

The new  
**bintec R Series**

The tried and trusted VPN gateway family  
—now in a 19-inch housing  
with integrated power supply and Gigabit Ethernet



# The VPN gateways of the new bintec R Series:

**As flexible as your company—and with all of the features required to meet demanding requirements.**

The VPN gateways of the new bintec R Series have performance features that go far beyond just routing and allow these gateways 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. The comprehensive **multicast support** makes the gateway range ideal for use in multimedia and streaming applications. RIP, OSPF or multicast routing protocol PIM-SM can be used as routing protocols.

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 gateways of the new bintec R 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.

In practice, the gateways of the new bintec R Series offer impressive high performance hardware: fan-free design with integrated energy-efficient switched-mode power supply in a rugged 19-inch metal housing: developed for a long device service life and rapid, convenient integration into existing infrastructures.

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

**Tried and trusted with logical improvements:  
The new bintec R Series—the new benchmark in its class.**

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



# Highlights of the R Series:

## Why the new bintec R Series fits your IT admin like a glove

### *Comprehensive IPSec implementation*

The VPN gateways of the new bintec R Series offer a whole host of IPSec functions, which are unparalleled on the market: All devices in the bintec R Series are supplied ex works with a licence for 10 hardware-accelerated IPSec tunnels. Up to 100 additional tunnels can also be enabled if licensed. 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 certificates can be managed conveniently and easily on a RADIUS server. Funkwerk offers a special solution, which also permits RADIUS dial out solutions. With XAuth (Extended Authentication) and a "one time password" solution such as Kobil SecOVID®, for example, the level of security can be optimised.

The bintec IPSec implementation of the new R Series offers support when creating VPN connections with dynamic IP addresses. By using a free ISDN call back procedure, for example, the head offices can trigger each branch to establish a tunnel with a static IP address.

The majority of VPN gateways 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 VPN gateways of the new bintec R Series allows this by using NAT over IPSec.

### *Load balancing and device redundancy*

The VPN gateways of the new bintec R Series allow two or three interfaces to be configured as WAN interfaces simultaneously. 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.

The bintec router redundancy protocol (BRRP) allows two devices to operate as a single device in the LAN. Both devices have their own IP and MAC addresses for each interface as well as a joint virtual IP and MAC address as standard gateway for the LAN. If one of the devices fails, the other device automatically takes over the entire data traffic.

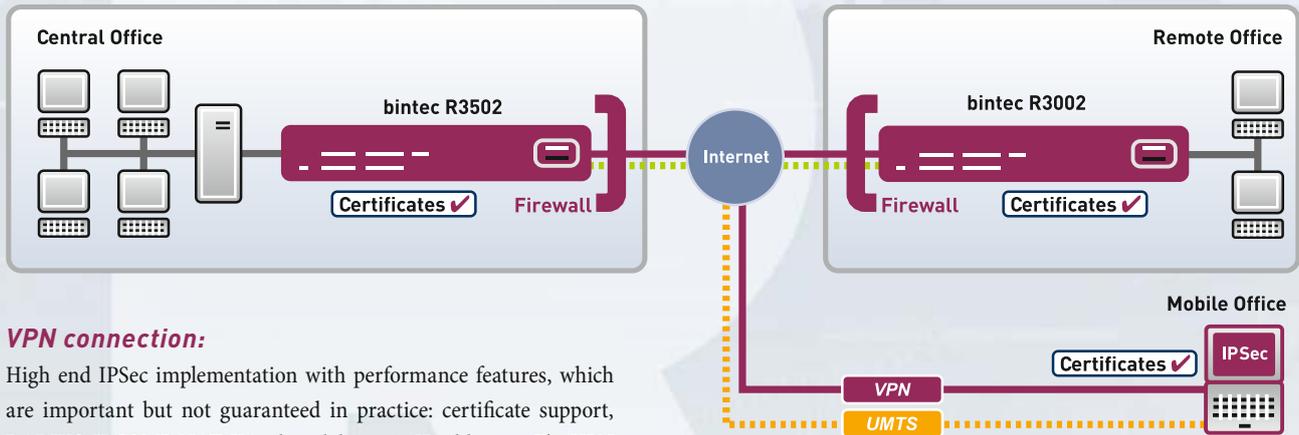
### *Simple configuration and maintenance*

The new bintec R 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.

