

Voice Gateway

Release Note



July 2005

P/N: 214149

Introduction

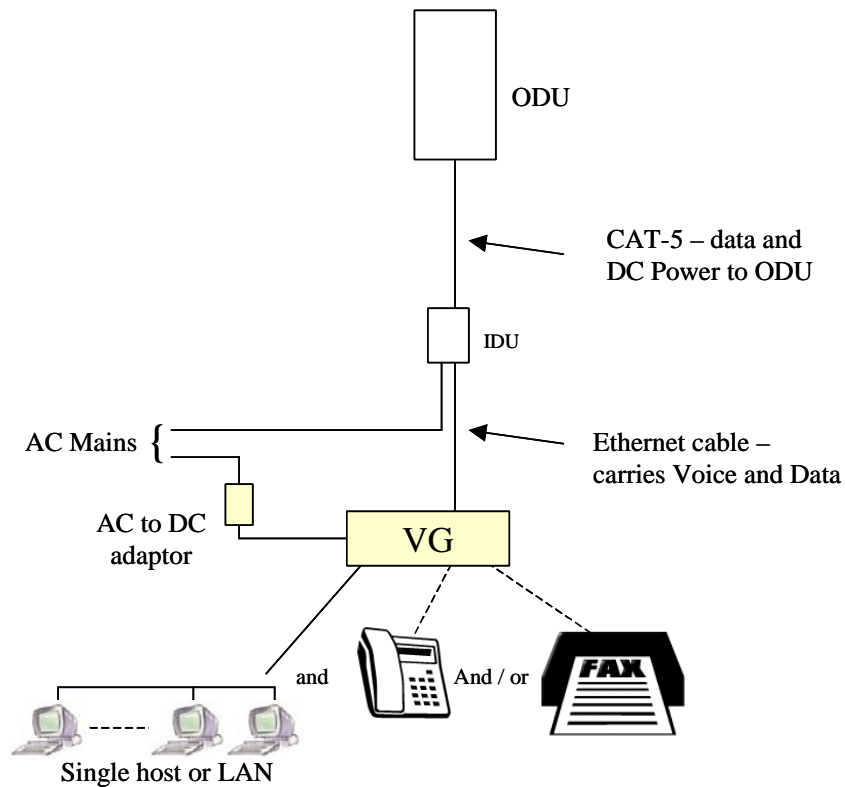
The Alvarion Voice Gateway is a VoIP Gateway that, when used in conjunction with a BreezeMAX or a BreezeACCESS VL CPE, allows the provisioning of voice and high speed data services to the broadband wireless subscriber.

Alvarion offers currently two variation of the voice gateway:

- **Single Phone** - one voice and one data connections
- **Dual Phone** - two voice and one data connections

The Voice Gateway supports the **SIP** signaling protocol for voice. **POTS** telephone equipment and **G3 fax** machines are supported using **RJ-11 port(s)**.

Standard 10/100BaseT Ethernet port connects to the user's data equipment, providing bridging functionality and supporting **VLAN**.



Voice Gateway Configuration

Software version:

The Voice Gateway is released with version: Ver. 180. Do not use the gateway with any software version earlier than 180.

Power supply note:

The Voice Gateway has its own AC to DC power adaptor (see figure above) that is connected to the AC Mains supply. This is in addition to the CPE's indoor unit (IDU) that is also connected to the AC Mains.

DRAP (Dynamic Resources Allocation Protocol)

Alvarion's Voice Gateway has an important advantage over other off-the-shelf gateways due to the DRAP mechanism that it is based on.

DRAP is a protocol that is used between the Voice Gateway and the BreezeMAX base station (DRAP is also on BreezeACCESS VL roadmap for H2 2005). When the DRAP is enabled the following take place:

- Automatic Voice Gateway registration
Using DRAP each Voice Gateway is automatically located and registered with the base station.
- Efficient dynamic allocation of voice resources (not relevant for BreezeACCESS VL)
The Voice Gateway uses DRAP to request from the base station the exact amount of capacity needed for the upcoming voice or fax session. The base station allocates this resource in the wireless domain on a per-session basis and releases it at the end of the session.
- Limitation of the number of voice calls
The DRAP is used (in the base station) to limit the number of allowed simultaneous voice calls per sector.
- Management from the AlvariSTAR (will be available from Alvaristar ver 2.6)

More information about the DRAP can be obtained from the BreezeMAX Ver 1.5 Release Notes Document.

Important Note:

The DRAP is currently supported only on the BreezeMAX (Ver 1.5 and up). In the future it will be supported on the VL platform also. Meanwhile, when using the Voice Gateway on the BreezeACCESS VL, please disable the DRAP option.

INI Files:

A special configuration file (called INI file) may be used to configure local country related requirements (local telephony parameters). The default setting of the Voice Gateway will fit in most situations, but in rare cases, Alvarion will supply a special INI File to fit special local requirements. Please contact customer service on this subject if needed.

