NAME

miibus - IEEE 802.3 Media Independent Interface network bus

SYNOPSIS

For most network interface cards (NIC):

device miibus

DESCRIPTION

The **miibus** driver provides an interconnection between the Media Access Control (MAC) sublayer, the Physical Layer entities (PHY), Station Management (STA) entities, and the PHY Layer as defined by the IEEE 802.3 Standard.

The **miibus** layer allows network device drivers to share common support code for various external PHY devices. Most 10/100 network interface cards either use an MII transceiver or have built-in transceivers that can be programmed using an MII interface. The **miibus** driver currently handles all of the media detection, selection, and reporting using the ifmedia interface. A generic driver has been included for all PHYs that are not handled by a specific driver, this is possible because all 10/100 PHYs implement the same general register set along with their vendor specific register set.

The following network device drivers use the **miibus** interface:

ae(4) Attansic/Atheros L2 Fast Ethernet

age(4)
      Attansic/Atheros L1 Gigabit Ethernet

alc(4)
      Atheros AR8131/AR8132 PCIe Ethernet

ale(4)
      Atheros AR8121/AR8113/AR8114 PCIe Ethernet

aue(4)
      ADMtek USB Ethernet

axe(4)
      ASIX Electronics AX88172 USB Ethernet

axge(4)
      ASIX Electronics AX88178A/AX88179 USB Ethernet

bce(4)
      Broadcom NetXtreme II Gigabit Ethernet

bfe(4)
      Broadcom BCM4401 Ethernet

bge(4)
      Broadcom BCM570xx Gigabit Ethernet

cas(4)

      Sun Cassini/Cassini+ and National Semiconductor DP83065 Saturn

dc(4)

      DEC/Intel 21143 and various workalikes

ed(4)

      NE[12]000, SMC Ultra, 3c503, DS8390 cards

et(4)   Agere ET1310 Gigabit Ethernet

fxp(4)

      Intel EtherExpress PRO/100B

gem(4)

      Sun ERI, Sun GEM and Apple GMAC Ethernet

jme(4)

      JMicron JMC250 Gigabit/JMC260 Fast Ethernet

lge(4)

      Level 1 LXT1001 NetCellerator Gigabit Ethernet

msk(4)

      Marvell/SysKonnect Yukon II Gigabit Ethernet

nfe(4)

      NVIDIA nForce MCP Networking Adapter

nge(4)

      National Semiconductor DP83820/DP83821 Gigabit Ethernet

re(4)   RealTek 8139C+/8169/8169S/8110S

rl(4)   RealTek 8129/8139

rue(4)

      RealTek RTL8150 USB To Fast Ethernet

sge(4)

      Silicon Integrated Systems SiS190/191 Ethernet

sis(4)

      Silicon Integrated Systems SiS 900/SiS 7016

sk(4)   SysKonnect SK-984x and SK-982x Gigabit Ethernet

smsc(4)

      SMSC LAN9xxx USB Fast Ethernet

ste(4)

      Sundance ST201 (D-Link DFE-550TX)

stge(4)

      Sundance/Tamarack TC9021 Gigabit Ethernet

udav(4)

      Davicom DM9601 USB Ethernet

ure(4)

      RealTek RTL8152 USB To Fast Ethernet

vge(4)
>   VIA VT612x PCI Gigabit Ethernet

vr(4)   VIA Rhine, Rhine II

vte(4)
>   DM&P Vortex86 RDC R6040 Fast Ethernet

xl(4)   3Com 3c90x

COMPATIBILITY

The implementation of **miibus** was originally intended to have similar API interfaces to BSD/OS 3.0 and NetBSD, but as a result are not well behaved newbus device drivers.

SEE ALSO

ae(4), age(4), alc(4), ale(4), arp(4), aue(4), axe(4), axge(4), bce(4), bfe(4), bge(4), cas(4), dc(4), ed(4), et(4), fxp(4), gem(4), jme(4), lge(4), msk(4), netintro(4), nfe(4), nge(4), re(4), rgephy(4), rl(4), rue(4), sge(4), sis(4), sk(4), smsc(4), ste(4), stge(4), udav(4), ure(4), vge(4), vr(4), vte(4), xl(4)

STANDARDS

More information on MII can be found in the IEEE 802.3 Standard.

HISTORY

The **miibus** driver first appeared in FreeBSD 3.3.

AUTHORS

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