

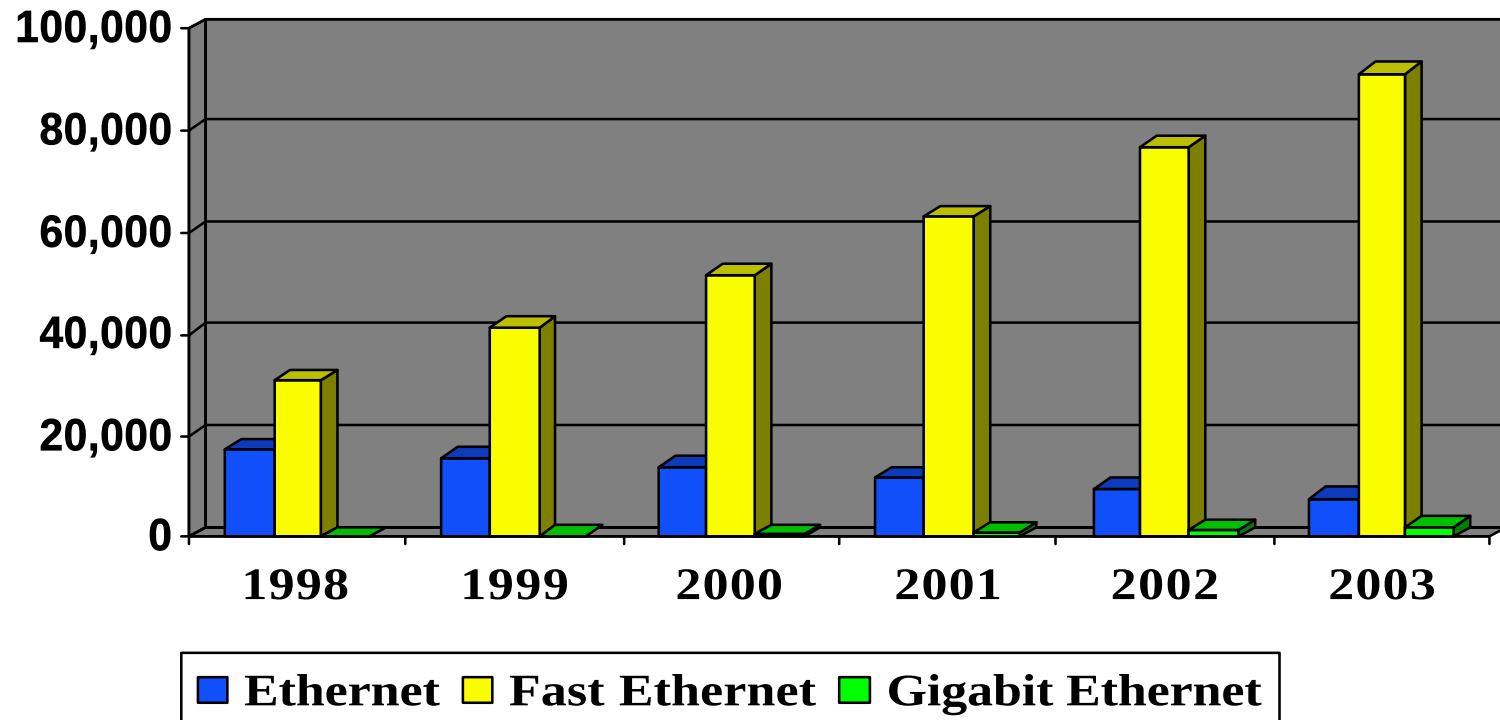
Agenda

- ◆ Introduction
 - What is Ethernet?
 - Market Analysis Data
- ◆ Technology
 - MAC Types
 - What is CSMA/CD?
 - Variables of CSMA
 - What is OSI Model?
 - What is TCP/IP Model?
 - Ethernet Frames
 - Ethernet PHY Specs
 - Ethernet MAC
 - Ethernet Cabling and Connectors
 - Ethernet Devices
- ◆ Ethernet & Home Networking
 - Motivation for home networking
 - Ethernet in HN
- ◆ Xilinx Solution
- ◆ Alliances
 - Gigabit Ethernet
 - IEEE 802.3
- ◆ Summary

What Is Ethernet?