The gateways can also manage the devices locally and remotely over other configuration accesses such as Telnet, SSH and ISDN login.

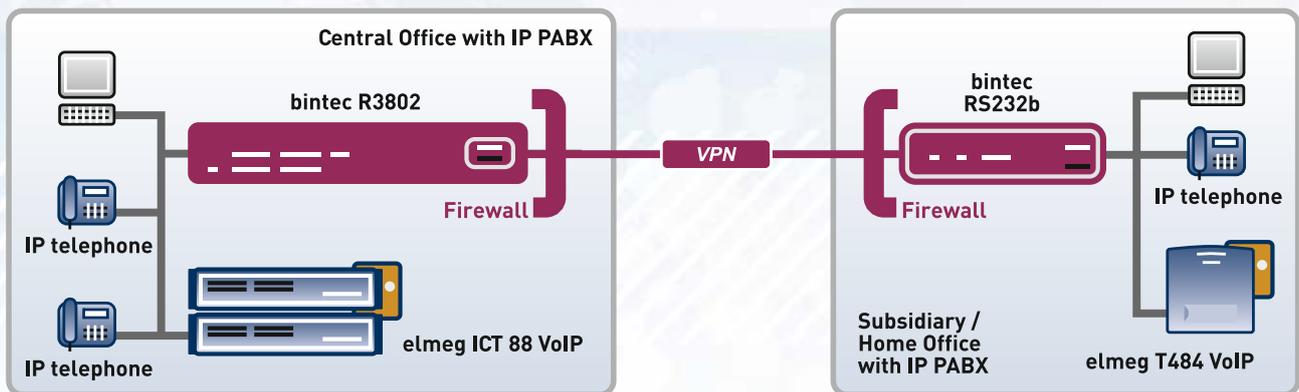
A key security feature is the permanent status message for gateway activities. In addition to sending system messages as SNMP Traps, Syslog messages can also be logged. The administrator can also be informed of certain events by e-mail.

# Application examples



### VPN connection:

High end IPSec implementation with performance features, which are important but not guaranteed in practice: certificate support, RADIUS, IPCOMP, NAT, XAuth and dynamic IP addresses. The VPN gateways permit up to 110 simultaneous VPN tunnels to be licensed. This gives mobile workers with an IPSec client secure access to central company data at any time over UMTS.



### 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 gateway and VoIP connections are prioritised over other data. QoS is therefore an essential function for Voice over IP.



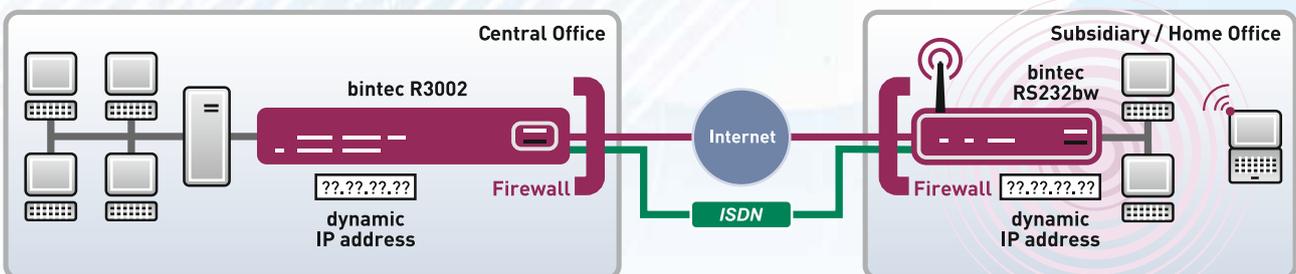
**Device redundancy through BRRP:**

The bintec router redundancy protocol (BRRP) allows two devices to be operated redundantly so that they act as a single device in the local network. If a device or a connection fails, the backup device automatically takes over its tasks. This master backup configuration is fully transparent to the user in the LAN.



