Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

AVR® Motor Control Evaluation Kit ATAVRMC100

EVALUATE AND DESIGN BRUSHLESS DC MOTORS APPLICATIONS

The ATAVRMC100 is an evaluation kit dedicated to brushless DC motor control, for both Hall effect sensor control and sensorless control using Back ElectroMotive Force.

The kit includes an evaluation board, a 3-phase BLDC motor and a demonstration software. It allows users to quickly evaluate the capability of the AVR® microcontroller AT90PWM3B to control high speed brushless DC motor applications.

The kit can also serve as a development platform. Low cost AVR development tools make debugging easier, and source codes, written in C, can be easily re-used by developers for their own motor control applications.
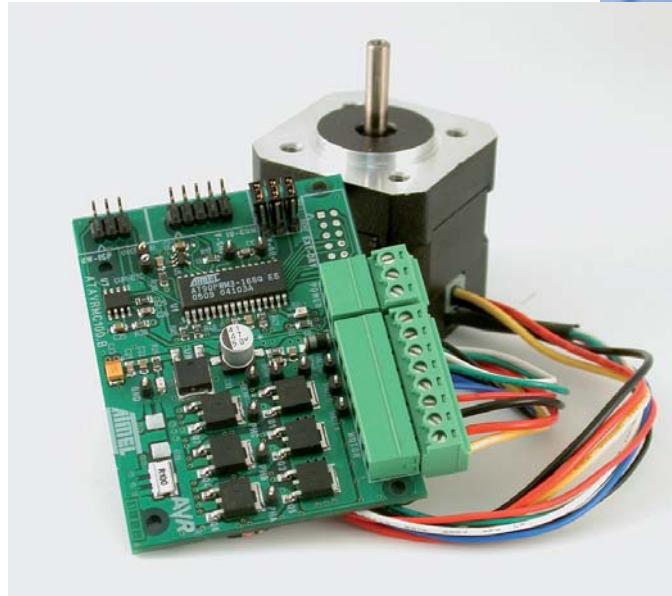
Key Features

- Evaluation Board with AT90PWM3B Microcontroller
- 3-phase BLDC Motor
- For both Hall Sensor and Sensorless Applications
- Supports In-System Programming and Chip Emulation
- CD-ROMs with Datasheets, Application Notes and Demonstration Software

Applications

- Air Conditioning (HVAC)
- Refrigerators, Fans, Pumps
- High Tech Industrial Constant Speed Applications
- Traction Elevator
- Medical Equipment

ATMEL®

The ATAVRMC100 BLDC motor control kit is an evaluation tool and development board for the AT90PWM3B AVR microcontroller from Atmel.

The board includes power bridges for BLDC motors and can realize zero crossing voltage detection, hardware overcurrent detection and motor supply voltage measurement. An on board LIN transceiver allows to drive application through a LIN network. Programming of the code into the microcontroller's Flash memory can be performed with an AVRISP or a JTAGICE mkII through the dedicated connectors.
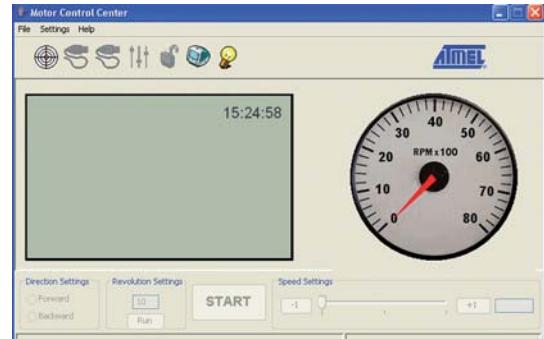
Product Features

- On board AT90PWM3B microcontroller in SO32 package (2.7-5.5V)
- Hall sensor or sensorless configuration
- Zero crossing voltage detection
- Hardware overcurrent detection
- Motor supply voltage and operating current measurement
- System clock: internal RC oscillator
- On board LIN transceiver Atmel ATA6661
- Expansion connector to be used with other AVR microcontrollers
- Many access points for test and debug
- Dimension: 75 mm x 55 mm

Power Bridge for BLDC Motors

- Any commutation schemes are possible.
- Recommended Voltage Operation from 8 to 16V DC (4A)

BLDC Motor

For a comprehensive and ready-to-use evaluation, a 3-phase BLDC motor is provided.
- Manufacturer: TecMotion
- Hall sensors included. Also usable as sensorless motor.

- Phases: 3 – Poles: 8
- Voltage: 12V
- Speed: 6200 RPM
- Peak Torque: 0.19 N.m

Support

All design hints are described. Any new design can use these examples as a starting point.

- ATAVRMC100 User Manual
- Hardware schematics and layout
- Self tutorials
- Application notes and software examples

Development Tools

Only low cost standard AVR tools are required for application development and debug.

- AVR Studio® software interface
- ISP connector for on-chip In System Programming
- ISP connector for debug wire

Ordering Information

- ATAVRMC100

The latest version of all softwares is available free of charge on Atmel web site: www.atmel.com