

# WellGate 2680

## 8-Port FXO SIP IP Gateway



WellGate 2680 front view



WellGate 2680 rear view

### **SIP Proxy Redundancy : Support Primary and Secondary Proxy**

### **SIP Trunk busy forwarding**

### **Auto HTTP and FTP Provision**

### **Flexible digit manipulation and Dial Plan**

### **Rich FXO telephony signal to adapt a variety of PSTN and PABX interface**

### **FXO LED flashes to indicate no Line install correctly**

### **Redundant Firmware Image avoid from boot code crashing**

WellGate 2680 is an 8-Port FXO gateway with SIP protocol IP device which allows to connect 8 lines of analog telephone extension of PABX or PSTN line to make or receive VoIP call over Internet or VPN network through Internet Telephony service provider. This device is suitable for office use to connect local PSTN line or PABX extensions to IP Network, for instance, IP-PBX application to access local PSTN line. To work with remotely FXS gateway ( such as Wellgate 2608 or WellGate 2504 ), WellGate 2680 extends local PSTN line or PABX extension over IP network to remote office or users ( Peer to Peer mode with Hotline ).

#### **Rich Telephony Features**

WellGate 2680 has 8-Line FXO ports. Each Line can be configured to meet different countries Telephony requirements. For Instance, AC Impedance, Ring Frequency, Ring Voltage, Distinctive Ring, Ring Cadence, different Disconnect Tone (Level, Frequency, Cadence), Hook Flash detection time, DTMF/FSK Caller ID detection, Polarity Reversal and Current Drop Time (Open Loop Disconnect) detection. FXO interface has highly compatibility with different countries Telephony interface, but also support existing digital PBX analog interface. You don't need to worry about the interoperability with existing PBX or Telco equipment.

#### **Rich Digit Manipulation Features**

Flexible digit manipulation processes Matched Prefix code, Minimum digit length, replace digits at start and stop digit position. This digit manipulation feature applies to FXO dial out to PSTN or IP incoming call or pre-program up to 4 groups of digit manipulation processors. Each group can define up to 50 indexes to meet your variety of dial purpose.

#### **Flexible Dial plan**

WellGate 2680 provides flexible Dial Plan from FXO to IP Trunk (SIP Softswitch). Dial Plan is to configure in what condition the FXO incoming digits can be sent out to IP network during dialing. Dial Rule is able to detect the prefix code and maximum digits reached and then dial automatically.

#### **Call Routes Plan**

Route Plan is to configure receiver IP address at peer to peer ( P2P ) mode when dialing from FXO interface. When dialing

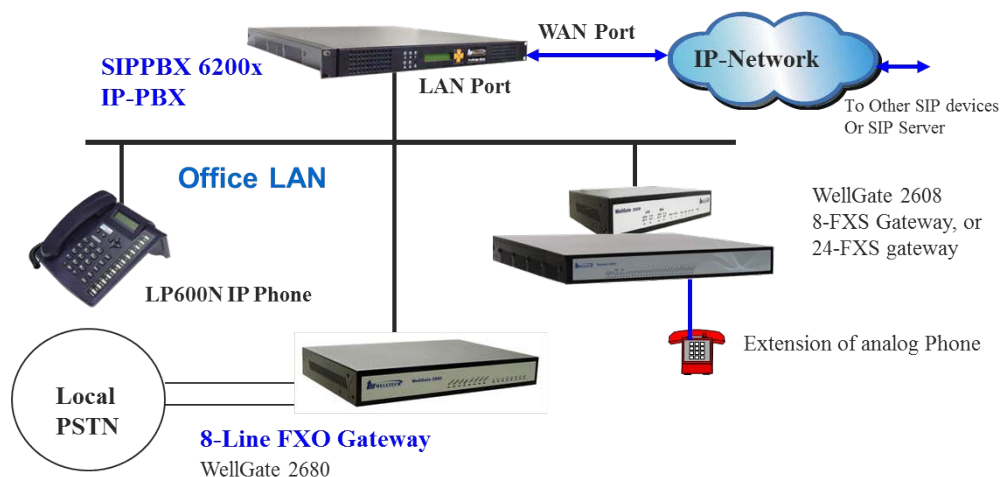
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prefix code and Minimum length was matched at this plan, the IP address was sent to receiver site directly. Besides, there are four groups of digit manipulation can be applied at Call Routes plan before sending as well. Each Routes plan has an Backup Routes P2P IP address in case of original one was failed. Up to 50 entries of Call Routes List are supported to meet your application.

### Suit to IP Telephony Service Provider

WellGate 2680 is a FXO IP Gateway to connect with existing analog telephony extension of PABX or PSTN line to make/receive IP calls. Its Simple, Slim and Compact design and easy installation allow office users or SOHO users to make or receive call just like an legend telephone call but less cost. It is compatible with IP-PBX to bridge between local PSTN lines and IP Phone or IP-PBX extension or remotely IP devices.



