

**NAME**

**siis** - SiliconImage Serial ATA Host Controller driver

**SYNOPSIS**

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

```
device pci  
device scbus  
device siis
```

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

```
siis_load="YES"
```

The following tunables are settable from the loader(8):

*hint.sis.X.msi*

controls Message Signaled Interrupts (MSI) usage by the specified controller.

*hint.sisch.X.pm\_level*

controls SATA interface Power Management for the specified channel, allowing some power to be saved at the cost of additional command latency. Possible values:

- 0 interface Power Management is disabled (default);
- 1 device is allowed to initiate PM state change, host is passive.

Note that interface Power Management is not compatible with device presence detection. A manual bus reset is needed on device hot-plug.

*hint.sisch.X.sata\_rev*

setting to nonzero value limits maximum SATA revision (speed). Values 1, 2 and 3 are respectively 1.5, 3 and 6Gbps.

**DESCRIPTION**

This driver provides the CAM(4) subsystem with native access to the SATA ports of controller. Each SATA port is represented to CAM as a separate bus with 16 targets. Most of the bus-management details are handled by the SATA-specific transport of CAM. Connected ATA disks are handled by the ATA protocol disk peripheral driver `ada(4)`. ATAPI devices are handled by the SCSI protocol peripheral drivers `cd(4)`, `da(4)`, `sa(4)`, etc.

Driver features include support for Serial ATA and ATAPI devices, Port Multipliers (including FIS-based switching), hardware command queues (31 command per port), Native Command Queuing, SATA interface Power Management, device hot-plug and Message Signaled Interrupts.

The activity LEDs of the adapters supported by the **siis** driver can be controlled via the **led(4)** API for localization or status reporting purposes.

## HARDWARE

The **siis** driver supports the following controller chips:

- ⊕ SiI3124 (PCI-X 133MHz/64bit, 4 ports)
- ⊕ SiI3131 (PCIe 1.0 x1, 1 port)
- ⊕ SiI3132 (PCIe 1.0 x1, 2 ports)
- ⊕ SiI3531 (PCIe 1.0 x1, 1 port)

## FILES

*/dev/led/siisch\** identification LED device nodes

## SEE ALSO

[ada\(4\)](#), [ata\(4\)](#), [cam\(4\)](#), [cd\(4\)](#), [da\(4\)](#), [led\(4\)](#), [sa\(4\)](#)

## HISTORY

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

## AUTHORS

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