**Load Balancing:**

If 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 addresses:**

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 gateways, a VPN connection can also be established with dynamic IP addresses on both sides.

# The models of the new bintec R Series

The new bintec R Series offers a practical range of powerful and, thanks to their comprehensive basic equipment, flexible VPN gateways. The 19-inch metal housing with integrated energy-efficient switched-mode power supply guarantees a long-term reliability in critical corporate applications. This makes the new bintec R Series ideal for use as a VPN gateway, particularly for SMEs and company head offices.

All devices of the new bintec R 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: the VPN gateway can be operated behind one or more, or even different, ADSL,

SDSL, VDSL or cable modems, or has an integrated DSL modem depending on the model. This enables the VPN gateway to be integrated into the widest range of network topologies.

All models in the new bintec R Series are supplied ex works with a licence for 10 hardware-accelerated IPSec tunnels. Up to 100 additional IPSec tunnels can also be enabled optionally if licensed.

Detailed product information can be found in the product data sheets at the following address:

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



## **bintec R1202**

- ▶ 19-inch metal housing, internal switched-mode power supply
- ▶ 5 gigabit Ethernet ports, freely configurable
- ▶ Licence for 10 IPSec tunnels, hardware-accelerated, can be extended to up to 110 tunnels
- ▶ Integrated ISDN interface for remote configuration and ISDN backup (fallback)



## **bintec R3002**

- ▶ 19-inch metal housing, internal switched-mode power supply
- ▶ Integrated ADSL2+ modem, supports Annex B (ADSL over ISDN) and Annex A (ADSL over POTS) with Annex M extension
- ▶ 5 gigabit Ethernet ports, freely configurable
- ▶ Licence for 10 IPSec tunnels, hardware-accelerated, can be extended to up to 110 tunnels
- ▶ Integrated ISDN interface for remote configuration and ISDN backup (fallback)



### **bintec R3502**

- ▶ 19-inch metal housing, internal switched-mode power supply
- ▶ Integrated VDSL modem (asymmetric band plan 998, profiles 8b and 17a) with automatic switching to ADSL2+
- ▶ 5 gigabit Ethernet ports, freely configurable
- ▶ Licence for 10 IPSec tunnels, hardware-accelerated, can be extended to up to 110 tunnels
- ▶ Integrated ISDN interface for remote configuration and ISDN backup (fallback)

*(available from Q3/2010)*



### **bintec R4402**

- ▶ 19-inch metal housing, internal switched-mode power supply
- ▶ 2x BRI and 2x PRI ISDN interfaces = 68 ISDN B channels for ISDN backup, remote access server or leased lines
- ▶ 5 gigabit Ethernet ports, freely configurable
- ▶ Licence for 10 IPSec tunnels, hardware-accelerated, can be extended to up to 110 tunnels



### **bintec R3802**

- ▶ 19-inch metal housing, internal switched-mode power supply
- ▶ Integrated SDSL.bis modem for operation of up to four 2 wire copper lines each with up to 5.7 Mbps throughput (by bundling over IMA up to max. 22.8 Mbps)
- ▶ Operation possible in back-to-back mode: private connection of two LANs
- ▶ 5 gigabit Ethernet ports, freely configurable
- ▶ Licence for 10 IPSec tunnels, hardware-accelerated, can be extended to up to 110 tunnels
- ▶ Integrated ISDN interface for remote configuration and ISDN backup (fallback)

*(available from Q2/2010)*

### **Optional extensions for VPN gateways of the bintec Rxx02 Series:**

- ▶ Licence packet for each 25 additional VPN tunnels, hardware-accelerated
- ▶ Service package with 5 years first class service and preliminary exchange
- ▶ Hot Spot function
- ▶ Cobion Content Filtering

