bintec R3400 | R3800

SHDSL routers for high-speed Internet access and VPN connection

R3400 | R3800

The bintec R3400 and bintec R3800 SHDSL routers were specially developed for high-speed Internet access and for VPN connections for medium-sized enterprises and branch offices. Connected to an 8-wire copper line, these devices enable a transmission capacity of up to 9.2 Mbps (bintec R3800). If the routers are operated in back-to-back mode, physically separated LANs can be networked with symmetrical bandwidths.

SHDSL connection provide enterprises with symmetrical bandwidth, i.e. with the same transmission speed in both directions. This connection is particularly well suited to such hosting services as the provision of web and e-mail servers or of virtual workplaces (e.g. Citrix Metaframe, Windows TS). SHDSL is ideal for applications with equal data transmission for up and downstream, such as video teleconferencing or the integration of satellite stations.

The bintec R3400 supports symmetrical data transmission speeds of 192 kbps up to 2.3 Mbps on a 2-wire copper line. Connected with a 4-wire copper line, it delivers a transmission capacity ranging from 384 kbps to 4.6 Mbps and is thus able to serve the growing demands for increased bandwidth in business customer environments. Thanks to the integrated IMA function (Inverse Multiplexing via ATM), the bintec R3800 also offers the option of bundling a bandwidth of 9.2 Mbps. If required, the additional ISDN interface is able to set up reliable backup connections, thus providing for the high availability of business-critical applications.

The comprehensive IPSec implementation supports the set-up of secure VPN infrastructures. Straight from the factory, the routers are already equipped with ten active IPSec tunnels. 3DES or AES is used for encryption, authentication can be provided with preshared keys or certificates. The integration of a Radius server also presents no problem. Additional VPN tunnels can be activated by purchasing a corresponding license.

A wide variety of different software features round out these devices. The stateful inspection firewall provides protection from attacks from the outside, while Content Filtering* makes it possible to screen out web contents before they reach the internal network. The integrated PPPoE client/server function defines user-specific rules and regulations for the use of the Internet. QoS mechanisms can be activated to ensure the optimal exploitation of the bandwidth and to make the required service features available. The configuration of the routers is easy with the help of the HTTP Configuration Wizard (for inexperienced users).

* Content Filtering is subject to payment and is available as a 30-day trial version.

Versions

Feature	Description
bintec R3400	Datarates up to 4.6 Mbps via 2x2 wires line
bintec R3800	Datarates up to 9.2 Mbps via 4x2 wires line

DSL Interface

Feature	Description
G.SHDSL	On 2x2 or 4x2 by R3800 wires line (ITU-T G 991.2 and ETSI TS 101 524, with G.handshake ITU-T G.994.1)
High-speed Internet	PPPoA (RFC 2364) and PPPoE (RFC 2516)
High-speed LAN	Connections with bridged Ethernet (RFC 1483 / RFC 2684) and IP over ATM (RFC 1483 routed mode)
ATM	AAL5 through statically assigned PVCs, RFC 1483 encapsulation, monitoring facilities through OAM F5 protocol elements

ISDN Interface

Feature	Description
ISDN protocols	Euro-ISDN and other national ISDN protocols
Dialup and leased lines (BRI)	Leased lines supported: D64S, D64S2, TS02, D64S2Y
B-channel protocols	Excellent interoperability with other manufacturers (Raw HDLC, CISCO HDLC, X.75)
PPP, ML-PPP	(See Software)
X.31 over CAPI	X.25 within ISDN B- and D-channel
CAPI	CAPI 2.0 with CAPI user concept (password requested for CAPI use)
Bit rate adaptation	V.110 (1,200 up to 38,400 bps), V.120 up to 57,600 kbps (HSCSD) for connection to GSM subscribers
Automatic backup	Backup of the connection in case of failure of the SHDSL line, including re-establisment of the VPN tunnels

Security

Feature	Description
NAT/PAT	Network & Port Address Translation / Stateful Packet Inspection: Isolation of complete network from public access
CLID and callback	Calling Line Identification (CLID), callback
Access lists	Filtering of IP packets according to different criteria (source, destination, port and interface)
Stateful Inspection Firewall	filtering with monitoring and interpretation of the status of the individual connections
RADIUS	Central check of access authorization at a RADIUS server (PPP and Login Authentication)
TACACS+	Support of TACACS a security application that provides centralized validation of users
Authentication	PPP mechanisms (see Software)
Content filtering	30 day evaluation licence
VLAN	Network nodes in different network segments behave like a arbitrary group connected to the same network segment
Encryption for PPP	MPPE up to 128 bit other up to 168 bit
VPN - IPSec	10 tunnels inclusive, 50 more via separate licenses
VPN - IPSec	Powerful encryption up to 256 bits (AES, 3DES, DES, CAST, Blowfish, Twofish)
VPN - IPSec	Callback: Transmission of dynamic IP address in D or B channel; free-of-charge licence necessary
VPN-IPSec DPD	Dead Peer Detection for IPSec tunnel
VPN - PPTP	integrated
VPN - PPTP	Strong encryption up to 128 bits (MPPE), up to 168 bits (DES/3DES, Blowfish)
DynDNS / DynVPN	Router can still be reached over the Internet in spite of dyn. IP address
IKE for IPSec	Pre-Shared Keys and X.509 certificate support
X.509	X.509 v1/v3 certificates (PKCS#7/8/10, 12, CLRs, SCEP)
QoS for IPSec	Available
PKI Support for IPSec	Available
NAT Traversal for IPSec	Available
IPCOMP	IP Compression
IPSec / RADIUS	Available
IPSec Redesign	Policy manager and interface concept
L2TP	layer 2 tunneling protocol for ATM, Ethernet, PPP; user authenticatio
GRE	V.0 according RFC 2784 for common encapsulation
Hardware Encryption	factory default: 3DES, AES and RC4

