

bintec RS Series

The new family of IP access routers
—professional features for
tailor-made network access



The bintec RS Series:

Router systems for professional applications —Your tailor-made network access

The IP access routers of the new bintec RS Series have performance features that go far beyond just routing and allow these routers to be integrated into complex IT infrastructures.

Functions such as **bintec Extended Routing and Extended NAT (ERN)** permit an exact separation and detailed implementation of all incoming and outgoing data packets according to precisely defined criteria. **Network Address Translation** individually translates the incoming and outgoing data traffic based on user defined criteria for each interface. The comprehensive **multicast support** makes the bintec RS Series ideal for use in multimedia and streaming applications.

The integrated **Stateful Inspection Firewall (SIF)** offers effective protection against attacks from the internet and is easy to set up thanks to numerous pre-configured services. The SIF is supplemented with an optional content filter*, which classifies all outgoing internet requests and reliably filters out unwanted content.

All routers of the new bintec RS Series provide a SIP **application level gateway (ALG)** as standard for the direct connection of VoIP telephones in the network or for registering with a VoIP provider. Particularly, but not only, VoIP applications also profit from the integrated, sophisticated **Quality of Service functions (QoS)**, which separate out data streams in order to ensure that important services are always supplied with the required bandwidth—even in combination with VPN.

Load balancing and a 2-year warranty (which can be extended to 5 years at minimal cost) ensure high reliability, which is particularly important when it comes to high availability.

The new bintec RS Series—the first choice for a stable, secure and professional network connection.

*) Content filtering is an option at extra cost. A 30-day test version is available.

Highlights of the RS Series:

Tried and trusted features for professional and secure applications

Comprehensive IPsec implementation

The routers of the new bintec RS Series offer a whole host of IPsec functions, which are unparalleled on the market: All devices in the bintec RS Series are supplied ex works with a licence for 5 hardware-accelerated IPsec tunnels. The integrated high end encryption engine ensures adequate performance.

In addition to pre-shared keys, X.509 certificates are also used, e.g. for a public key infrastructure with maximum security. This protects the systems, for example when employees change or if a VPN device is stolen, by means of a single action by a central location. This simplifies administration and over the long-term improves security and reduces costs. The German Federal Office for Information Security also recommends the use of certificates.

The bintec IPsec implementation of the new RS Series offers support when creating VPN connections with dynamic IP addresses. Even if both VPN remote terminals have an internet connection with dynamic IP, the bintec RS Series can reliably establish a VPN connection: The current IP is exchanged either over a dynamic DNS service, or directly over ISDN* (free transfer over the ISDN D channel, similar to the „fixed SMS network“) or at cost over an ISDN B channel (similar to a modem connection).

The majority of routers on the market do not allow a connection between two private networks with the same IP address range - to do this all of the IP addresses in one of the networks must be changed. The routers of new bintec RS Series allows this by using NAT over IPsec.

Load balancing and multi-backup

The new bintec RS Series offers an impressive and comprehensive range of external interfaces. Two ports can be configured as WAN interfaces. As a result, there is not only more bandwidth available, but also the data traffic can be spread across individual WAN connections according to load or data type.

If one WAN connection is terminated, the other connection automatically takes over the entire data traffic. If both WAN ports fail, the data traffic to an external USB UMTS (3G) modem can be rerouted - as the IT saying goes „two backups are always better than one“.

Simple configuration and maintenance

The new bintec RS Series is configured over the Funkwerk Configuration Interface (FCI), a web-based graphical user interface, which can be operated with a current web browser over HTTP or encrypted over HTTPS. Various wizards simplify the set up considerably. Software tools such as bintec XAdmin and the new DIME Manager assist with the rollout, setup and configuration of larger networks.

