

**NAME**

**superio** - Super I/O controller and bus driver

**SYNOPSIS**

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

```
device superio
```

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

```
superio_load="YES"
```

**DESCRIPTION**

Super I/O is an I/O controller that combines various low-bandwidth devices that can be functionally unrelated otherwise. A typical Super I/O can contain devices such as

- a floppy disk controller
- a parallel port
- a serial port
- a PS/2 mouse and keyboard controller
- a hardware monitoring controller
- a watchdog timer
- a controller for general purpose input-output

The **superio** driver provides support for devices residing in the Super I/O controller that can only be accessed or discovered using the controller's interface. Some of the Super I/O devices have standardized interfaces. Such devices either use well-known legacy resources or they are advertised via ACPI or both. They can be configured either using ISA bus hints or they are auto-configured by acpi(4). The **superio** driver is not designed to interact with that kind of devices. They can be handled by their respective drivers without any knowledge of the Super I/O specifics. For instance, fdc(4) provides access to the floppy disk controller.

There are other Super I/O devices that do not have any standardized interface. Drivers for those devices can be written using facilities of the **superio** driver.

The driver itself attaches to the ISA bus as all supported controllers are accessed via LPC I/O ports.

The **superio** driver is unusual as it is both a controller driver for a variety of Super I/O controllers and a bus driver for supported devices in those controllers.

## HARDWARE

The **superio** driver supports a multitude of Super I/O controllers produced by Nuvoton, formerly known as Winbond, and ITE, namely:

- ⌘ Fintek F81803
- ⌘ Fintek F81865
- ⌘ Nuvoton NCT5104D/NCT6102D/NCT6106D rev. A and B+
- ⌘ Nuvoton NCT5585D
- ⌘ Nuvoton NCT6116D
- ⌘ Nuvoton NCT6775
- ⌘ Nuvoton NCT6776
- ⌘ Nuvoton NCT6779
- ⌘ Nuvoton NCT6791
- ⌘ Nuvoton NCT6792
- ⌘ Nuvoton NCT6793
- ⌘ Nuvoton NCT6795
- ⌘ Nuvoton NCT6796D-E
- ⌘ Winbond 83627HF/F/HG/G/S/THF/EHF/DHG/UHG/DHG-P
- ⌘ Winbond 83637HF
- ⌘ Winbond 83667HG/HG-B
- ⌘ Winbond 83687THF
- ⌘ Winbond 83697HF/UG

## SEE ALSO

superio(9)

## HISTORY

The **superio** driver was written by Andriy Gapon <avg@FreeBSD.org>.