

Router Product Overview

Complex internetworks have grown past the point where network administrators can depend on equipment from a single vendor. At the same time, the administrators of small, independent networks are finding it necessary to interconnect networks and to provide network interoperability. Virtually all organizations creating and connecting local-area networks (LANs) and wide-area networks (WANs) have major commitments to hardware and software from many different vendors. Therefore, current and future internetworking requires products that support multiprotocol and multimedia networks with multivendor products.

Our routers connect LANs and WANs and interoperate with equipment from most vendors over most available media. This chapter describes the protocols and media that our routers support.

Supported Network Protocols

Our routers support many networking protocols, as well as several routing protocols. These protocols are based on both open standards and proprietary protocols from a variety of vendors. Our routers also support a wide set of bridging and IBM connectivity solutions.

Our routers can receive and forward packets concurrently from any combination of the following:

- WAN protocols
 - Asynchronous Transfer Mode (ATM)
 - Dial-on-demand routing (DDR)
 - Frame Relay
 - High-Level Data Link Control (HDLC)
 - Integrated Services Digital Networks (ISDN)
 - Point-to-Point Protocol (PPP)
 - Serial Line Internet Protocol (SLIP)—for asynchronous lines
 - Switched Multimegabit Data Service (SMDS)
 - X.25 and its derivatives, including LAPB and DDN X.25
- LAN protocols
 - Apollo Domain
 - AppleTalk (Phase 1 and Phase 2)
 - Banyan VINES
 - DECnet Phase IV, Phase IV Prime, and Phase V

- Internet Protocol (IP)
- ISO Connectionless Network Services (CLNS) and Connection Mode Network Services (CMNS)
- Novell IPX
- XNS and two variations developed by Ungermann-Bass and 3Com
- Bridging types
 - Transparent bridging and source-route transparent bridging (SRT)
 - Source-route bridging (SRB) and remote source-route bridging (RSRB)
 - Source-route translational bridging (SR/TLB)
- Support for IBM networking
 - Serial tunnel (STUN)
 - LLC2 and Synchronous Data Link Control (SDLC)
 - SDLLC

Supported Media

Our routers support the following industry-standard networking media:

- Ethernet—IEEE 802.3 and Type II
- Token Ring—IEEE 802.5
- FDDI—single and dual mode
- Synchronous serial—V.35, RS-232, RS-449, RS-530, and X.21
- High-Speed Serial Interface (HSSI)—supports T1, T3, E3, and SONET rates