

## AMI Embedded Controller (EC) Firmware Solution

### Keyboard Controller Firmware with ACPI Embedded Controller Functionality

#### AT and PS/2 8042 Compatibility

- Hot-plug and hot-swap external PS/2 devices
- External keyboard support
- Internal and external PS/2 auxiliary device support
- Internal matrix keyboard scan code controller
- Numeric keypad support
- Simultaneous external & internal device support
- Alternate use of internal/external auxiliary device
- Custom scan code & hot key implementations

#### ACPI Embedded Controller (EC)

- Full ACPI EC command set
- External Events (Thermal, Lid, Battery, ...)
- SMBus Host Interface

#### Smart Battery Management

- Supports SMBus Interface
- Smart or control method battery
- 1 Wire support using ACPI
- Poll battery/charger for alarm & status information

#### OEM Customization

- Programmable GPIO
- PWM and Fan Control
- Custom LED Support
- Downloadable Features
- Watch Dog Timer Function

#### Easily Integrates With Any BIOS

- Legacy BIOS or UEFI
- Supported today by AMIBIOS8 & Apto

### Not Your Father's Keyboard Controller ...

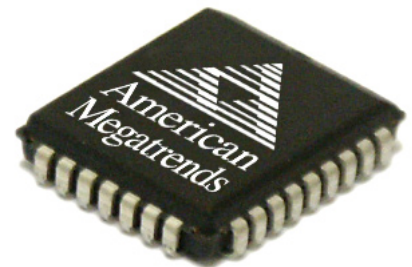
The embedded controller (EC) is an essential component in modern mobile, ultra-mobile and embedded computer systems. An efficient EC sub-system enables energy-conscious designs to obtain dramatic power savings.

The latest EC silicon feature higher processing power and complex features, requiring a more robust firmware solution. With over 25 years of experience in BIOS and keyboard controller programming, AMI is the best candidate to provide an advanced EC firmware solution.

Since the first AMIKEY firmware was released for 8042-compatible controllers, AMI has consistently adapted to the shift from the basic keyboard controller to full-featured EC products.

### Advanced Functionality

- > Keyboard Controller Functionality: AT and PS/2 8042 Compatibility with support for matrix keyboard scan controllers, device hot-swap, hot-plug and OEM hot-key implementations.
- > ACPI Embedded Controller
  - > Full compatibility with ACPI EC requirements
  - > Designed to extend beyond the specification
  - > Use ASL to control EC functionality
  - > Customize notifications and external events
- > Smart Battery Management: SMBus interface for smart or control method batteries
- > OEM Customization: Utilize EC advanced functionality to create unique platform functionality. Including general purpose I/O (GPIO), analog-to-digital convertor (ADC), pulse-width modulator (PWM) and watch dog timer (WDT) functionality.



### Flexible Development Options

- > Full source code available for development
- > Firmware development in C or assembly language (depends on part selection)
- > Supports ShareBIOS and Internal Flash implementations (depends on part selection)
- > AMI offers EC firmware ported to many popular chipset reference board (CRB) designs.

### Broad Hardware Support

- > Renesas: H8S/2117, H8S/2111, H8S/2149, H8S/2169, H8S/2140, M38859
- > ITE: IT8510E, IT8511E, IT8512E, IT8513E
- > Winbond: PC97551, W83L952
- > Fujitsu: MB90F378
- > SMSC: KBC1100, KBC1122

More parts available & more are under development, ... contact AMI for details.

*Note: Specific feature support depends on capabilities of embedded controller hardware and platform design.*



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