3c90x

3c90x NIC

NIC, Network interface controller,网卡

本页是关于3com制造的3c90x / 3c90xB / 3c90xC系列以太网适配器。很多3com卡共享该系列的编程接口; 这包括3c556 10 / 100LAN + 56k调制解调器MiniPCI适配器（也称为3CN3AC1556B和3Com®Megahertz®10 Mbps LAN CF +卡）和支持3c90xC接口的3c555 10 / 100LAN MiniPCI适配器。

The Card

3c90x (FastEtherLink XL) is a successor to 3c59x (which are successor to 3c5x9). A new feature introduced in this series is full bus master operation mode with seperate download and upload buffer chains.

3c90x support PIO for compatibility; 3c90xB and 3c90xC do not.

the adapter can be setup to wake the system upon reception of packets with a programmable filter.

VLAN support.

TCP/IP checksum checking support.

There are three register mechanisms which enable the host to access and configure the NIC: PCI configuration registers, host registers (IO/memory space) and the NIC's EEPROM. Issuing a command to the NIC is achieved by writing to the write-only command register (a host register). The read-only interrupt status register informs about the interrupt source, the current register bank visible in the window and whether a command is being executed. The 3x90xC provides also the IntStatusAuto register, reading of which returns the value of the interrupt status register and causes side effects which are supposed to improve interrupt handling efficiency. Bytes 0-15 of the host registers form a switchable window, which means the meanings of particular bytes/words/dwords in the window depends on the currently selected register bank. The docs are well written and easy to follow.

Programming considerations

For 3c555, 3c556, 3c575 and 3c656 cards, the Eeprom Command for "Read" has value 0x230 (and not 0x80 like for 3c90x cards).

Resources

NE2000是一个由Novell公司所创立并且高度成功的ISA网络卡的标准。

1980年代，Novelle公司企图提振他的网络服务器的生意，自他的软件NetWare以至于网络硬件雨露均霑。 因此他提出了NE2000作为网络卡的标准以使得业界可以大量制造网络卡提升网络的普及性。在此之前，网络界的领导厂商--IBM与3Com对于网络卡都收取相当高的费用。

在原始的设计中，NE1000 (8-bit ISA) 与 NE2000 (16-bit ISA)被使用于以太网路中，NE1000T与NE2000T则增加了对于10Base-T的支持。"NE"表示"Novell Ethernet"。