

NAME

atkbd - the AT keyboard interface

SYNOPSIS

```
options ATKBD_DFLT_KEYMAP
makeoptions ATKBD_DFLT_KEYMAP=_keymap_name_
options KBD_DISABLE_KEYMAP_LOAD
device atkbd
```

In */boot/device.hints*:

```
hint.atkbd.0.at="atkbd"
```

```
hint.atkbd.0.irq="1"
```

DESCRIPTION

The **atkbd** driver, together with the **atkbdc** driver, provides access to the AT 84 keyboard or the AT enhanced keyboard which is connected to the AT keyboard controller.

This driver is required for the console driver `syscons(4)` or `vt(4)`.

There can be only one **atkbd** device defined in the kernel configuration file. This device also requires the **atkbdc** keyboard controller to be present. The *irq* number must always be 1; there is no provision of changing the number.

Function Keys

The AT keyboard has a number of function keys. They are numbered as follows and can be associated with strings by the `kbdcontrol(1)` command. You can use a keyboard map file (see `kbdmap(5)`) to map them to arbitrary keys, particularly the functions in the range from 65 to 96 which are not used by default.

| Function Key number | Function Key |
|---------------------|--|
| 1, 2,...12 | F1, F2,... F12 |
| 13, 14,...24 | Shift+F1, Shift+F2,... Shift+F12 |
| 25, 26,...36 | Ctl+F1, Ctl+F2,... Ctl+F12 |
| 37, 38,...48 | Shift+Ctl+F1, Shift+Ctl+F2,... Shift+Ctl+F12 |
| 49 | Home and Numpad 7 (without NumLock) |
| 50 | Up Arrow and Numpad 8 (without NumLock) |
| 51 | Page Up and Numpad 9 (without NumLock) |
| 52 | Numpad - |
| 53 | Left Arrow and Numpad 4 (without NumLock) |
| 54 | Numpad 5 (without NumLock) |

| | |
|--------------|--|
| 55 | Right Arrow and Numpad 6 (without NumLock) |
| 56 | Numpad + |
| 57 | End and Numpad 1 (without NumLock) |
| 58 | Down Arrow and Numpad 2 (without NumLock) |
| 59 | Page Down and Numpad 3 (without NumLock) |
| 60 | Ins and Numpad 0 (without NumLock) |
| 61 | Del |
| 62 | Left GUI Key |
| 63 | Right GUI Key |
| 64 | Menu |
| 65, 66,...96 | free (not used by default) |

See the man page for the `kbdcontrol(1)` command for how to assign a string to the function key.

DRIVER CONFIGURATION

Kernel Configuration Options

The following kernel configuration options control the **atkbd** driver.

ATKBD_DFLT_KEYMAP

This option sets the default, built-in keymap of the **atkbd** driver to the named keymap. See *EXAMPLES* below.

KBD_DISABLE_KEYMAP_LOAD

The keymap can be modified by the `kbdcontrol(1)` command. This option will disable this feature and prevent the user from changing key assignment.

Driver Flags

The **atkbd** driver accepts the following driver flags. They can be set either in */boot/device.hints*, or else from within the boot loader (see `loader(8)`).

bit 0 (FAIL_IF_NO_KBD)

By default the **atkbd** driver will install even if a keyboard is not actually connected to the system. This option prevents the driver from being installed in this situation.

bit 1 (NO_RESET)

When this option is given, the **atkbd** driver will not reset the keyboard when initializing it. It may be useful for laptop computers whose function keys have special functions and these functions are forgotten when the keyboard is reset.

bit 2 (ALT_SCANCODESET)

Certain keyboards, such as those on some ThinkPad models, behave like the old XT keyboard and require this option.

bit 3 (NO_PROBE_TEST)

When this option is given, the **atkbd** driver will not test the keyboard port during the probe routine. Some machines hang during boot when this test is performed.

EXAMPLES

The **atkbd** driver requires the keyboard controller **atkbdc**. Thus, the kernel configuration file should contain the following lines.

```
device atkbdc
device atkbd
```

The following example shows how to set the default, built-in keymap to *jp.106.kbd*.

```
device atkbdc
options ATKBD_DFLT_KEYMAP
makeoptions ATKBD_DFLT_KEYMAP=jp.106
device atkbd
```

In both cases, you also need to have following lines in */boot/device.hints*.

```
hint.atkbdc.0.at="isa"
hint.atkbdc.0.port="0x060"
hint.atkbd.0.at="atkbdc"
hint.atkbd.0.irq="1"
```

SEE ALSO

kbdcontrol(1), atkbdc(4), psm(4), syscons(4), vt(4), kbdmap(5), loader(8)

HISTORY

The **atkbd** driver first appeared in FreeBSD 3.1.

AUTHORS

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