NAME

igc - Intel Ethernet Controller I225 driver

SYNOPSIS

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

> **device iflib**
> **device igc**

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

> if_igc_load="YES"

DESCRIPTION

The **igc** driver provides support for any PCI Express adapter or LOM (LAN On Motherboard) based on the Intel I225 Multi Gigabit Controller. The driver supports Transmit/Receive checksum offload, Jumbo Frames, MSI/MSI-X, TSO, and RSS.

Support for Jumbo Frames is provided via the interface MTU setting. Selecting an MTU larger than 1500 bytes with the ifconfig(8) utility configures the adapter to receive and transmit Jumbo Frames. The maximum MTU size for Jumbo Frames is 9216 bytes.

This driver version supports VLAN hardware insertion / extraction, and VLAN checksum offload. For information on enabling VLANs, see ifconfig(8). The **igc** driver supports the following media types:

autoselect   Enables auto-negotiation for speed and duplex.

10baseT/UTP Sets 10Mbps operation. Use the **mediaopt** option to select **half-duplex** mode.

100baseTX   Sets 100Mbps operation. Use the **mediaopt** option to select **half-duplex** mode.

1000baseT   Sets 1000Mbps operation. Only **full-duplex** mode is supported at this speed.

2500baseT   Sets 2500Mbps operation. Only **full-duplex** mode is supported at this speed.

HARDWARE

The **igc** driver supports the following models:

- I225-LM
- I225-V

   ⚘ I225-IT

   ⚘ I225-K

LOADER TUNABLES

Tunables can be set at the loader(8) prompt before booting the kernel or stored in loader.conf(5).

hw.igc.igc_disable_crc_stripping

> Disable or enable hardware stripping of CRC field. This is mostly useful on BMC/IPMI shared interfaces where stripping the CRC causes remote access over IPMI to fail. Default 0 (enabled).

hw.igc.rx_int_delay

> This value delays the generation of receive interrupts in units of 1.024 microseconds. The default value is 0, since adapters may hang with this feature being enabled.

hw.igc.rx_abs_int_delay

> If hw.igc.rx_int_delay is non-zero, this tunable limits the maximum delay in which a receive interrupt is generated.

hw.igc.tx_int_delay

> This value delays the generation of transmit interrupts in units of 1.024 microseconds. The default value is 64.

hw.igc.tx_abs_int_delay

> If hw.igc.tx_int_delay is non-zero, this tunable limits the maximum delay in which a transmit interrupt is generated.

hw.igc.sbp

> Show bad packets when in promiscuous mode. Default is false.

hw.igc.rx_process_limit

> Maximum number of received packets to process at a time. Default is 100. A value of -1 means unlimited.

hw.igc.eee_setting

> Disable or enable Energy Efficient Ethernet. Default 1 (disabled).

hw.igc.max_interrupt_rate

> Maximum device interrupts per second. The default is 8000.

DIAGNOSTICS

igc%d: Hardware Initialization Failed A fatal initialization error has occurred.

igc%d: Unable to allocate bus resource: memory A fatal initialization error has occurred.

igc%d: Invalid MAC address The MAC address programmed into the EEPROM is either empty or a multicast/broadcast address.

SEE ALSO

altq(4), arp(4), iflib(4), netintro(4), ng_ether(4), vlan(4), ifconfig(8)

HISTORY

The **igc** device driver first appeared in FreeBSD 14.0.

AUTHORS

The **igc** was originally written by Intel Corporation and converted to the iflib(4) framework by Netgate.