

bintec R3000 | R3000w

Highend Wireless ADSL Router with IP-Sec and ISDN.

The bintec R3000 is an ADSL multi-protocol router equipped with an integrated ADSL(2+) modem and automatic ISDN backup.

The R3000/R3000w's ADSL modem is compliant with the ANNEX-A and ANNEX-B standards, which means it can be used in many different countries around the world. It

has been specially designed to accommodate high-speed Internet access and remote access for use in small to medium-sized companies or remote offices. The device already comes complete with 10 IPSec tunnels including hardware acceleration. Up to 100 additional IPSec tunnels can be added to the system with the purchase of the corresponding license. The second integrated ISDN S0 interface can also be activated optionally with the purchase of a license.



The basic version offers an SIP and MGCP Application Level Gateway, enabling it to be connected directly to IP telephones in the network or registered with the VoIP provider. The R3000(w) automatically controls the firewall, which makes it considerably easier to configure. It has also been conveniently equipped with a DSP slot for future use as a VoIP media gateway. As a wireless router, the bintec R3000w supports the 802.11a/b/g/h standards with a gross transfer rate of 54 Mbps. In addition to WEP encryption, the secure WPA or WPA2 modes for the use of pre-shared keys or the integration into a Radius server are available to guarantee secure data transmission via the WLAN. Access is controlled on the port level via 802.1x. The multi-SSID function makes it possible to build several different user groups, each with their own guidelines. The WDS function (Wireless Distribution System) can be used to create wireless infrastructures for application scenarios in which a wired solution would be too expensive or technically impossible.

The devices can be configured using either the HTTP Configurations Wizard (recommended for inexperienced users) or via an HTML user interface. The SSH-encrypted communication to the device provides for secure configuration.



Wireless LAN

Feature	Description
WLAN Modes	IEEE 802.11 Compatibility Mode: 11a Only, 11b Only, 11g Only, Mixed, Mixed-Long Range, Mixed-Short Range
Channel sets	According to IEEE 802.11d (country support)
Data rates	IEEE802.11 Standards: a,h (5GHz) g,b (2,4 GHz) modulation scemes: 11, 5.5, 2 and 1Mbps (DSSS) 2.4GHz; 54, 48, 36, 24, 18, 12, 9 and 6Mbps (OFDM), 2,4 and 5 GHz
TPC	TPC (Transmission Power Control): At 5 GHz, automatic power reduction according to EN301893
DFS	DFS (Dynamic Frequency Selection): At 2,4 and 5GHz, channels are used dynamically depending on occupation.
WDS	Available
WEP/WPA	WEP64 (40 Bit key), WEP128 (104 Bit key), WPA Personal, WPA Enterprise, WPA2 Personal, WPA2 Enterprise
IEEE802.11i Authentication and Encryption	802.1x/EAP-MD5, 802.1x/EAP-TLS, 802.1x/EAP-TTLS, 802.1x/EAP-PEAP, Key Management, PSK/TKIP Encryption, AES Encryption, 802.1x/EAP
Broadcast	Broadcast-SSID: Enable/disable.
Multi SSID	Up to 16 service sets per radio in AP mode.

DSL Interface

Feature	Description
ADSL2 / ADSL2+	With downloads up to 12 / 24 Mbps, ANNEX-A and ANNEX-B

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) permits direct access to services such as fax and e-mail
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

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, 100 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
Hardware Encryption	Factory default: 3DES, AES and RC4

Maintenance and Service

Feature	Description
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

Hardware Features

Feature	Description
RISC architecture	Motorola 8241 RISC processor with 32 MB RAM
Flash ROM	8 MB on board
ADSL	RJ45 port for connections to splitter
4+1-port switch	4+1-port autosensing 10/100 Mbps Ethernet switch
VoIP DSP-Steckplatz	Internal slot for 4 channel DSP
WLAN	Internal radio modul, 2,4 GHz and 5 GHz Band, 2 external antennas (Antenna Diversity)
ISDN	1 x BRI (2 B channels), opt. 2nd BRI via license
Console	Serial console port: RS 232 C, RJ45, 1,200 bps - 115 kbps
Power supply	External AC/DC converter 15 V DC
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)

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)
VoIP	SIP, Application Level Gateway; VoIP session management, automatic firewall controlling
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