- ◆ A local-area network (LAN) protocol developed by Xerox Corporation in cooperation with DEC and Intel in 1976
- ◆ Ethernet uses a bus or star topology and supports data transfer rates of 10/100/1000 Mbps
- ◆ The Ethernet specification served as the basis for the IEEE 802.3 standard, which specifies the physical and lower software layers
- ◆ Ethernet uses the CSMA/CD access method to handle simultaneous demands
- ◆ Ethernet defines the lower two layers of the OSI Reference Model

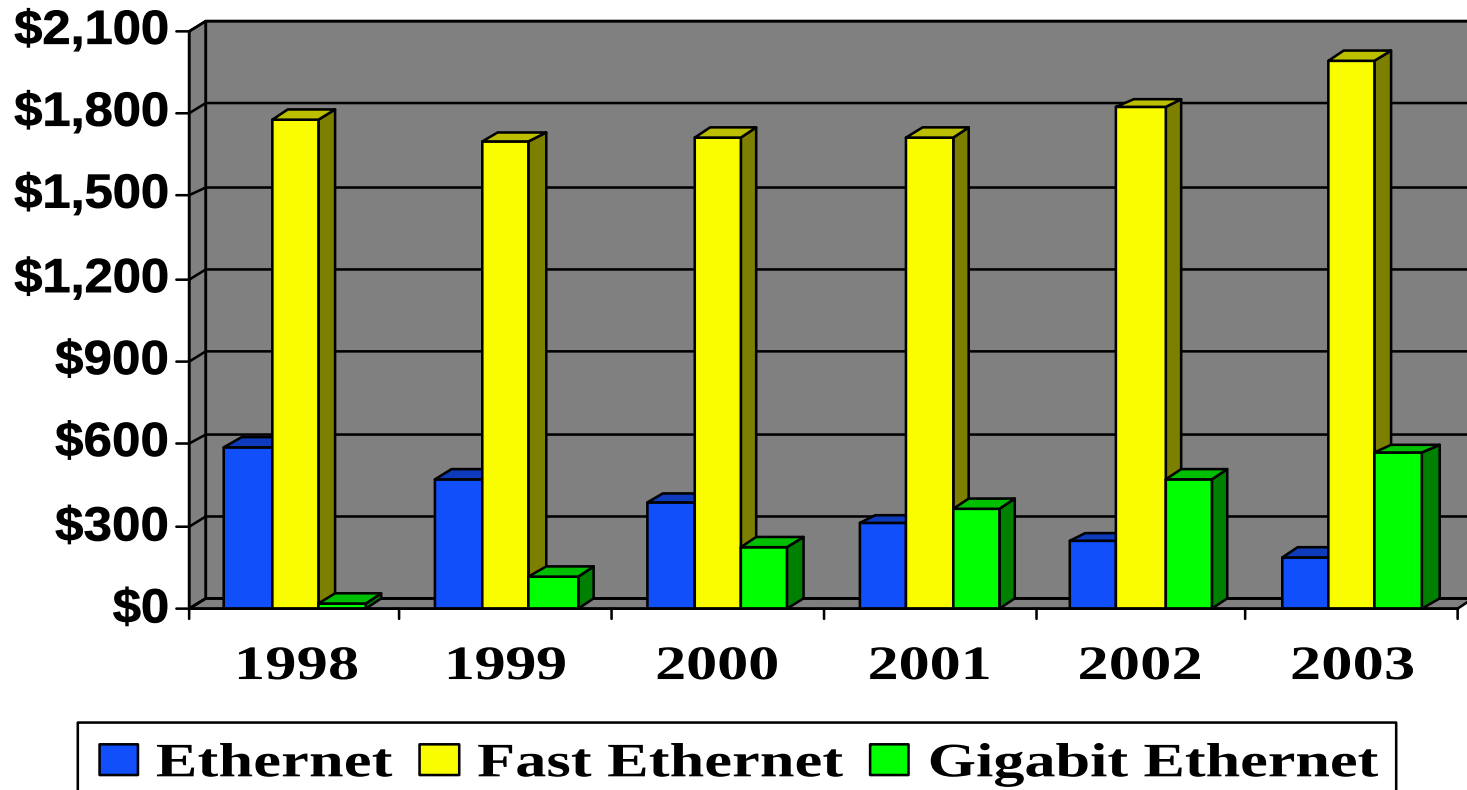
WW LAN NIC Market System Units (K)



