bintec R230a | R230aw

ADSL router with SIP proxy and IPSec

R230a | R230aw



Approval and homologation in Switzerland

The bintec R230a / R230aw are the successor products of X2301 / X2301w and in addition both models offer the same feature set available in their predecessors. The bintec R230aw also includes WLAN function. A memory extension and new features in the software release for these devices transform them into flexible IP access routers with an integrated ADSL modem (Annex A) and with a 4-port switch.

ADSL2+ enables a high-performance WAN connection and allows download rates of up to 24 Mbps. The WLAN function provides for exceptional flexibility when using the routers in wireless environments. An SIP proxy regulates transparent communication to SIP providers and makes it possible to use the routers in VoIP scenarios, such as for Internet telephony.

The Application Level Gateway makes it possible for IP telephones to establish a connection to SIP providers in the LAN, without compromising the security of the WAN connection. Thus, the SIP proxy monitors the signalization process between the IP phone and the SIP provider and performs all the necessary NAT and firewall procedures dynamically for the duration of communications. It is also possible to easily configure and use several different SIP providers on the router.

The R230aw's wireless interface transmits the data at a maximum rate of 54 Mbps (802.11g) and is compatible with the 802.11b 11 Mbps version in the same frequency range. Encryption via the WLAN interface can use WPA and WPA2. Multi-SSID can be used to define virtual WLAN interfaces, making it possible to establish different access rules for the WLAN, e.g. to log on internal employees and external visitors. The HTTP Wizard can be of valuable assistance in configuring the WLAN component.

Both routers come complete with powerful IPSec implementation and are already equipped with two active VPN tunnels straight from the factory (with Release 7.6.1 or higher: 5 IPSec tunnels, optional up to 5 PPTP tunnels). In addition to encryption with AES or 3DES, both routers offer authentication via certificates or pre-shared keys. To optimize the encrypted data stream, IPComp can be used to compress it. The dead-peer detection function makes it possible to check the availability of the tunnel end point and reconnects the tunnel if it is inactive. Along with NAT Traversal, the integration of Radius or Tacacs+ for authentication purposes is also supported.

In order to be able to find partners despite dynamic IP addresses, the routers support the DynDNS function. The implementation is compatible with leading European DynDNS suppliers and seven providers are already pre-installed. The Stateful Inspection Firewall (SIF) offers effective protection against attacks from the Internet through dynamic packet filtering. Using the firewall is made considerably easier by the wide range of pre-configured services. The router security functions are rounded out by optional content filtering*, which classifies all outgoing Internet queries and makes it possible to reliably filter out any undesirable contents.

Both models can work not only as PPPoE clients but as PPPoE servers as well, which makes it possible to allocate different privileges to individual users in the network. In combination with the router scheduling function, specific periods of times can be defined during which users are allocated individual privileges,

such as Internet access. The router VLAN function enables a division of the users into virtual sub-networks to offer even greater security.

Inexperienced users can take advantage of an HTTP Wizard to configure the routers; the Wizard guides them step-by-step through the most important basic settings. More experienced users can opt for the HTML configuration interface. The SSH-encrypted communication to the router provides for absolutely secure configuration.

* Content filtering is subject to a fee and available in a 30-day trial version free of charge.

Versions

Feature	Description
R230a	without WLAN
R230aw	incl. WLAN

Highlights

Feature	Description
Integrated ADSL modem	ADSL2 / ADSL2+ with downloads up to 12 / 24 Mbps
Application Level Gateway	SIP proxy
Multi-SSID	Virtual WLAN interfaces for individual access
IPSec	With AES, certificates, IPComp, NAT Traversal, RADIUS
DynDNS	Router can still be reached over the Internet in spite of dyn. IP address
RADIUS, TACACS+	Secure authentication
VLAN	Secure separation of network segments
Event Scheduler	Time-based execution of commands
Stateful Inspection Firewall	connection based firewall
Content filtering	30 days test license
PPPoE Server	Different rights for LAN user adjustable
SSH login	Encrypted configuration session
Configuration Wizard	Configuration assistant for HTTP

