Specification:

Product Model

BA RG 21	Two telephony ports and one LAN port

Security

Packet filter	Capable of blocking certain types of traffic
VLAN	Separates data, management and telephony traffic
Authentication per registration	H.225.0.0 RAS

Telephony and Fax Services

G3 Fax	T.38
Calling number identification	FSK, DTMF
3rd party initiated pause and rerouting	External rerouting of media stream during speech, e.g. for pre-paid calling card
DTMF	In-band and out-band using H245 and H225
Class 5 features	3-party conference calls, enquiries, call waiting, call hold and alternation between calls

Voice Quality

Voice Codecs	G.711, G.729ab (G.723.1)
Internal delay	5-10 ms delay for decoding/encoding/AEC/internal operations
General	Adaptive jitter buffer, echo cancellation, speech sampling 10-60 ms, silence suppression with comfort noise

Quality of Service (QoS)

1. QoS Marking:	
DiffServ	Level 3 (IP) mechanism for handling QoS flexibility
802.1p tagging	Level 2 (Ethernet) mechanism for marking priority on packets
2. Advanced Queuing	Multi queue mechanism to differentiate between voice and IP traffic

Flexibility

Daisy chaining	Up to 3 residential gateways connected in series.
Number of telephones	Up to 5 standard analog phones connected in series to each telephony port
Regional telephony parameters	Telephony signals, tones and cadences
MAC-address learning	Up to 8 MAC-addresses connected to the LAN port
MAC-address handling	MAC-address list

Reliability and Availability

MTBF	> 300,000 hours
Configurable 1st and 2nd gatekeeper	High availability through gatekeeper backup

Future Features

Enhanced QoS support with the BreezeACCESS wireless system (integrating VoIP sessions from the residential gateway into the ACSE BreezeACCESS protocol).

Protocols and Standards

BreezeACCESS RG complies with the following standards:
IPv4, TCP, UDP, RTP, DHCP, RTCP, SNMP,IEEE 802.1D, IEEE 802.1Q, IEEE 802.1P, IEEE 802.2, IEEE 802.3X,H323v2, G711, G729ab, (G723.1), G.165, G.167, G.168, T.38, G3, FSK and DTMF.

Regulatory Compliance

EU Directives	Low Voltage Directive (LVD) 73/23/EEC,
(EMC) 89/336/EEC 73	Electromagnetic Compatibility (EMC) Directive 89/336/EEG
Safety	EN 60950 (2000), CSA C22.2 No.950-95/UL 1950 3rd Edition
Emission	EN 55022:1998 Class B, EN 61000-3-2:1995, Harmonics; EN 61000-3-3:1995, Flicker; FCC part 15 (1998) Class B, AS/NZS 35481995)
Immunity	EN 55024:1998

BreezeACCESS RG

Achieving voice harmony, with feature-rich telephony

The BreezeACCESS RG system together with wireless broadband networks, enables Operators and Service Providers to deliver IP-telephony and secure, high quality Ethernet access to residential customers and enterprises.

BreezeACCESS RG has been developed to meet the needs of small and medium customers for IP-telephony, fast Internet and a range of other broadband services.

Delivering high quality IP telephony to all networks
Priority mechanisms, on both the Ethernet and IP level, enable BreezeACCESS RG to deliver carrier grade voice quality, using either narrow or wideband speech CODECs. Supporting G3 fax and Class 5 services, such as 3-party conference calls and call waiting, external Class 5 services, provided by the Operator's telephony system, can be easily activated and deactivated.

Cost-effective and easy IP telephony services
By connecting analog telephones or G3 fax machines to BreezeACCESS RG, users can avoid the need for costly IP telephones. Up to five telephones can be connected to each of the two telephone ports, and by daisy chaining BreezeACCESS RG units, operators can offer users, for example small offices, more than two telephone numbers.

Always-on broadband access with peace-of-mind
Network security is a major concern with always-on broadband connections. Offering peace-of-mind and security, the PipeLock™, which features a built-in packet filter, enables users to simply disconnect and connect all traffic between the network and the computer, without affecting the telephone service.

Simplicity through remote management
The plug and play BreezeACCESS RG features an Element Manager, designed for remote management, configuration and software upgrades and simplifies the management of Customer Premises Equipment (CPE) for Enterprises, Service Providers or Operators.

Perfect solution for BWA networks
Special adaptation to wireless conditions enables the BreezeACCESS RG to work with multiple wireless networks to deliver flawless and consistent voice quality over the air. In addition, BreezeACCESS RG complies with existing standards, such as SNMP and H323v2/4.

BreezeACCESS RG Product Highlights

BreezeACCESS RG contains numerous features and benefits, including:

- **Two standard telephony interfaces (POTS)**
- **Support for Class 5 telephony services, such as call waiting, 3-party conference call**
- **Plug & Play operation (with BA-RG Element Manager)**
- **Authentication of BA-RG before providing voice services**
- **Light firewall and VLAN filtering**
- **Standard 14.4 Kbps G3 fax over T.38 protocol support**
- **QoS support for voice and data applications**
- **Remote management of multiple units**
- **PipeLock™ for enhanced, simple user security**
- **Full compatibility with BreezeACCESS, BreezeNET Pro.11 and BreezeNET DS.11**