

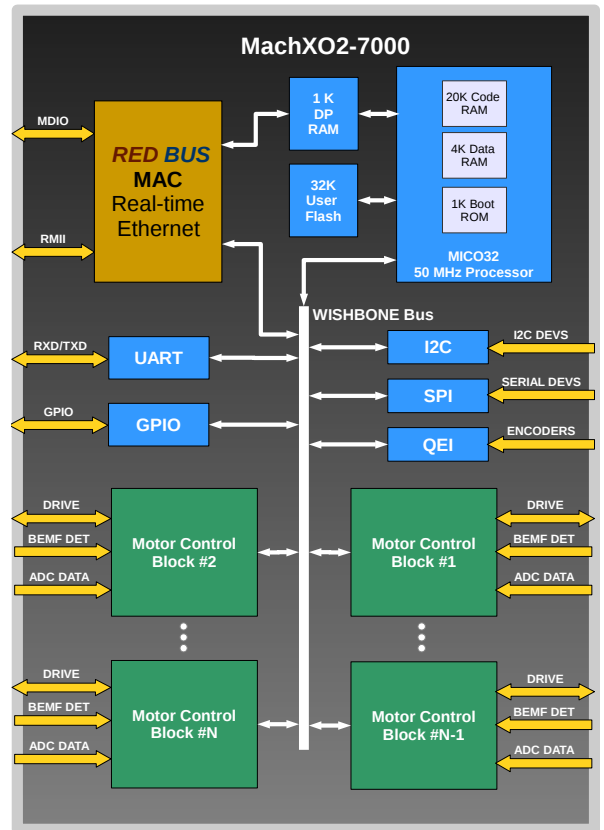
Motor Control with MachXO2

Features

- Fit into MachXO2-7000 CPLD
- Drive up to 8 stepper motors
- Two phase or three phase motors
- Hardware supports brushless motors
- 32 bit processor @ 50 Mhz
- 20 Kbyte code space, 4 Kbyte data space
- 8 QEI interface for encoders
- Space Vector Modulation
- Back-EMF detection
- REDBUS Real-time Ethernet interface

Benefits

- Low cost solution
- Smooth motion and accurate positioning
- Rotor position estimation with Back-EMF detection allows sensorless BLDC motors drive
- Torque estimation and stall detection
- 100 Mbit Real-time and deterministic data exchange
- REDBUS Ethernet MAC allows multiple boards connection without Ethernet switch devices

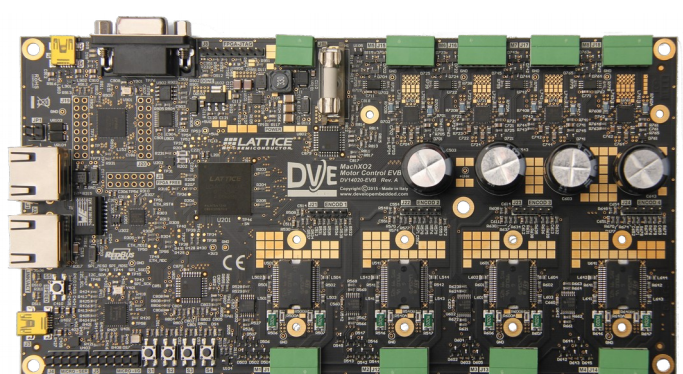
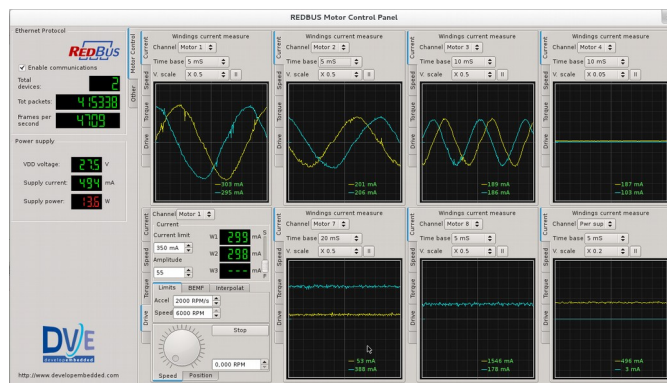


Evaluation board

DVE offers an “easy to use” evaluation board to prove and evaluate the performance of the Motor-control IP core and REDBUS Ethernet interface. A software GUI, available for Windows and Linux operating systems, allows real-time monitoring and control of eight motors simultaneously.

Main characteristics

- Four independent 6A peak motor drivers
- Four independent 3A peak motor drivers
- Precision windings current measure with dedicated 12bit A/D
- Back-EMF detection circuits on all motors
- Four QEI interfaces for encoders
- 1 RS-232 interface
- 1 USB interface for CPLD JAG programming and second UART with standard FTDI device
- REDBUS (Real-time Ethernet) interface
- GPIO connector through CPLD I/Os
- Optional Cortex M3 processor with dedicated USB device interface and connections to CPLD through SPI and I2C bus
- 3 Axes MEMS accelerometer
- External power supply from 18V to 48V



For more information, please visit www.developembedded.com/products.html