Source: Dataquest

Ethernet: 10 Mbps
Fast Ethernet : 100 Mbps
Gigabit Ethernet : 1 Gbps

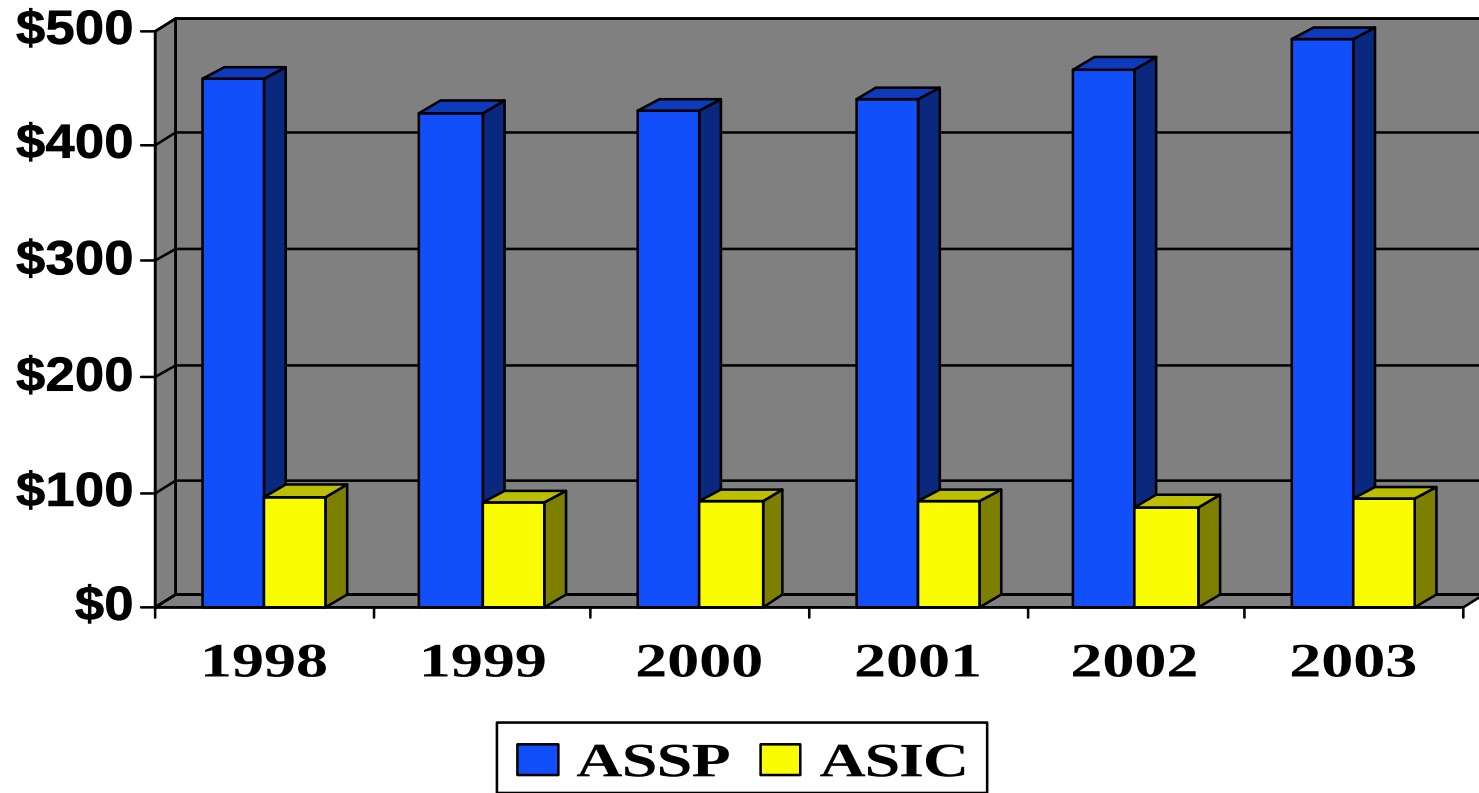
WW LAN NIC Market Revenue (\$M)



