4 GB SD card programmed with a simple Linux image that demonstrates basic capabilities of ZedBoard
- 8 GB SD card programmed with ADI FCMOTCON2 Base Reference Design for motor control
- Xilinx Vivado® Design Edition voucher (device locked)
- Brushless DC motor: 24V, 4000 RPM, Hall Sensors and 1250 CPR indexed encoder
- Ethernet and USB Cables
- XADC ribbon cable
- Motor encoder ribbon cable
- 24V power supply (for FMC module motor drive stage)
- 12V power supply (for ZedBoard baseboard)
- 5V power supply (for optional Dynamometer)

Key Features:

- Drive 2 BLDC / PMSM / Brushed DC / Stepper motors up to 48 V @ 20 A
- AD7403/5 Isolated 20 MHz Sigma-Delta modulators
- ADuM5000/7640 power and digital signal isolation
- ADuM5230 Isolated Half-Bridge Driver for High Frequency Switching
- Integrated over-current and reverse-voltage protection
- Dual Gigabit IEEE1588 Ethernet PHYs for high speed industrial communication
- Isolated Xilinx XADC interface
- Encoder support includes BISS, EnDAT, Hall Sensor, and resolver
- Zynq reference design of motor control features Analog Devices Ubuntu Linux framework
- Linux drivers, applications software, HDL source, reference designs, schematics and Gerbers

Optional Features:

- The Motor Control Design Package from MathWorks® delivers a turnkey solution for motor control algorithm development, including C and HDL code generation for the Zynq-7000 AP SoC
- The AD-DYN02-EBZ dynamometer provides a compact, digitally controlled motor load for evaluating the performance of Zynq motor control applications

To obtain the most current reference materials, please refer to the following sites:

- Avnet's ZedBoard and Zynq Intelligent Drives Kit II schematics, layout, reference designs, and training: www.zedboard.org
- Analog Devices AD-FMCMOTCON2-EBZ schematics, layout, HDL, and software drivers: www.wiki.analog.com/resources/eval/user-guides/ad-fmcmotcon2-ebz

Refer to the Quick Start Card for assistance in setting up your development system. Please visit the product page for more details and updated information: www.zedboard.org/product/zynq-idk-ii

Sincerely,

Avnet Technical Marketing