Maintenance and Service

Feature	Description
Autoconfiguration	SHDSL and ISDN autoconfiguration and speed test
ISDN logging	ISDN event & system logging: recording of all relevant connection data, e.g. intrusion attempts
SNMP	Complete management with MIB-II, Enterprise MIB, inclusive SNMP management software for Windows (DIME Tools and Browser)
SSH login	Secure connections for terminal applications
Local / remote administration	Complete configuration and maintenance, local and remote, over Ethernet, ISDN Login or serial interface
Trace / debugging / monitoring	Traces for ISDN B-/D-channel, R-CAPI traces, Ethernet traces, reason for call break, ISDN signaling information
Email alert	Available
DHCP	Server and client for simplified configuration for TCP/IP
Setup Tool	Integrated, menu-based, intuitive setup program, standard for the whole bintec product portfolio
HTML Setup Tool	HTML interface accessible through a Java Script enabled browser
HTML Wizard	Browser-based configuration assistant
XADMIN	Roll out tool for larger router installations (IP+ISDN)
Activity Monitor	Controls router activities from each LAN PC
Documentation	Complete toolset and documentation on CD
Guarantee	2-year manufacturer's guarantee

Software Features

Feature	Description
TCP/IP routing	Routing information updating and distribution, static or dynamic (RIP v1/v2/triggered, RFC 2091), selectable for each interface, ProxyARP, BOOTP/DHCP forwarding
Extended IP routing	Dependent on source/destination port, source IP address, TOS ..., i.e. policy-based routing
X.25 Enhanced	X.25 over ISDN, XOT, X.25 to TCP Gateway, X.25 PAD, TP0 Bridge
OSPF	Static/dynamic updating and distribution of routing information
Bridging	Spanning Tree & Transparent Mode
QoS	Quality of Service with DiffServ and shaping: breakdown of IP data traffic into classes with different priorities, optimized queue handling and shaping as per these priorities
TCP Download Rate Control	Optimal for VoIP transmission
BRRP	Bintec Router Redundancy Protocol, back up a service offered by a single physical router to a LAN (Virtual Router)
IP load balancing	Bandwidth management
BoD	Bandwidth on Demand: Scalable bandwidth to suit data traffic load
AUX backup	Backup via GSM, GPRS or analogue modem
PPP	Authentication mechanisms (PAP, CHAP, MS-CHAP, MS-CHAP v2), standard PPP, channel bundling over Multilink PPP (ML-PPP), transparent mode, dynamic IP address assignment (server and client mode)
PPPoE	Point-to-Point Protocol over Ethernet (Client and Server) for high-speed Internet access over xDSL (RFC 2516)
LAN user - ISDN WAN partner	Unlimited number
Dyn. IP addresses	Simple Internet access without fixed IP addresses
ISDN accounting	Call detail recording, number, charging information, ...
IP accounting	Source, destination, port, interface, packets/bytes counter
Event Scheduler	Budgets based on data volume or based on time
Short hold	Static and dynamic short hold saves connection costs through automatic call clearing
Keep Alive Monitoring	Saves costs by only allowing a connection to be set up if configurable IP addresses can be reached
STAC	Compression for PPP connections, free-of-charge licence necessary
Cost of ownership	Minimum, e.g. due to free software updates, full remote administration

Hardware Features

Feature	Description
RISC architecture	Motorola 8241 RISC processor with 32 MB RAM
Flash ROM	8 MB on board
SHDSL	RJ45 port for connexion to SHDSL line (two copper pairs), adapter cable on request
4+1-port switch	4+1-port autosensing 10/100 Mbps Ethernet switch
ISDN	1 x BRI, 2 B-channels
Console	Serial console port: RS 232 C, RJ45, 1,200 bps - 115 kbps
Power supply	External AC/DC converter 15 V AC
On/off switch	Available
Status LEDs	Power, Status, 10 x Ethernet, 8 x Function (ISDN, ADSL, WLAN, ...)
Housing	Metal housing
19-inch	Optional: suitable for mounting in 19-inch cabinet via a 19-inch rack-mount kit
Fanless design	Long lifetime
Dimensions	Approx. 295 x 45 x 160 mm (W x H x D)