Source: Dataquest

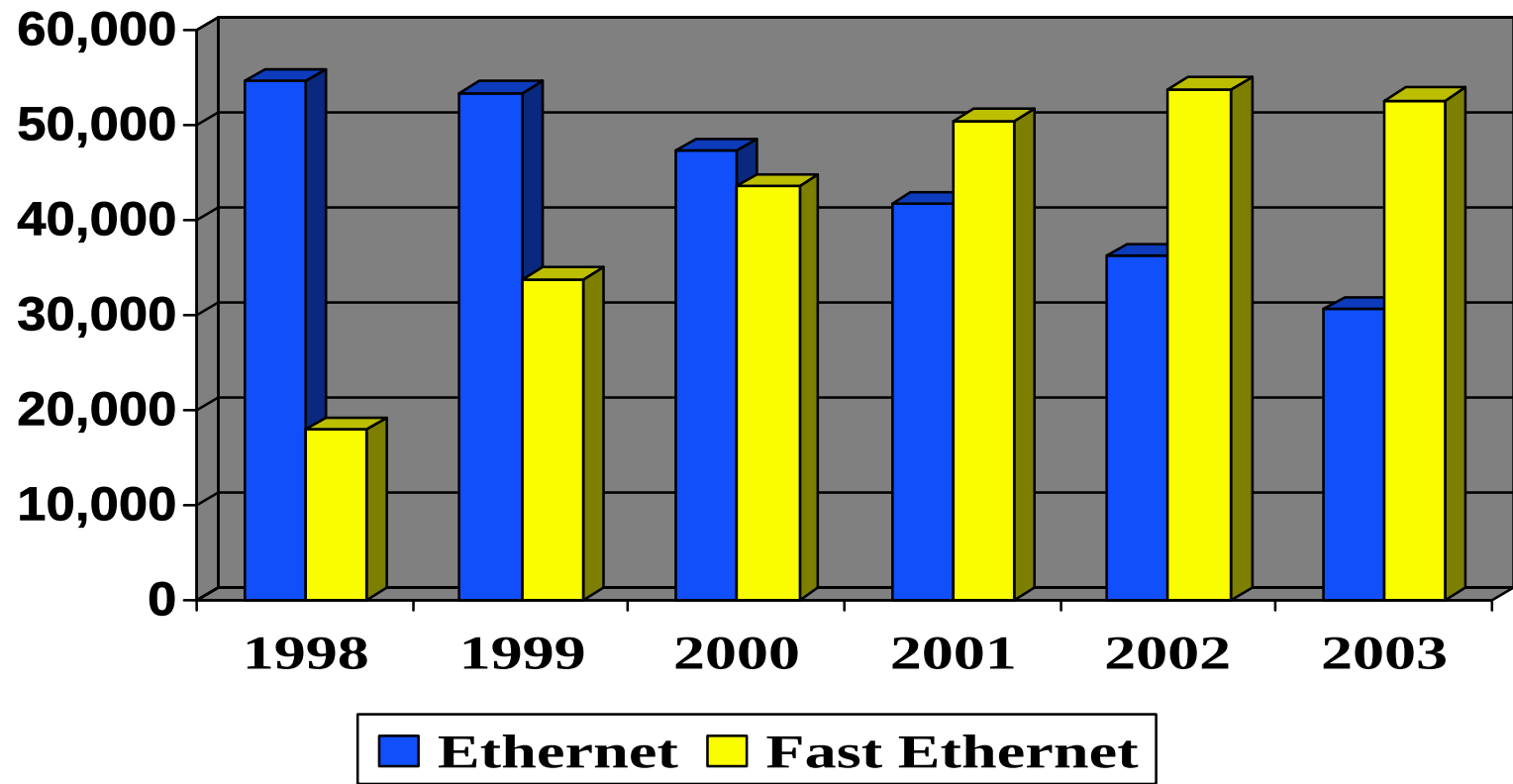
Ethernet: 10 Mbps
Fast Ethernet : 100 Mbps
Gigabit Ethernet : 1 Gbps

WW LAN NIC Market ASSP & ASIC Revenue (\$M)



