**AVR® AC Induction Motor Control**

**EVALUATE AND DESIGN ASYNCHRONOUS AC MOTOR APPLICATIONS**

The ATAVRMC200 is an evaluation kit dedicated to asynchronous AC motor control, using various sensors for regulation. The kit includes an evaluation board and a demonstration firmware. It allows users to quickly evaluate the capability of the AVR® microcontroller AT90PWM3/3B to control asynchronous AC 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
- Various Sensor Inputs
- Supports In-System Programming and Chip Emulation
- Complete Software and Schematics
- Asynchronous AC Motor (to be ordered separately)

**Applications**
- Air Conditioning (HVAC)
- Washing Machines, Dryers, Vacuum Cleaners
- Refrigerators, Fans, Pumps
- Traction Elevator
- Medical Equipment
- Industrial Applications
The on-board AT90PWM3/3B drives the power bridges for Asynchronous AC motors and provide hardware detection for overcurrent and measure motor supply voltage. An on board isolated RS-232 transceiver allows to control the kit remotely. Code programming into the microcontroller’s Flash memory can be performed with an AVRISP mkII or a JTAGICE mkII through the dedicated connectors.

**Product Features**

- On board AT90PWM3/3B microcontroller in SO32 package (2.7-5.5V)
- Hardware overcurrent detection
- Isolated inputs for sensors
- 0-10V input
- Any commutation schemes are possible.

**Asynchronous AC Motor:**

ATAVRMC201 *(to be ordered separately)*

An asynchronous AC motor (ATAVRMC201) allows a comprehensive and ready-to-use evaluation.

**Support**

All design hints are described. Any new design can use these examples as a starting point. Dedicated motor control web resources:

www.atmel.com/products/avr/mc/

**Development Tools**

ATAVRMC200 supports standard AVR tools for application development and debug.

- Motor supply voltage, operating current and power stage temperature measurement
- System clock: internal RC oscillator
- On board isolated RS-232 transceivers
- Many access points for test and debug
- Dimension: 100 mm x 200 mm
- Recommended Voltage Operation from 110 to 230V – 1/2 HP (370 W)

**Ordering Information**

- ATAVRMC200: Evaluation Kit with AT90PWM3/3B AVR Microcontroller
- ATAVRMC201: Asynchronous AC Motor (ALMO – RMA 56-G4)

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