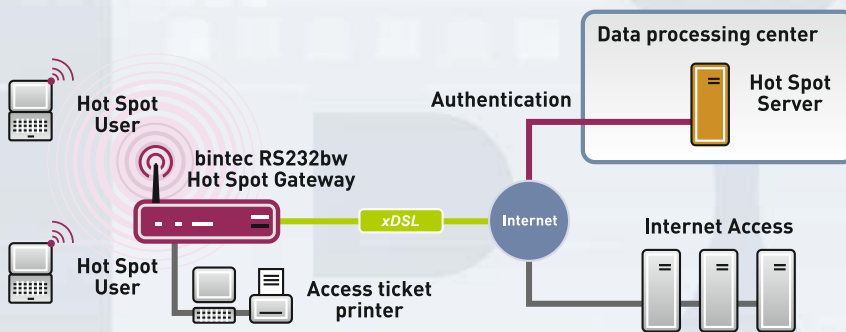
The routers can also be managed locally and remotely over other configuration accesses such as Telnet, SSH, GSM dial-in** and ISDN login*.

A key security feature is the permanent status message for router activities. In addition to sending system messages as SNMP Traps, Syslog messages can also be logged. The administrator can also be informed of certain events by e-mail.

*) Only on bintec RS232b / RS232bw

**) Only on RS120wu or over an external USB UMTS (3G) modem

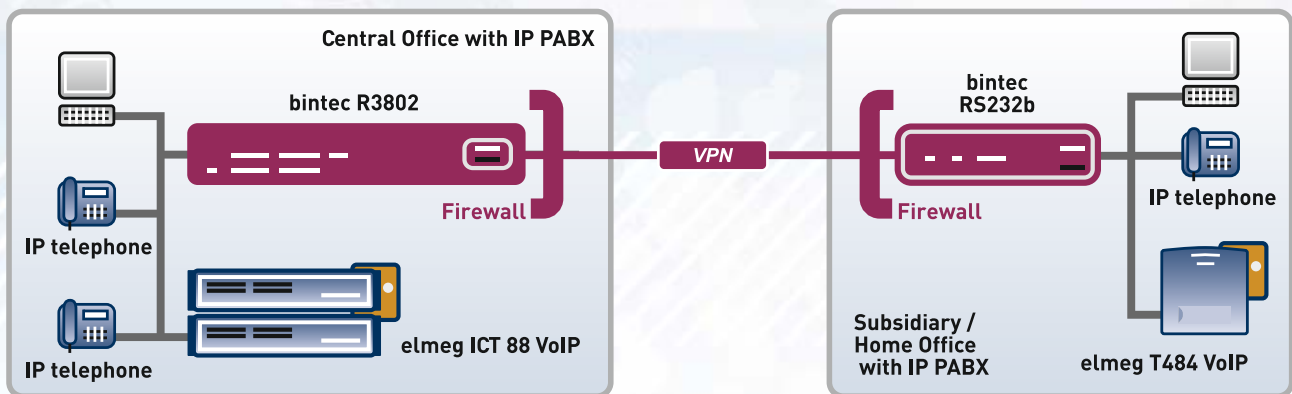
Application examples



Hot Spot:

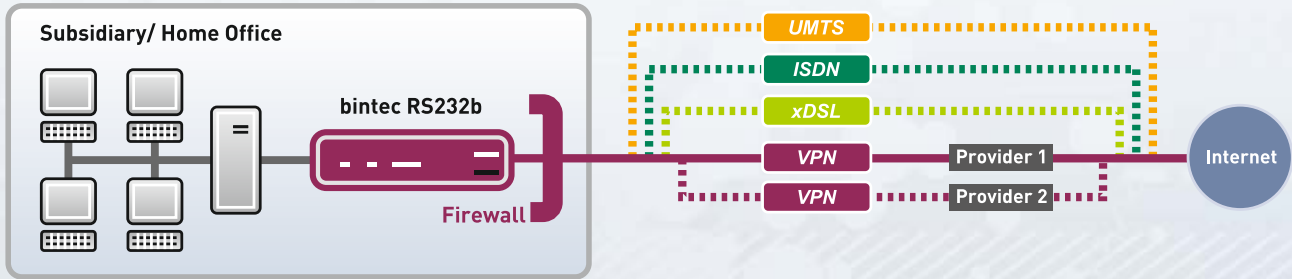
The bintec Hot Spot solution permits the operation of public hot spots for internet access—easy to set up, powerful, flexible to configure and in compliance with the current legal regulations on data protection and data retention.