Source: Dataquest

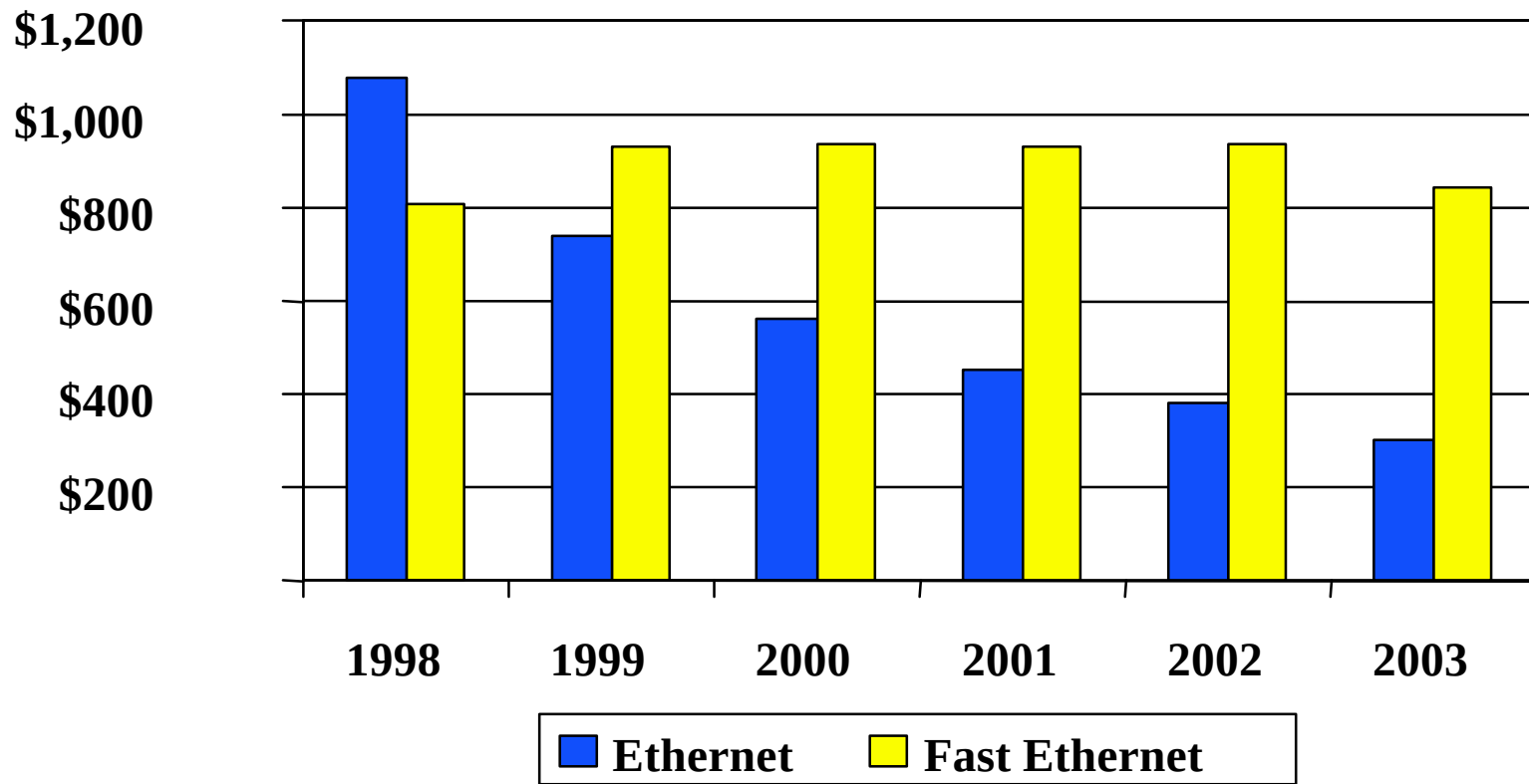
WW LAN Hub Market System Port (K)



Source: Dataquest

Ethernet: 10 Mbps
Fast Ethernet : 100 Mbps
Gigabit Ethernet : 1 Gbps

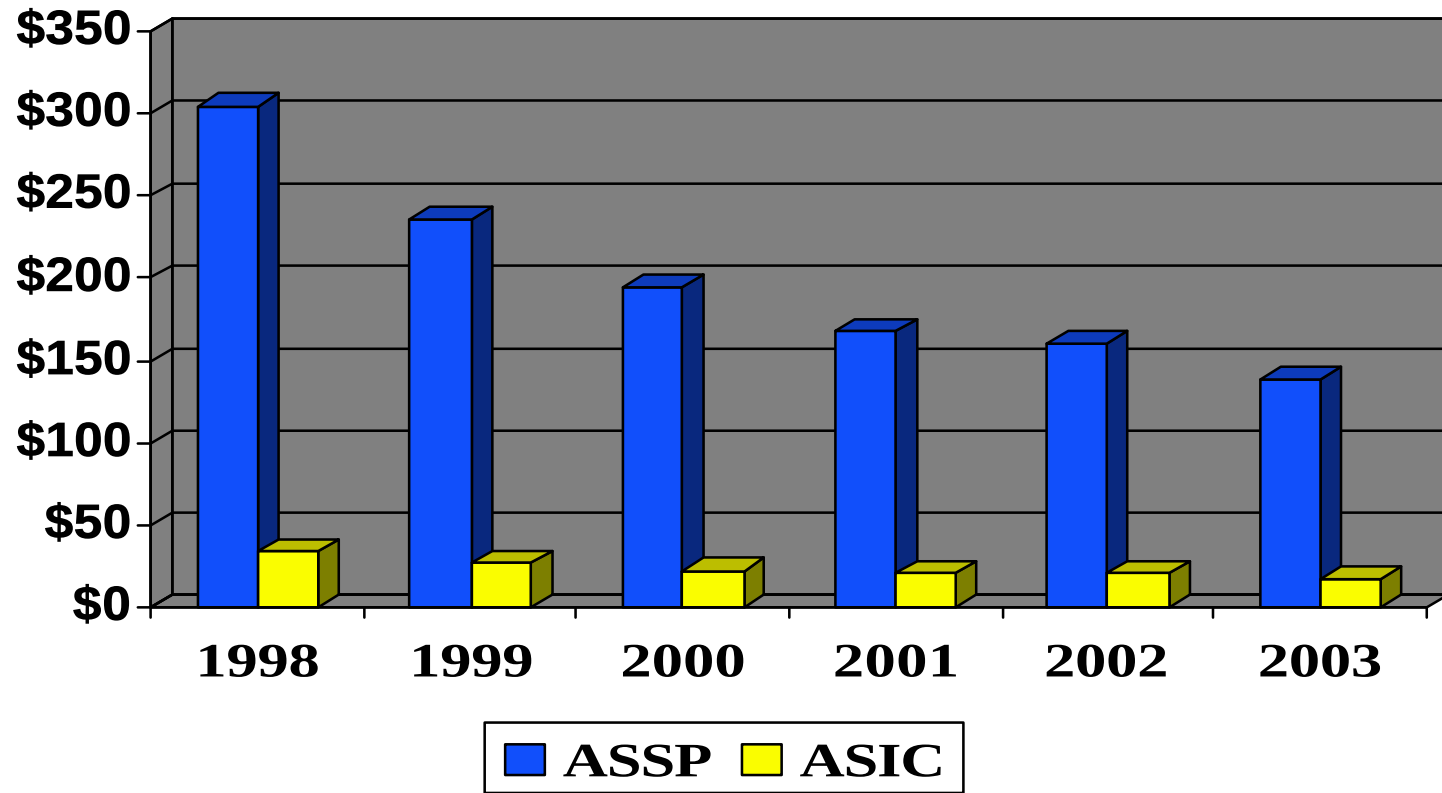
WW LAN Hub Market Revenue (\$M)



