

NAME

asmc - device driver for the Apple System Management Controller (SMC)

SYNOPSIS

To compile this driver into the kernel, place the following line in your kernel configuration file:

```
device asmc
```

Alternatively, to load the driver as a module at boot time, place the following line in loader.conf(5):

```
asmc_load="YES"
```

DESCRIPTION

The **asmc** driver controls the Apple System Management Controller (SMC for short) found on Intel Apple systems.

The SMC is known to be found on the following systems:

- ⊕ MacBook
- ⊕ MacBook Pro
- ⊕ Intel MacMini
- ⊕ Mac Pro
- ⊕ MacBook Air
- ⊕ Intel iMac

With this driver, you can configure your keyboard backlight brightness, check temperatures of several sensors, check the speed of the internal fans and check the status of the Sudden Motion Sensor.

Variables related to the SMC control and inspection are exported via sysctl(3) under the device tree *dev.asmc*.

KEYBOARD BACKLIGHT

On MacBook Pro systems, you can control the keyboard brightness by writing a value to the *dev.asmc.%d.light.control* sysctl MIB.

The following sysctl MIBs contains the raw value returned by the left and right light sensors: *dev.asmc.%d.light.left* or *dev.asmc.%d.light.right*.

TEMPERATURES

The number of temperature sensors and their description varies among systems. You can inspect the

temperature sensors on your system by traversing the *dev.asmc.temp* sysctl MIB.

All values are in degrees celsius.

SYSTEM FANS

The *dev.asmc.fan.%d* sysctl tree contains the leaf nodes *speed*, *safespeed*, *minspeed*, *maxspeed* and *targetspeed*. Each of these leaf nodes represent the current fan speed, the safest minimum fan speed, the minimum speed and the maximum speed respectively.

All values are in RPM.

SUDDEN MOTION SENSOR

The Sudden Motion Sensor (SMS for short) is a device that detects laptop movement and notifies the operating system via an interrupt. The sysctl MIBs present under *dev.asmc.sms* all relate to the SMS.

The most interesting usage of this device is to park the disk heads when the laptop is moved harshly. First, you need to install *ataidle(8)* (*ports/sysutils/ataidle*) and then configure *devd(8)* the following way:

```
notify 0 {
    match "system"          "ACPI";
    match "subsystem" "asmc";
    action                  "/usr/local/sbin/ataidle -s X Y";
};
```

Do not forget to change the *X* and *Y* values in the command above.

Also, please note that parking the disk heads too many times can dramatically reduce your hard drive's life span. Do not rely solely on the SMS to protect your hard drive: good care and common sense can increase your hard drive's life.

SEE ALSO

ataidle(8) (*ports/sysutils/ataidle*), *devd(8)*, *sysctl(8)*

HISTORY

The **asmc** driver first appeared in FreeBSD 8.0.

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BUGS

Support for the latest models was never tested and is most likely not fully working.