# Kernel driver i2c-sis96x

Replaces 2.4.x i2c-sis645

Supported adapters:

- Silicon Integrated Systems Corp (SiS)

  Any combination of these host bridges:
  > 645, 645DX (aka 646), 648, 650, 651, 655, 735, 745, 746

  and these south bridges:
  > 961, 962, 963(L)

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## Description

This SMBus only driver is known to work on motherboards with the above named chipset combinations. The driver was developed without benefit of a proper datasheet from SiS. The SMBus registers are assumed compatible with those of the SiS630, although they are located in a completely different place. Thanks to Alexander Malysh <amalysh@web.de> for providing the SiS630 datasheet (and driver).

The command `lspci` as root should produce something like these lines:

```
00:00.0 Host bridge: Silicon Integrated Systems [SiS]: Unknown device 0645
00:02.0 ISA bridge: Silicon Integrated Systems [SiS] 85C503/5513
00:02.1 SMBus: Silicon Integrated Systems [SiS]: Unknown device 0016
```

or perhaps this:

```
00:00.0 Host bridge: Silicon Integrated Systems [SiS]: Unknown device 0645
00:02.0 ISA bridge: Silicon Integrated Systems [SiS]: Unknown device 0961
00:02.1 SMBus: Silicon Integrated Systems [SiS]: Unknown device 0016
```

(kernel versions later than 2.4.18 may fill in the "Unknown"s)

If you can't see it please look on quirk_sis_96x_smbus (drivers/pci/quirks.c) (also if southbridge detection fails)

I suspect that this driver could be made to work for the following SiS chipsets as well: 635, and 635T. If anyone owns a board with those chips AND is willing to risk crashing & burning an otherwise well-behaved kernel in the name of progress... please contact me at <mhoffman@lightlink.com> or via the linux-i2c mailing list: <linux-i2c@vger.kernel.org>. Please send bug reports and/or success stories as well.

## TO DOs

- The driver does not support SMBus block reads/writes; I may add them if a scenario is found where they're needed.

## Thank You

Mark D. Studebaker <mdsxyz123@yahoo.com>
> - design hints and bug fixes

Alexander Maylsh <amalysh@web.de>
> - ditto, plus an important datasheet... almost the one I really wanted

Hans-Günter Lütke Uphues <hg_lu@t-online.de>
> - patch for SiS735

Robert Zwerus <arzie@dds.nl>
> - testing for SiS645DX

Kianusch Sayah Karadji <kianusch@sk-tech.net>
> - patch for SiS645DX/962

Ken Healy
> - patch for SiS655

To anyone else who has written w/ feedback, thanks!