Source: Dataquest

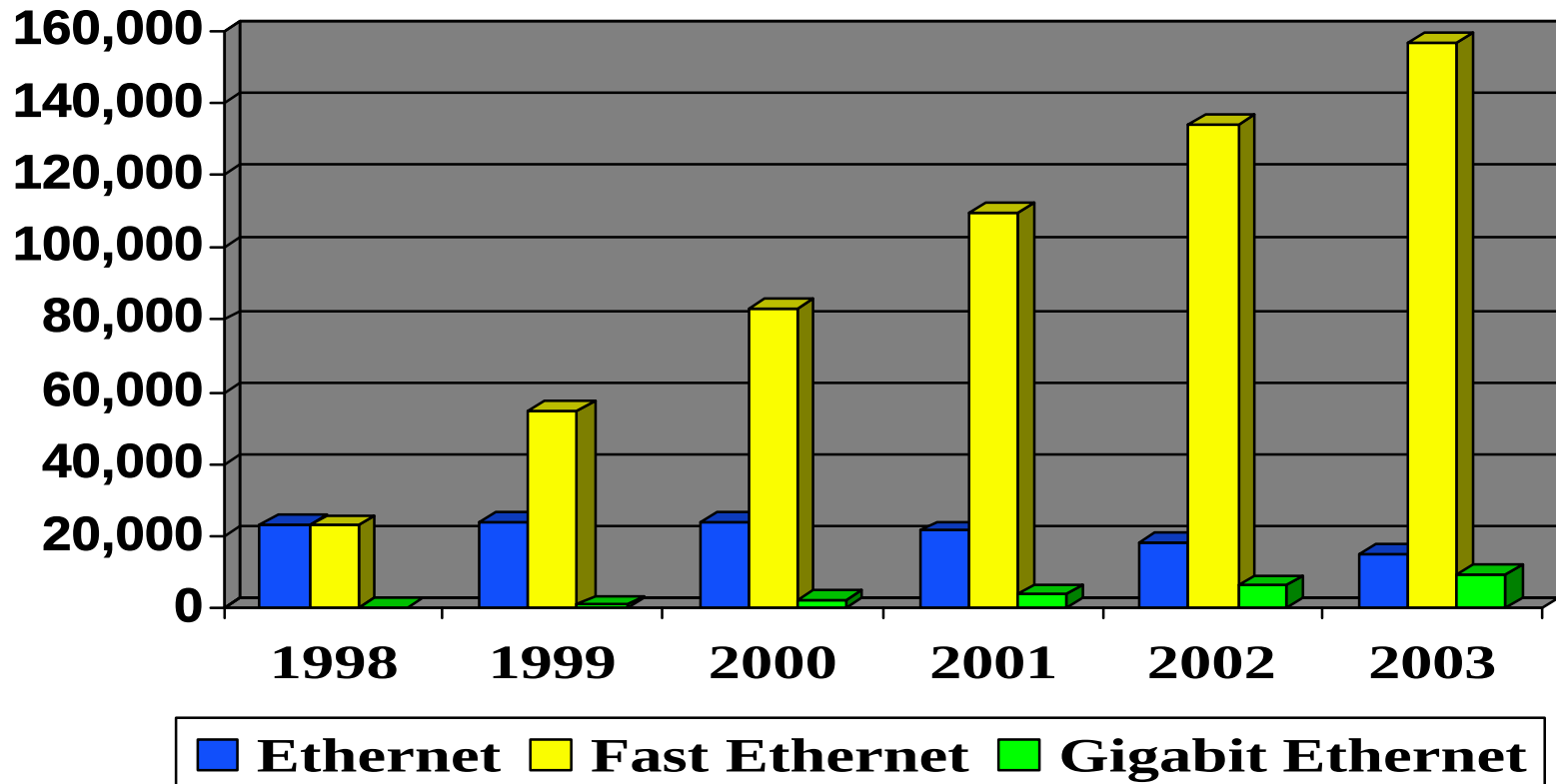
Ethernet: 10 Mbps
Fast Ethernet : 100 Mbps
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WW LAN Hub Market ASSP & ASIC Revenue (\$M)