# Software

## bintec XAdmin

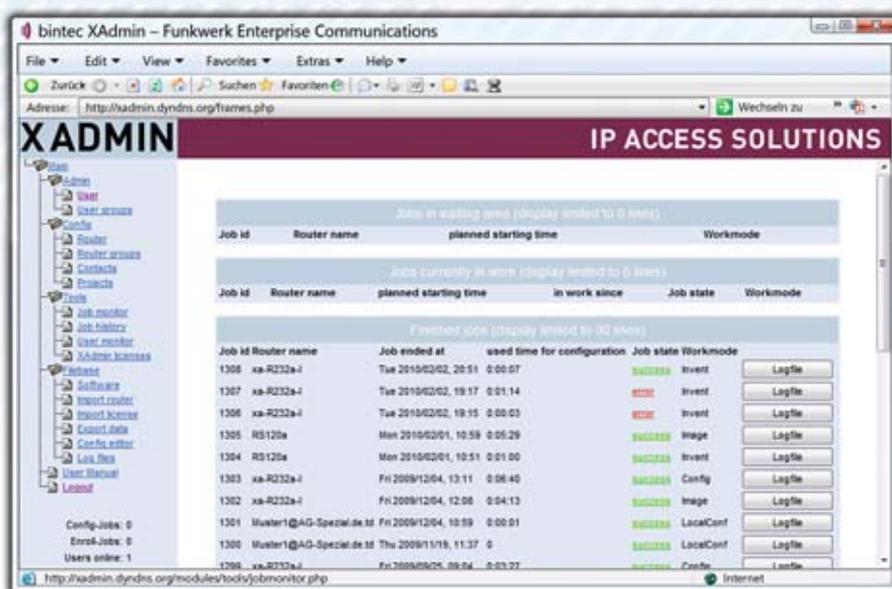
VPN gateways are the first choice for providing a secure and stable connection between company head offices and subsidiaries. The required configuration of the branch's gateways on site would be extremely laborious and uneconomical. bintec XAdmin offers a rapid, secure and convenient solution. With the bintec XAdmin, the system administrator can operate, configure, update and manage remote branch gateways from head office. VPN gateways, 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 gateways 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 gateway 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 VPN gateways of the bintec R 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.funktwerk-ec.com/ipsec\\_client\\_en](http://www.funktwerk-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

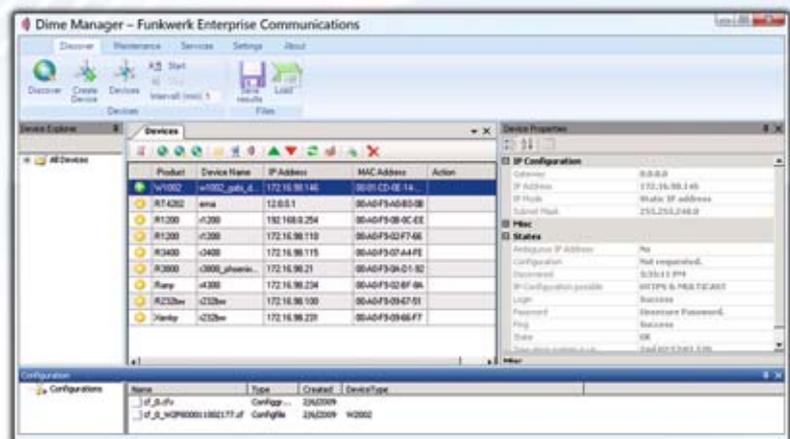
The free DIME Manager was developed for administrators that look after networks with up to 50 devices in the LAN or VPN and offers sophisticated device management for bintec hardware. The software simplifies the management and configuration of gateways and access points either individually or in logical 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 gateways or access points in branches, subsidiaries or home offices are located using device discovery, even via VPN.