Voice Gateway - Main Features

Telephony and fax services:

- VoIP Protocol: SIP
- Internal Class 5 services:
 - Call Waiting
 - 3-party call
 - Call alteration
 - Unconditional call forward
 - Differentiated ringing tones, ringback, busy, alarm
- G3 Fax (T.38)
- Calling number identification: FSK, DTMF

Security:

- VLAN - separately for data, management and telephone traffic

QoS for real-time services:

- Speech Codecs: G711, G729ab,
- Class of Service: Level 2 (Ethernet) mechanism for handling QoS
- General:
 - Adaptive Jitter buffer
 - Echo cancellation
 - Adjustable speech sampling
 - Silence suppression with comfort noise

Flexibility & Service differentiation:

- Daisy chaining: up to 3 Voice Gateways daisy chained (connected in series)
- Number of telephones: up to 5 analog telephones connected in series to the telephone port
- Regional Settings Properties: telephony signals, tones and cadences

Protocols and Standards:

- IPv4, TCP, UDP, RTP, DHCP, RTCP, SNMP
- IEEE802.1D, IEEE802.1Q, IEEE802.1P, IEEE802.2, IEEE802.3
- ICMP, HTTP, TFTP, NTP, SIP
- G.711, G.729ab, G.165, G.167, G.168
- G3
- FSK, DTMF

Compatibility and Interoperability

BreezeMAX Compatibility:

The Voice gateway is used only in conjunction with the BreezeMAX CPE-IDU-1D and CPE-ODU.

DRAP functionality is supported only with BreezeMAX version 1.5 and up.

For earlier BreezeMAX versions (earlier than 1.5) the voice gateway can be used without the DRAP (similar to the use of any other off-the-shelf gateways)

BreezeACCESS VL Compatibility:

The Voice Gateway can be used in conjunction with the BreezeACCESS VL CPE.

DRAP functionality is NOT supported on BreezeACCESS VL. Please disable this feature in the Voice Gateway when it is used in the BreezeACCESS VL.

Documentation update

The following documents are related specifically to the Voice Gateway:

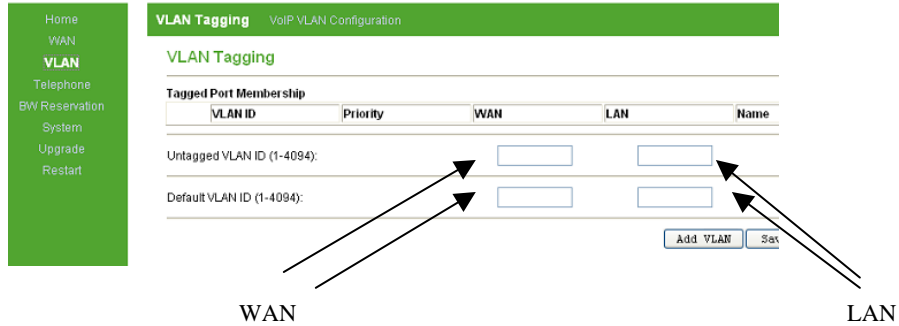
- Alvarion Voice Gateways – System Manual
- Voice gateway data sheet
- Voice Gateway Commissioning – Technical Application Notes Document

These documents can be found in the Alvarion web site.

Known Limitations

1. SNMP is not supported (the unit can be managed through the Web Interface)
2. When working in DRAP mode with voice service and there is a need to perform remote firmware upgrade to that Voice Gateway, redefine first DRAP messages timeout retries from 4 to 1200 (1 hour timeout). After upgrade completion return the timeout to its original value.
3. DRAP enabled Voice Gateway can not be connected behind a router (including Alvarion's Network Gateway)
4. Voice calls can not be established between daisy chained Voice Gateways.
5. Bi-Directional FTP traffic on the Voice Gateway can not exceed 1.5Mbps
6. 3-way call and call waiting do not work when 2 Voice Gateways are involved and at least one of them has two telephone ports.
7. IP address 192.168.1.1 is reserved for the LAN port of the voice gateway, do not use this IP address for any of the hosts that are connected to the Voice Gateway's LAN.

8. In the WEB management's "VLAN Tagging" page, there are two fields whose names are missing. The left field is for WAN and the right field is for LAN.



9. When sending an inquiry to the BreezeMAX, through SNMP or Telnet, about a VG-1D1V that is connected to one of the CPEs, the BreezeMAX will return a type "Unknown" for this VG.
10. When using the Voice Gateway with BreezeMAX ver 1.5 and the DRAP is active the Call waiting feature is not functional.
11. Fax works only when T38 is enabled.

How to order

New Part Number	Description
735403	ALVR-VG-1D1V-SIP
735404	ALVR-VG-1D2V-SIP