Source: Dataquest

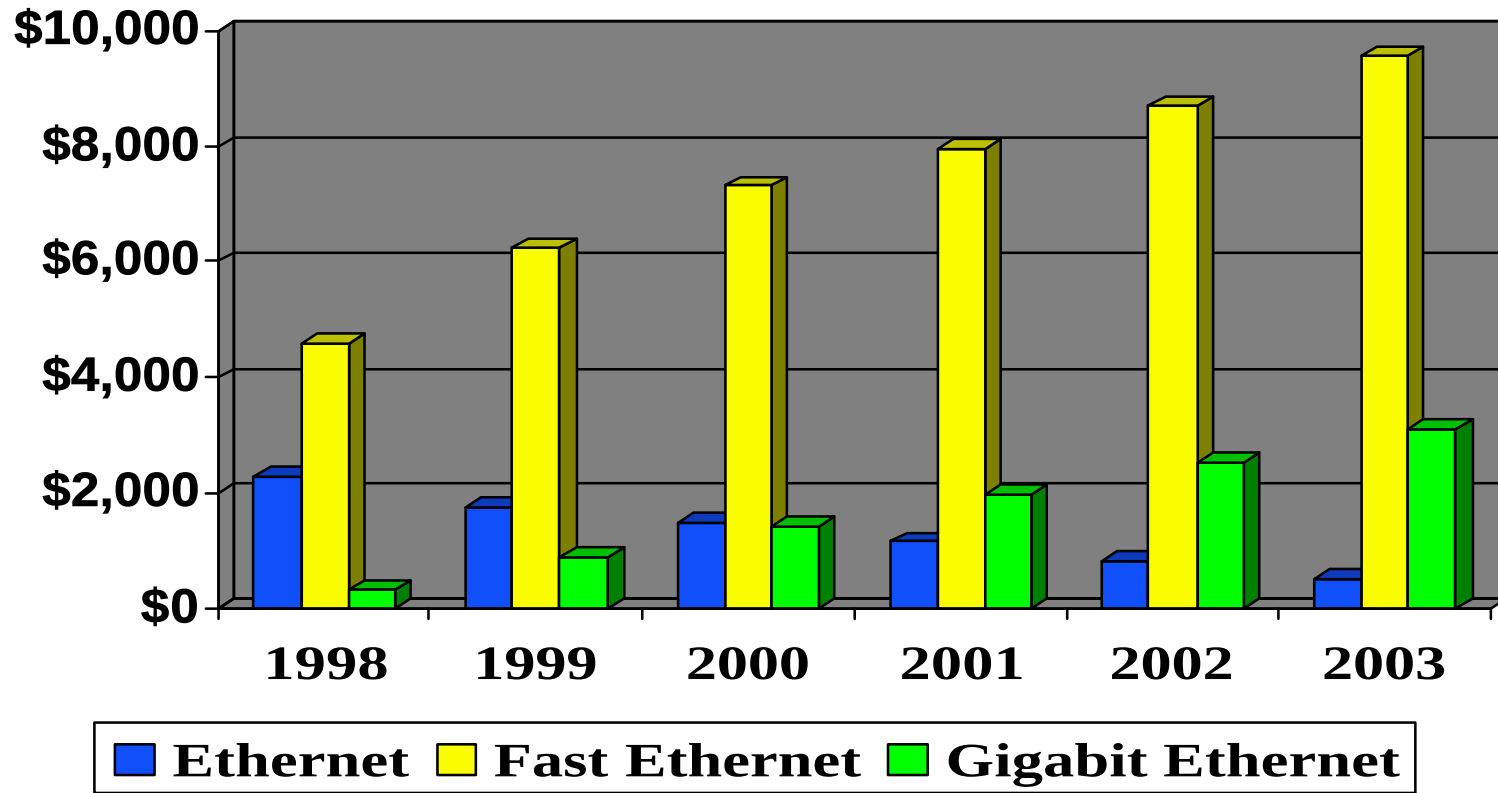
WW LAN Switch Market System Port (K)



