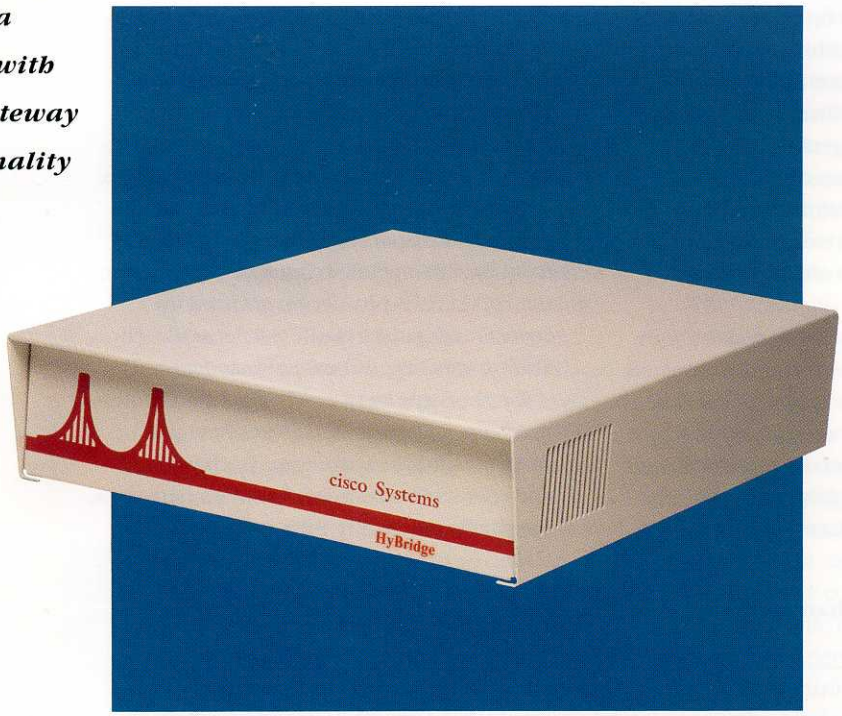
CISCO SYSTEMS

HyBridge

COMBINES BRIDGE AND GATEWAY

HyBridge from cisco provides the speed and protocol transparency of a LAN bridge with the network reliability of a gateway. Network managers can now have the low cost and high performance of a bridge, with cisco gateway functionality as well.



HyBridge, cisco's economical hybrid bridge/router, guarantees you the functionality and network reliability of all cisco gateways, while providing bridging speed and protocol transparency when you need them.

Cisco Systems, a pioneer in network science, builds complex, manageable LANs and WANs. Internetworking products from cisco provide multi-protocol, multi-media, multi-vendor connectivity.

HyBridge ends the controversy in internetworking technology between bridges and gateways.

HyBridge, cisco's hybrid bridge/router, combines the functionality of cisco's ISO Level 3 gateways with the speed of a MAC-layer bridge (Media Access Control at Level 2 of the OSI protocol stack). HyBridge performs simultaneous bridging and routing functions on the same network. Acting as either a bridge or a router, HyBridge can switch 12,000 packets per second.

Multi-protocol hybrid bridge/gateway systems like HyBridge achieve the best internetwork connectivity because they link many kinds of computers and network technologies, without requiring different protocol-specific or medium-specific routers. All cisco gateways including HyBridge support TCP/IP, ISO CLNS, XNS, DECnet, and Chaosnet protocols, and can serve as part of X.25 and DDN X.25 networks. HyBridge bridging connectivity also supports networks that use other protocols.

HyBridge extends multi-protocol network connectivity to include protocol-indifferent bridging.

Sometimes proprietary protocols (such as DEC's LAT protocol), patent constraints, or business reasons make it impractical to implement a specific routing technology in a gateway. A single cisco HyBridge solves this problem by acting both as a router for its supported higher-level protocols and as a LAN bridge connecting networks using other protocols.

HyBridge combines bridging and routing firmware, so HyBridge networks provide both kinds of performance:

- The reliability, security, and manageability of gateway-based internetwork systems.
- The total connectivity of protocol-indifferent bridging systems.

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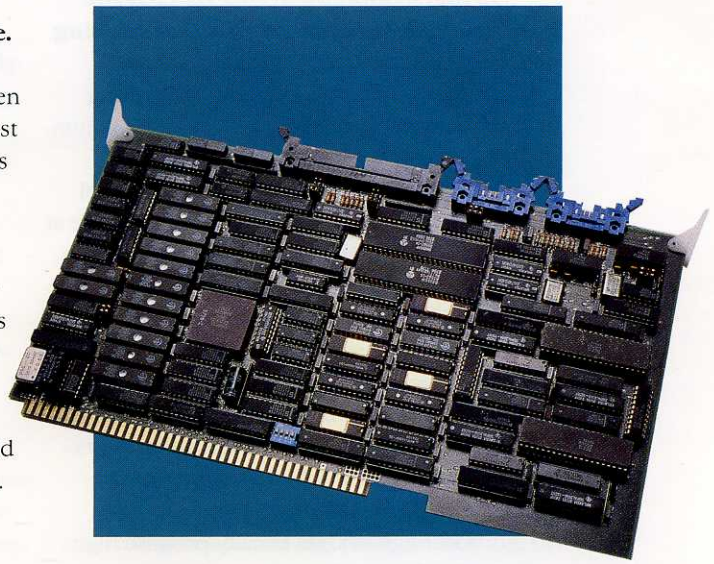
Cisco's HyBridge is engineered to make complex networks manageable. Broadcasts normally treat each network segment as an independent network. When a broadcast requires a response from a host on a different segment, the gateway acts as an agent for the broadcasting host and obtains a response from the remote host, without network-wide broadcasts. Also, network-level protocols have built-in protections against infinite looping of packets within the network, enabling gateways to prevent broadcast storms.

Multi-protocol, multi-media gateways enable the manager of a large WAN to build networks of networks over diverse media. One high-function gateway can connect many types of networks. Similarly, one multi-protocol gateway can link networks that use incompatible upper-layer protocols. Cisco gateways let you "grow as you go", while preserving capital investments in existing smaller LANs or subnets.

With cisco's HyBridge, network managers no longer have to weigh the advantages and disadvantages of bridges and gateways. You can have both: the functionality and reliability of gateways, along with bridging speed and protocol transparency.



The cisco Systems Multi-port Communications Interface provides the HyBridge bridging and routing capabilities. The same functionality is also available as a firmware option in other cisco Systems which use the MCI.

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