The Hot Spot operator can create an individual login page and set up registration-free advertising pages. The Hot Spot can be operated as a free service or as a time-based or volume-based ticket system. The solution is branch-capable and can therefore be offered at various locations and managed centrally.



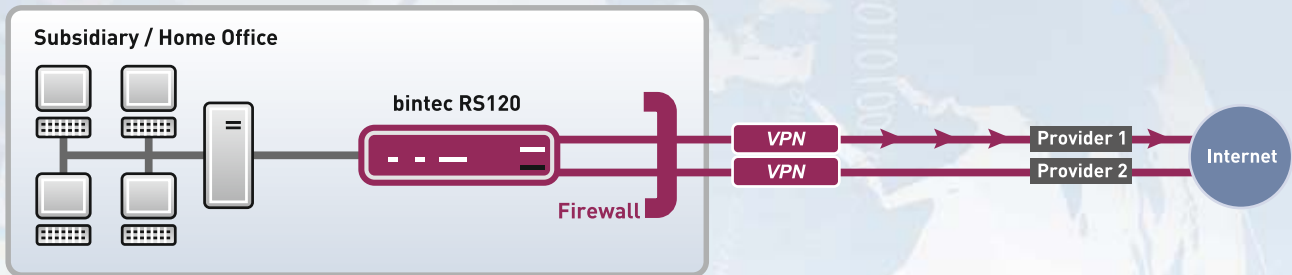
Quality of Service:

For the reliable operation of Voice over IP, the voice quality and stability of the connection must be guaranteed. To avoid interference from parallel data traffic, all data connections of the IP line are categorised by the router and VoIP connections are prioritised over other data. QoS is therefore an essential function for Voice over IP.



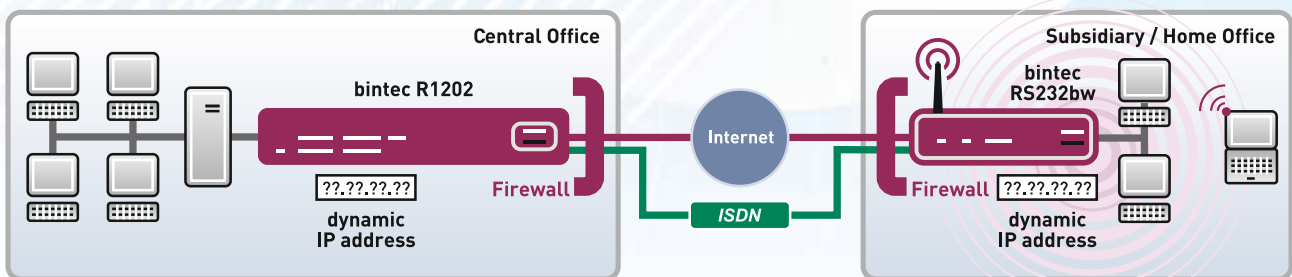
Multi-Backup:

To maintain a stable, high availability network connection with a maximum degree of reachability, bintec routers have comprehensive backup mechanisms. The router responds immediately to interruptions to the main connection by automatically establishing a new and individually configurable connection. After eliminating the fault, the original connection is automatically re-established.



Load Balancing:

If IP access routers with several WAN interfaces are used, several WAN connections can be realised. The data traffic can then be distributed across the individual lines according to percentage reference values or according to protocols and networks services. For example, business-critical VPN traffic is separated from all other data traffic.



Dynamic IP address:

Some internet accesses offer no fixed IP address, but are allocated a new address by the provider each time they connect, which makes it more difficult to establish VPN connections. When using two bintec routers, a VPN connection can also be established with dynamic IP addresses on both sides.

The models of the new bintec RS Series

The new bintec RS Series has a comprehensive basic range of professional functions, which offer a broad spectrum of uses, and ensure long-term reliability in critical corporate applications. This makes the new bintec RS Series ideal for use as an IP access router for branches, SoHos and SMEs.