The DIME Manager supports all gateways 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.funktwerk-ec.com/dl\\_sw\\_dime\\_manager\\_en.html](http://www.funktwerk-ec.com/dl_sw_dime_manager_en.html)



**Performance features of VPN gateways of the bintec R Series**

	bintec R1202	bintec R3002	bintec R3502	bintec R3802	bintec R4402
<b>Hardware / Interfaces</b>					
10/100/1000BASE-T	5	5	5	5	5
ISDN BRI ports	1	1	1	1	2
ISDN PRI ports	–	–	–	–	2
Internal DSL modem	–	ADSL (2+)	VDSL	SHDSL	–
DSL variants	–	Annex A+B	Band plan 998	8 wire, IMA	–
Serial interface (console)	1	1	1	1	1
19-inch metal housing	•	•	•	•	•
Internal, energy-efficient switched-mode power supply	•	•	•	•	•
<b>Software IP access / routing</b>					
Policy-based routing / NAT	•	•	•	•	•
PPPoE Client / PPPoE Server / Multi Link PPPoE	•/•/•	•/•/•	•/•/•	•/•/•	•/•/•
PPPoA / IPoA / Multi-Link PPPoA	–	•/•/–	–	•/•/•	–
DHCP Client / Server / Proxy	•	•	•	•	•
SIP Proxy / ALG	•	•	•	•	•
Multicast / IGMP v3 / IGMP Proxy	•	•	•	•	•
RIP v1 / v2 / Triggered RIP	•	•	•	•	•
Routing protocols OSPF / PIM	•	•	•	•	•
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	•	•	•	•	•
X.25 over ISDN, X.25 to TCP, XOT, X.25 PAD, TP0 Bridge	opt.	opt.	opt.	opt.	opt.
UPnP	•	•	•	•	•
Load Balancing	•	•	•	•	•
Remote CAPI	•	•	•	•	•
Switch Port Separation	•	•	•	•	•
ISDN Leased Line	•	•	•	•	•
Hot Spot	opt.	opt.	opt.	opt.	opt.
<b>VPN / Security</b>					
IPSec tunnels included	10 tunnels	10 tunnels	10 tunnels	10 tunnels	10 tunnels
Max. number of IPSec tunnels	110 opt.	110 opt.	110 opt.	110 opt.	110 opt.
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	110	110	110	110	110
DynDNS / DynVPN	•	•	•	•	•
NAT / PAT	•	•	•	•	•
Stateful Inspection Firewall	•	•	•	•	•
IP packet filter	•	•	•	•	•
Content Filtering	opt.	opt.	opt.	opt.	opt.
Email alert	•	•	•	•	•
Local Services Access Control	•	•	•	•	•

	bintec R1202	bintec R3002	bintec R3502	bintec R3802	bintec R4402
<b>Backup</b>					
Device redundancy (BRRP)	•	•	•	•	•
Backup ISDN / analogue / GSM / GPRS	•/•*/•*/•*	•/•*/•*/•*	•/•*/•*/•*	•/•*/•*/•*	•/•*/•*/•*
<b>Management</b>					
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 modem and cable required



## The new **bintec R Series**

**The tried and trusted VPN gateway family  
—now in a 19-inch housing with integrated  
power supply and gigabit Ethernet**



Everything that you need for professional VPN access: The tried and trusted VPN gateways of the bintec R Series now offer several detailed improvements:

- ▶ High-quality 19-inch metal housing, integrated switched-mode power supply
- ▶ 5 Gigabit Ethernet interfaces (1000BASE-TX)
- ▶ 10 IPSec tunnels included, can be extended to 110 tunnels
- ▶ Simple configuration and initial operation
- ▶ bintec Extended Routing / Extended NAT (ERN)
- ▶ Load balancing and device redundancy

bintec R Series: The optimum VPN solution for SMEs and company head offices seeking a long-term, secure, stable and flexible solution, which adapts to the requirements of corporate communication. 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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