Wireless LAN

Feature	Description
Standards	IEEE802.11b resp. IEEE802.11g
802.11i	802.1x/EAP-MD5, 802.1x/EAP-TLS, 802.1x/EAP-TTLS, 802.1x/EAP-PEAP
Multi SSID	Several service sets per radio in AP mode.
WEP 64/128	WEP 64 (40 Bit), WEP 128 (104 Bit)
WPA / WPA2	WPA Enterprise Mode; WPA PSK Mode; WPA2 Enterprise Mode; WPA2 PSK Mode
Channels	13 channels (Europe) / 11 channels (USA)
Transmission Capacity	max. 100 mW (20 dBm) e.i.r.p
Receiver Sensitivity IEEE802.11b	11 Mbps:-82 dBm; 5,5 Mbps: -87 dBm; 2 Mbps: -91 dBm; 1 Mbps: -94 dBm
Receiver Sensitivity IEEE802.11g	54 Mbps:-65 dBm; 48 Mbps:-66 dBm; 36 Mbps:-70 dBm; 24 Mbps:-74 dBm; 18 Mbps:-77 dBm; 12 Mbps:-79 dBm; 9 Mbps:-81 dBm; 11 Mbps:-80 dBm; 5,5 Mbps: -83 dBm; 2 Mbps: -84 dBm; 1 Mbps: -87 dBm

DSL Interface

Feature	Description
ADSL	G.dmt over analog lines (ITU G.992.1 Annex A, POTS), G.Lite (ITU G.922.2)
ADSL2 / ADSL2+	with downloads up to 12 / 24 Mbps
High-speed Internet	PPPoA (RFC 2364) and PPPoE (RFC 2516)
ATM	AAL5 as Layer 1 protocol, PVCs, RFC 1483 encapsulation (LLC- or VC-multiplexed), support for at least two simultaneous services, 5 or more simultaneous VC connections
ATM	Support of several VPI/VCI, line monitoring facilities through OAM F4/F5 protocol elements
ATM - VBR3	available

Security

Feature	Description
NAT/PAT	Network & Port Address Translation / Stateful Packet Inspection: Isolation of complete network from public access
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
Content filtering	30 day evaluation licence
VLAN	Network nodes in different network segments behave like a arbitrary group connected to the same network segment
VPN - IPSec	Inclusive, with a max. of 5 (from rel. 7.6.1 onwards) simultaneous tunnels
VPN - IPSec	Powerful encryption up to 256 bits (AES, 3DES, DES, CAST, Blowfish, Twofish)
VPN-IPSec DPD	Dead Peer Detection for IPSec tunnel
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 authentication

Maintenance and Service

Feature	Description
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
Trace / debugging / monitoring	Ethernet traces
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)
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
Application Level Gateway	configurable as SIP and MGCP proxy
IP load balancing	Bandwidth management
PPP	Authentication mechanisms (PAP, CHAP, MS-CHAP, MS-CHAP v2), standard PPP, dynamic IP address assignment (server and client mode)
PPPoE	Point-to-Point Protocol over Ethernet (Client and Server) for high-speed Internet access over ADSL (RFC 2516)
LAN user - ISDN WAN partner	Max. 5 WAN and 10 LAN partners (recommended)
Dyn. IP addresses	Simple Internet access without fixed IP addresses
DynDNS	Router can still be reached over the Internet in spite of dyn. IP address
Funkwerk Access Point Discovery	detection of configuered and unconfigured Funkwerk Access Points in the LAN
IP accounting	Source, destination, port, interface, packets/bytes counter
Event Scheduler	Budgets based on data volume or based on time
Connection time out	Short hold enables automatic call clearing

Hardware Features

Feature	Description
Processor / memory	TI Processor, 8 MB Flash, 32 MB RAM
ADSL	RJ11 port for connections to splitter
ADSL chipset	Texas Instruments chipset for ADSL modulation
4-port switch	4-port autosensing 10/100 Mbps Ethernet switch
WLAN	Internal radio modul, 2,4 GHz Band, 2 external antennas (Antenna Diversity for 802.11b)
Console	Serial console port
Power supply	power supply with connecting cable to router; R230aw: 12 V 800 mA DC; R230a: 12 V 500 mA DC
Status LEDs	Power, Status, 4 x 10/100 BT, WAN
Housing	Metal housing
Fanless design	Long lifetime
Dimensions	158 mm x 25,7 mm x 99,5 mm (W x H x D)
Weight	Approx. 450 g