All devices of the new bintec RS Series have five gigabit Ethernet ports (1000BASE-TX), which can be configured for LAN, WAN or DMZ. Thanks to the individual configuration of the Ethernet ports, the WAN connection can be established in a variety of ways. This enables the bintec RS Series to be integrated into the widest range of network topologies.

All models in the new bintec RS Series are supplied ex works with a licence for five hardware-accelerated IPSec tunnels. All models are fan-free and thanks to the rugged metal housing with external energy-efficient switched-mode power supply can be practically integrated into any working environment.

Optional extensions for routers of the bintec RS Series::

- ▶ Service package with 5 years first class service and preliminary exchange
- ▶ Hot Spot function
- ▶ Cobion Content Filtering

Detailed product information on each model can be found in the product data sheets on the internet:

<http://www.funkwerk-ec.com/products>



bintec RS120

- ▶ Fan-free metal housing, external, energy-efficient switched-mode power supply
- ▶ 5 gigabit Ethernet ports, freely configurable
- ▶ USB port for UMTS (3G) modem
- ▶ Licence for 5 IPSec tunnels
- ▶ SFP slot for fibre optic expansion module



bintec RS120wu

- ▶ Fan-free metal housing, external, energy-efficient switched-mode power supply
- ▶ 5 gigabit Ethernet ports, freely configurable
- ▶ Licence for 5 IPSec tunnels
- ▶ SFP slot for fibre optic expansion module
- ▶ Integrated UMTS (3G+) HSxPA modem, connection for external indoor or outdoor UMTS (3G) antenna
- ▶ Dual band WLAN in accordance with IEEE 802.11n (2.4 and 5 GHz) for up to 300 Mbps gross throughput



bintec RS230a

- ▶ Integrated ADSL 2+ modem for Annex A (ADSL over POTS, ITU 992.1)
- ▶ Fan-free metal housing, external, energy-efficient switched-mode power supply
- ▶ 5 gigabit Ethernet ports, freely configurable
- ▶ USB port for UMTS (3G) modem
- ▶ Licence for 5 IPSec tunnels



bintec RS230aw

- ▶ Integrated ADSL 2+ modem for Annex A (ADSL over POTS, ITU 992.1)
- ▶ Fan-free metal housing, external, energy-efficient switched-mode power supply
- ▶ 5 gigabit Ethernet ports, freely configurable
- ▶ USB port for UMTS (3G) modem
- ▶ Licence for 5 IPSec tunnels
- ▶ Dual band WLAN in accordance with IEEE 802.11n (2.4 and 5 GHz) for up to 300 Mbps gross throughput



bintec RS232b

- ▶ Integrated ADSL 2+ modem for Annex B (ADSL over ISDN) in accordance with ITU G992.1, compatible with Deutsche Telekom's U-R2 connection
- ▶ ISDN BRI port
- ▶ Fan-free metal housing, external, energy-efficient switched-mode power supply
- ▶ 5 gigabit Ethernet ports, freely configurable
- ▶ USB port for UMTS (3G) modem
- ▶ Licence for 5 IPSec tunnels



bintec RS232bw

- ▶ Integrated ADSL 2+ modem for Annex B (ADSL over ISDN) in accordance with ITU G992.1, compatible with Deutsche Telekom's U-R2 connection
- ▶ ISDN BRI port
- ▶ Fan-free metal housing, external, energy-efficient switched-mode power supply
- ▶ 5 gigabit Ethernet ports, freely configurable
- ▶ USB port for UMTS (3G) modem
- ▶ Licence for 5 IPSec tunnels
- ▶ Dual band WLAN in accordance with IEEE 802.11n (2.4 and 5 GHz) for up to 300 Mbps gross throughput

