

## 4/8-Port VoIP Gateways

### Combo FXS/FXO Internet Phone Connection

- 2 to 6 FXS Ports Analog Phone Connection to Internet
- 2 to 4 FXO Ports Remote IP Phone Connection to Local Analog Phone Lines
- Direct Internet Phone Call Without SIP Proxy
- Voice Compression Format to Save Internet Bandwidth
- Real-Time/Toll-Quality Voice
- Integrated 4-Port Switch/Broadband Router

#### FEATURES

##### Internet Telephone

- 2 to 6 FXS Ports
- 2 to 4 8 FXO Ports
- Flexible Connection to Company IP Network, PSTN Lines, PBX, Analog Phones/Fax
- Compatible With SIP Services
- Guaranteed Toll-Quality Voice Even in Busy Network
- Voice Compression Format to Save Internet Bandwidth

##### Call Features

- Call Hold, Wait, Forward, Transfer
- Speed Dialing, Repeat Dialing, 3-Way Conference
- Greeting Message, Caller ID Delivery
- Easy Tracking With Call Detailed Records

##### WAN/LAN Connection

- 10/100Mbps Ethernet WAN Port
- 4 10/100Mbps Ethernet LAN Ports
- WAN Connection Supports PPPoE, DHCP Client, DDNS

##### Configuration/Upgrade

- Easy Configuration by IVR or Web-Based GUI
- Web-Based Firmware Upgrade

##### Built-in Router/Firewall

- DHCP Server for Automatic IP Assignment
- IP Sharing for Multiple Users Internet Access Via Single IP
- NAT Firewall, DoS Attack Prevention

The DVG-7022S/7044S/7062S VoIP gateways present an ideal Internet telephone solution for business use. These gateways convert voice traffic into data packets for transmission over the Internet, and vice versa. Equipped with both FXS and FXO types of phone ports, these gateways provides flexible and convenient connection to PSTN lines, PBXs and standard phones for voice and fax over any IP network. They combine the industry's latest Voice over the IP network technology with advanced communication features, and are fully compatible with SIP Internet phone services. Now, from a single device, corporate, small, or remote offices can access Internet telephony services, eliminate toll charges and route calls to and from the PSTN, Internet, or LAN.

*Up to 6 FXS Ports.* Depending on the model, users can have up to 6 FXS ports for simultaneous Internet phone connections. Plug in regular phone sets to these ports, and they instantly become Internet telephones. For businesses with frequent needs for long-distance and international phone calls, these gateways provide great cost savings and convenience, while keeping configuration and maintenance to a minimal level.

*Up to 4 FXO Ports.* In a remote IP phone to local analog phone line application, a branch office can take in IP voice calls from a head office. Though the FXO ports, the gateways route them to local destinations equipped with only analog phones. The long distance calls are sent through the Internet without any phone charge, and the remote office pays only for the local analog phone time. The gateways connect analog callers to the IP network without involving operators or incurring toll charges from telephone companies

*Guaranteed Voice Quality.* The gateways deliver clear sound, voice and reliable fax calling through implementation of internationally recognized standards for voice and data networking. They incorporate Quality of Service (QoS) functions to ensure that voice received through the Internet is the same as or even surpasses that received on the ordinary phone.

*Convenient Call Features.* The gateways support extensive call features, allowing the service providers to offer these functions to their subscribers. Provided that the telephone sets at the end-users side support these functions, callers can take advantage of these convenient features. Configuration of individual phone connection is easy, using the multi-language Interactive Voice Response (IVR) or the web-based user's interface.

*Shared Broadband Internet Connection/Integrated 4-Port Switch.* All gateways in this series provide a convenient router function to permit office users to share the Internet broadband line. With 4 integrated Ethernet ports, office computers can readily connect to these gateways and use their built-in NAT/DHCP server functions for automatic logon to the Internet.

DVG-7022S  
4-Port Gateway



DVG-7044S  
8-Port Gateway



DVG-7062S 8-Port Gateway



## Technical Specifications

### VoIP

#### Analog Interface

- DVG-7022S: 2 RJ-11 FXS ports, 2 RJ-11 FXO ports
- DVG-7044S: 4 RJ-11 FXS ports, 4 RJ-11 FXO ports
- DVG-7062S: 6 RJ-11 FXS ports, 2 RJ-11 FXO ports
- Loop start signaling protocol
- Reversed polarity detection

