

Kernel compiling

System operation

```
static const struct usb_device_id  products[] = {
{
    // Linksys USB200M
    USB_DEVICE(0x077b, 0x2226),
    .driver_info = (unsigned long) &ax8817x_info,
}, {
    // Netgear FA120
    USB_DEVICE(0x0846, 0x1040),
    .driver_info = (unsigned long) &netgear_fa120_info,
},
...
{ },          // END
};
MODULE_DEVICE_TABLE(usb, products);

drivers/net/usb/asix_devices.c
```

The device driver source code lists which devices it supports

Thanks to aliases, the asix module is loaded

A new USB device is plugged-in

The USB controller driver reads USB device attributes: vendor id, product id, etc

The USB bus driver sends a MODALIAS string encoding these attributes to the udev process
MODALIAS=usb:v077bp2226d0001dcFFdscFFdp00icFFiscFFip00in00

make modules

Module file

asix.ko

Containing the list of supported devices (module metadata)

udev has a rule for when MODALIAS is set

```
ENV{MODALIAS}=="?*", RUN{builtin}+="kmod load $env{MODALIAS}"
....
/lib/udev/rules.d/80-drivers.rules
```

make modules_install (depmod)

```
alias usb:v077Bp2226d*dc*dsc*dp*ic*isc*ip*in* asix
alias usb:v0846p1040d*dc*dsc*dp*ic*isc*ip*in* asix
....
modules.alias
```

kmod load usb:v077bp2226d0001dcFFdscFFdp00icFFiscFFip00in00