Software

bintec XAdmin

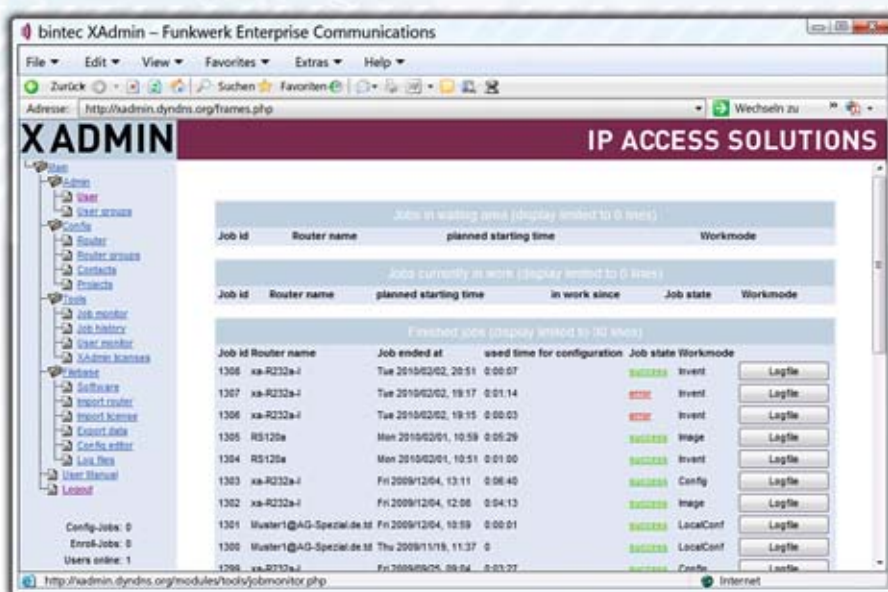
Standard routers are the first choice for providing a secure and stable connection between company head offices and subsidiaries. The required configuration of the branch's routers on site would be extremely laborious and uneconomical. bintec XAdmin offers a rapid, secure and convenient solution. With the bintec XAdmin, the system administrator can operate, configure, update and manage remote branch routers from head office. Even access points on the branch, which are operated behind the access point of the branch, can also be managed by XAdmin.

bintec XAdmin is offered in three versions, which distinguish between server and clients in terms of their connection: "XAdmin over IP" uses an existing IP infrastructure, "XAdmin over ISDN" and "XAdmin over GSM/UMTS" use public ISDN or mobile network connections.

This is also possible in combination with various XAdmin versions: For example, "XAdmin over ISDN" is particularly useful for the initial configuration when dialling into and configuring new routers in the ex works state. For updates and modifications during operation, however, "XAdmin over IP" is the lower cost version.

Performance features:

- ▶ Client server system with central database
- ▶ Web-based user interface
- ▶ Multi-user capability
- ▶ Individual configuration for each user by means of a flexible rights system with group and individual rights.
- ▶ Inventorisation of the router and database
- ▶ Automated processing of initial configuration (rollout) and updates
- ▶ Event-based or time-based configuration
- ▶ Import of configuration parameters using files in CSV format
- ▶ Success control and comprehensive, informative log files
- ▶ Major degree of reliability thanks to automated data backup system
- ▶ Stepped licence model



FEC Secure IPsec Client

The FEC Secure IPsec Client, which is tailored to the routers of the bintec RS Series, is ideal for mobile users who frequently work whilst travelling or from home. It offers a secure remote access over an existing IPsec gateway at head office or direct to an IPsec-capable server.

The integrated installation wizard ensures a quick and simple setup. Media detection automatically selects the optimum connection: analogue or DSL modem, ISDN, GPRS or UMTS.



A 30-day demo version is available from http://www.funkwerk-ec.com/ipsec_client_en

An integrated UMTS (3G) Budget Manager offers full cost control over the mobile network connection. The integrated firewall with friendly net detection offers comprehensive protection for the terminal as well as the option for secure communication when dialling in over public Hot Spots.