Source: Dataquest

Ethernet: 10 Mbps
Fast Ethernet : 100 Mbps
Gigabit Ethernet : 1 Gbps

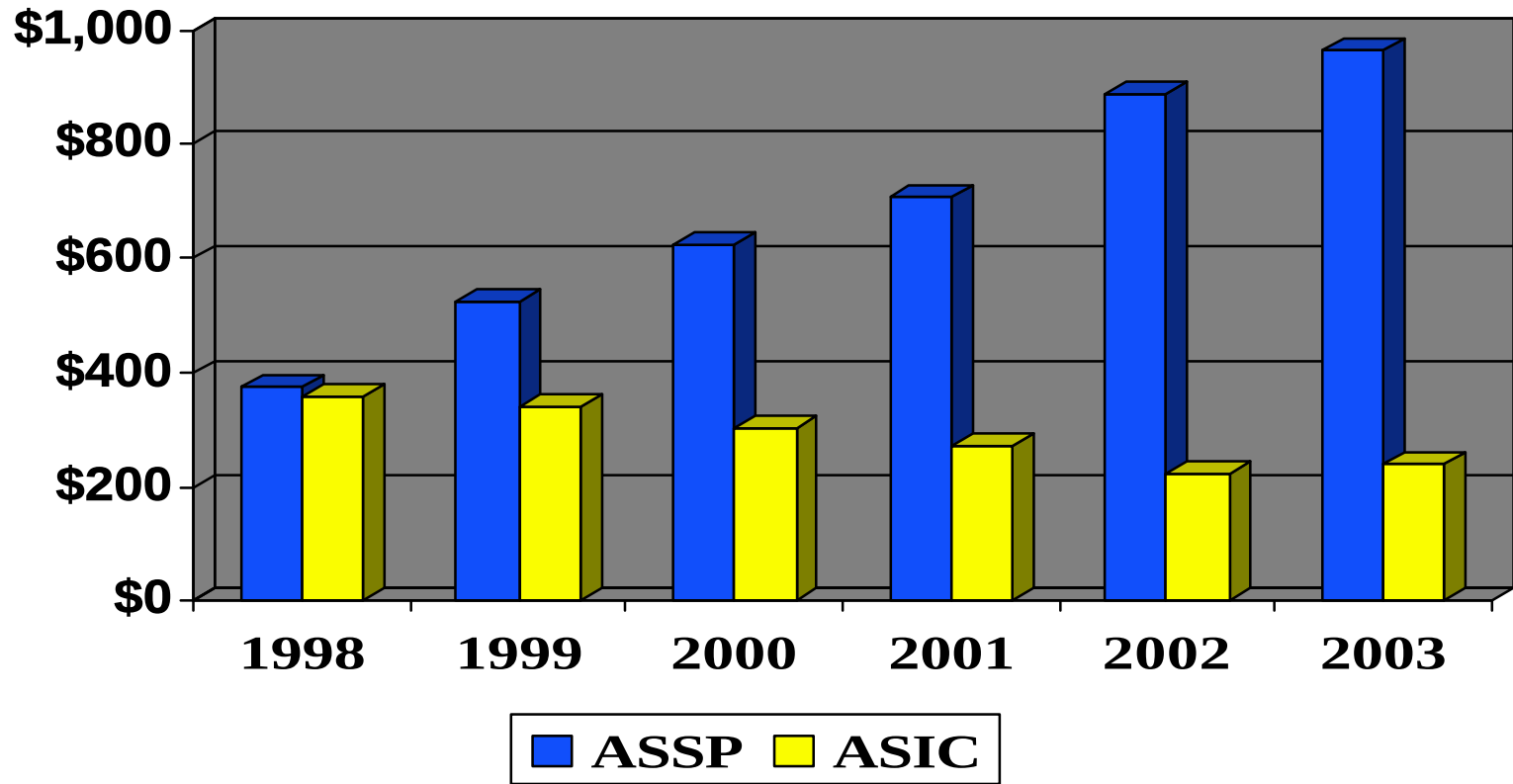
WW LAN Switch Market Revenue(\$M)



Source: Dataquest

Ethernet: 10 Mbps
Fast Ethernet : 100 Mbps
Gigabit Ethernet : 1 Gbps

WW LAN Switch Market ASSP & ASIC Revenue(\$M)



Source: Dataquest