#### Voice Features

- SIP (RFC3261) compatible
- SIP methods: ACK, BYE, CANCEL, INFO, INVITE, NOTIFY, OPTIONS, PING, PRACK, PUBLISH, REFER, REGISTER, SUBSCRIBE, UPDATE
- SIP Extension: Session Timer (UPDATE or re-INVITE), Proxy-Require, P-Asserted (RFC3325), MWI (RFC3842)
- Voice Codec: G.711 a/u law, G.726, G.729A, G.723.1
- CNG (Comfort Noise Generation)
- VAD (Voice Activity Detection)
- Silence suppression/detection
- G.165/G.168 echo cancellation
- Adaptive Jitter Buffer and programmable Gain Control
- In-Band DTMF, Out-Of-Band DTMF relay (RFC2833, SIP INFO)
- Multiple SIP Proxy server entries with failover mechanism.
- T.30 (G.11)/Real time T38/Secured T.38 FAX relay
- DTMF, FSK (Bellcore & ETSI) Caller ID detection and generation
- Caller ID Restriction (CLIR) support
- FXO hang-up detection: Busy Tone cadence auto learning/detection

#### Failsafe Mechanism (FXS Relay to PSTN)

- Network failure
- Service unavailable
- Power loss
- Group hunting function

- Digit Map
- E.164 Numbering & ENUM support
- Recordable greeting message (for FXO ports)
- Hot-Line, Warm-Line support

#### Call Features

- Call Hold, Call Waiting, Call Pickup
- Call Forward: Unconditional, Busy, No Answer
- Call Transfer: Unattended, Attended
- Speed Dialing, Repeat Dialing, Three Way Calling (Media Server required)

### IP Network

#### WAN Port

- RJ-45 10/100BASE-TX Ethernet port supporting Nway auto-negotiation, auto-detection/adjustment of MDI/MDIX
- Static IP, PPPoE, PPTP, Bigpond Cable and DHCP address assignment support
- QoS: IP TOS (IP Precedence), DiffServ, Port Priority
- NAT traversal: STUN, UPnP, OUTBOUND PROXY
- Pass-through NAT
- NAP: (Network Time Protocol RFC 1305), accepts up to 3 Time Servers Time Zones
- DDNS: DynDns.org, TZO, PeanutHull, 3322.org.
- RTP Packet Summary: packet sent, packet received, packet loss
- MAC address clone

#### LAN Ports

- 4 RJ-45 10/100BASE-TX Ethernet ports supporting NWay auto-negotiation, auto-detection/adjustment of MDI/MDIX
- NAT/PAT, DHCP Server, DMZ, Virtual Server, MAC/IP/port-based filtering
- QoS: port based priority (Hi/Low) with rate limit
- Router or Bridge Mode

### DoS Prevention

- Attack prevention based on TCP, UDP, IP, ICMP protocols
- Prevents SYN Flood, IP Spoofing, Ping of Death, Tear Drop DoS attacks

### Operation & Maintenance

#### Management/Configuration

- Web-based & Telnet user interfaces with password authentication
- Configuration, port status, registration status, hardware/software information in web-based & Telnet UI
- IVR (Interactive Voice Response) configuration engine
- Reset button (factory default setting restoration)
- Optional Auto Provisioning Server (APS) for mass deployment with less dispatch
- SNMP v.1/v.2c support
- Ping test

#### Diagnostic LEDs

- P1 to Pn (for FXS ports)
- L1 to Ln (for FXO ports)
- WAN (for WAN port)
- LAN 1 to LAN 4 (for LAN ports)
- Run
- Power
- Alarm

## Physical & Environmental

### Power Output

DC 12V

### Power Input

Through AC 100V to 240V 50/60Hz power adapter

### AC Power Consumption

- DVG-7022S: 6.0 watts (off peak), 10.0 watts (peak)
- DVG-7044S: 8.9 watts (off peak), 15.1 watts (peak)
- DVG-7062S: 9.8 watts (off peak), 18.3 watts (peak)

### DC Power Consumption

- DVG-7022S: 4.8 watts (off peak), 8.4 watts (peak)
- DVG-7044S: 7.2 watts (off peak), 13.2 watts (peak)
- DVG-7062S: 8.4 watts (off peak), 15.6 watts (peak)

### Dimensions

- DVG-7022S: 202 x 172 x 35 mm
- DVG-7044S: 302 x 179 x 45 mm
- DVG-7062S: 302 x 179 x 45 mm

### Dimensions

- DVG-7022S: 430 grams
- DVG-7044S: 1.2 kg
- DVG-7062S: 1.2 kg

### Operating Temperature

0° to 45°C

### Storage Temperature

-25° to 75°C

### Operating Humidity

Up to 90%RH, non-condensing

### Certification

- FCC Class B
- CE

### Safety

- UL



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