Performance features:

- ▶ Support for Windows 7®, Windows® Vista® and Windows® XP (32 and 64 Bit)
- ▶ Use of strong authentication and encryption procedures
- ▶ Comprehensive IPsec functions such as IPComp, NAT Traversal, IKE Config Mode and XAuth
- ▶ Integrated personal firewall
- ▶ Automatic Hot Spot detection
- ▶ Integrated WLAN configuration
- ▶ UMTS (3G) dialler with integrated budget manager

DIME Manager

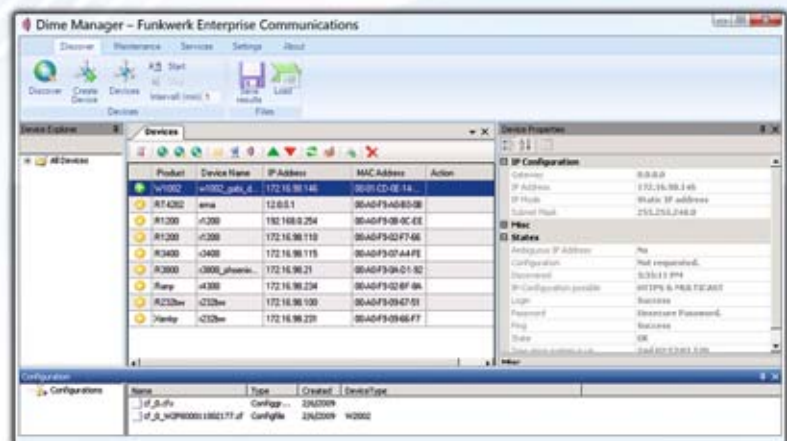
The free DIME Manager was developed for administrators that look after networks with up to 50 devices in the LAN or VPN and offers sophisticated device management for bintec hardware. The software simplifies the management and configuration of routers and access points either individually or in logical groups.

When developing DIME Manager, simple and efficient operation was the primary aim. Firmware status, uptime, current status, etc. are presented clearly for all devices in the LAN or VPN. Software updates or configurations can be applied to individual devices or groups of devices, e.g. simply by drag and drop. New devices in the network are detected and managed using SNMP multicasts, independent of their current IP address. Remote routers or access points in branches, subsidiaries or home offices are located using device discovery, even via VPN.

The DIME Manager supports all routers in the bintec RS, bintec R, bintec RT, bintec TR200 Series and access points in the W and WI Series.

Free download at

http://www.funkwerk-ec.com/dl_sw_dime_manager_en.html



Performance features of the bintec RS Series

	bintec RS120	bintec RS120wu	bintec RS230a	bintec RS230aw	bintec RS232b	bintec RS232bw
Hardware / Interfaces						
10/100/1000BASE-T	5	5	5	5	5	5
SFP slot for optical Ethernet module	1	1	–	–	–	–
ISDN BRI ports	–	–	–	–	1	1
Internal xDSL modem	–	–	ADSL (2+)	ADSL (2+)	ADSL (2+)	ADSL (2+)
DSL variants	–	–	Annex A	Annex A	Annex B	Annex B
WLAN 802.11a/b/g/h/n (Dual Band 2.4 and 5 GHz)	–	1	–	1	–	1
UMTS (3G+) HSxPA modem	–	1	–	–	–	–
USB port	1	1	1	1	1	1
Serial interface (console)	1	1	1	1	1	1
External, energy-efficient switched-mode power supply	•	•	•	•	•	•
Metal housing, can be wall mounted	•	•	•	•	•	•
Software IP access / routing						
Policy-based routing / NAT	•	•	•	•	•	•
PPPoE Client / PPPoE Server / Multi Link PPPoE	•	•	•	•	•	•
PPPoA / IPoA	–	–	•	•	•	•
DHCP Client / Server / Proxy	•	•	•	•	•	•
SIP Proxy / ALG	•	•	•	•	•	•
Multicast / IGMP v3 / IGMP Proxy	•	•	•	•	•	•
RIP v1 / v2 / Triggered RIP	•	•	•	•	•	•
Multi-Bridging	•	•	•	•	•	•
VLAN	•	•	•	•	•	•
QoS / TCP Download Rate Control	•	•	•	•	•	•
NTP Client/Server / Autom. Daylight Saving	•	•	•	•	•	•
RADIUS / Tacacs+	•	•	•	•	•	•
Scheduling	•	•	•	•	•	•
DNS Client / Server / Proxy / Relay	•	•	•	•	•	•
Keep Alive Monitoring	•	•	•	•	•	•
UPnP	•	•	•	•	•	•
Load Balancing	•	•	•	•	•	•
Remote CAPI	–	–	–	–	•	•
Switch Port Separation	•	•	•	•	•	•
Hot Spot	opt.	opt.	opt.	opt.	opt.	opt.
VPN/Security						
IPSec tunnels included / maximum	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5
IPSec hardware acceleration / encryption	•	•	•	•	•	•
IPSec IKE (PSK & X.509)	•	•	•	•	•	•
PKCS #7/8/10/12, SCEP	•	•	•	•	•	•
IKE Config Mode / IKE X-Authentication (Client/Server)	•	•	•	•	•	•
IPSec NAT-Traversal / Dead Peer Detection	•	•	•	•	•	•
IPSec in conjunction with NAT/QoS/RADIUS	•	•	•	•	•	•
IPSec IP address in D/B channel	–	–	–	–	•	•
PPTP (Client / Server)	•	•	•	•	•	•
L2TP	•	•	•	•	•	•
GRE	•	•	•	•	•	•
Max. number of PPTP / L2TP / GRE tunnels	5	5	5	5	5	5
DynDNS / DynVPN	•	•	•	•	•	•
NAT / PAT	•	•	•	•	•	•
Stateful Inspection Firewall	•	•	•	•	•	•
IP packet filter	•	•	•	•	•	•
Content Filtering	opt.	opt.	opt.	opt.	opt.	opt.
Email alert	•	•	•	•	•	•
Local Services Access Control	•	•	•	•	•	•

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WLAN						
Multi-SSID (max. 8 SSIDs)	-	•	-	•	-	•
WPA, WPA2 (Personal Mode / Enterprise Mode)	-	•	-	•	-	•
802.1x/EAP/MD5/TLS/TTLS/PEAP	-	•	-	•	-	•
IPSec over WLAN (PSK & Certificates)	-	•	-	•	-	•
Wireless Distribution Service (WDS)	-	•	-	•	-	•
Backup						
Backup ISDN	-	-	-	-	•	•
Backup GSM / GPRS / UMTS	- / - / •*	• / • / •	- / - / •*	- / - / •*	- / - / •*	- / - / •*
Management						
Detailed IP accounting	•	•	•	•	•	•
Internal / External system logging	•	•	•	•	•	•
Management over HTTP, HTTPS, SNMP, SSH, FCI, Telnet	•	•	•	•	•	•
Remote software upgrade & configuration download	•	•	•	•	•	•
DIME Manager support	•	•	•	•	•	•
XAdmin support	•	•	•	•	•	•

*) External USB UMTS (3G) modem available (not included with delivery)



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**The new family of IP access routers
—professional features for
tailor-made network access**



This flexible range of routers with professional features is ideal for use as an IP access router for branches, SoHos and SMEs.

- ▶ 5 Gigabit Ethernet interfaces (1000BASE-TX)
- ▶ ISDN connector
- ▶ Fan-free metal housing
- ▶ 5 IPSec tunnels included
- ▶ Simple configuration and initial operation
- ▶ bintec Extended Routing / Extended NAT (ERN)

bintec RS Series: The range of powerful IP access routers for demanding users and professional environments. Your system house will be happy to advise!

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Funkwerk: The Perfect Fit.

V O I C E , D A T A , S E C U R I T Y .

Communications solutions which adapt themselves to your company instead of the other way round: With Funkwerk systems, you can work more efficiently and securely.

Our product portfolio allows companies of any size to connect different company sites securely with each other using VPN, to protect their networks reliably against spamming and viruses, to connect mobile employees with the company headquarters, and to set up and operate flexible, reliable, high-speed telecommunications or wireless LAN infra-structures boasting a wide range of features.

Hardware with long life cycles, efficient commissioning, reliable operation, and competent partners: Funkwerk will provide you with a tailor-made solution!

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