### SPECIFICATION

#### Interface:

Ethernet port (RJ-45, 10/100 base-T)  
1-WAN port, connect to IP Network  
4-LAN port connect to PC to configure  
Support Bridge and NAT mode  
Telephony port (RJ-11 x 8 pcs)  
DC +12V power input Jack  
Reset key to return Factory setting  
LED Indicator for System, SIP and FXO status  
(LED flashes when line is disconnected)

#### IP Network connection

IPv4 (RFC 791)  
Configurable WAN HTTP port 80, 1024 to 65535  
Configurable WAN HTTPS port 443, 1024 to 65535  
IP/ICMP/ARP/RARP/SNTP  
Static IP  
DHCP Client (RFC 2131) at WAN port  
DHCP Server at LAN port  
Specify maximum DHCP Leased Time  
NAT Server (RFC 1631)  
PPPoE Client  
DNS Client  
Auto or Manual configure DNS Server IP address

Behind NAT, use DMZ for NAT traversal  
Use STUN for NAT Type 1 and 2 for NAT Traversal  
SNTP with time zone setting  
TCP/UDP (RFC 793/768)  
RTP/RTCP (RFC 1889/1890)  
IPV4 ICMP (RFC 792),  
TFTP Client  
QoS : DiffServ (DSCP RFC 2475), ToS (RFC791, 1394)  
Configure DSCP on RTP and SIP signal separately  
Configure ToS on RTP and SIP signal separately

#### SIP Protocol :

RFC3261 compliance  
Support local SIP and RTP port configure from 1 to 65535 at each line and SIP trunk.  
SIP UDP Protocol  
SIP Session keep mode : Disable, Empty packet, SIP options, SIP register and SIP Ping ( Nortel ).  
Support SIP HOLD Type  
SIP Session Timer (RFC 4028)  
MD5 Digest Authentication (RFC2069/RFC2617)  
Reliability of provisional response PRACK (RFC3262)  
Early/Delay Media support  
Offer/Answer (RFC3265)

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## 8-Port FXO SIP IP Gateway

Generate Ring Back tone or Custom Tone after received SIP message 100 trying

Event Notification (RFC3265)

REFER (RFC3515)

Support Outbound Proxy

Support Primary and Backup SIP Server

Support STUN NAT Traversal

Support "rport" parameter (RFC 3581)

### Audio Codec :

G.711 A-law/ $\mu$ -law, G.729, G.723.1 (6.3K, 5.3K),G.726-32

Display IP Bandwidth with selected codec and payload

Select Voice Codec Order : Local or Remote

Silence Suppression

VAD/CNG selection

LEC : Line Echo Canceller

Packet Loss Compensation

Configure INPUT, OUTPUT and DTMF Gain

In-band/out of band DTMF (RFC4733, RFC2833 / SIP INFO)

Adaptive/Configurable Jitter Buffer range: 0 to 200ms

G.168 Acoustic Echo Cancellation

Dialing Plan with drop, replace, Insert dialing digits

Select First digit and Inter digit timeout duration (Sec)

Selectable Call Progress Tone

Support Specified Line Calling

### Call Features :

FXO Caller ID detection DTMF (before 1<sup>st</sup> ring) and FSK (before 1<sup>st</sup> ring ), ETSI and Bellcore

DTMF Caller ID start and stop BIT (A,B,C,D,#) configurable

FXO Polarity Reversal detection

Tone Generation: Ring Back, Dial, Busy and Disconnect tone detection

Configure Tone Frequency, Cadence, Level and Cycle

CDR output Server IP address and port number

SYSLOG output Server IP address and port number

NAT Traversal support STUN and IP Sharing

Payload type setting : RFC2833, FAX Bypass and Modem Bypass

Out-Band DTMF : RFC2833 and SIP Info

DTMF detection Sensitivity setting : 1 (Lowest signal level) to 5

DTMF generate configurable Duration and Interval Time

Incoming Ring ON time detection configure : 1 to 8 seconds

Incoming Ring OFF time detection configure : 1 to 2 seconds

Remote user drop call detection : Polarity Reversal or Loop Current Drop or Disconnect Tone

Network Connection Detection

Network Unavailable announce Programmable Tone or Voice

Before dial first digit wait timeout configuration ( 1 to 60 sec )

Inter Digits Timeout configure : 1 to 5 seconds

Speed Dialing ( 50 sets )

Line services enable or disable

Sequential FXO Line Seizure

FXO line incoming Ring Cadence setting

Display each Line registration status

Configure each line Ring priority at sequential ring

Enable or Disable Incoming call from FXO IVR announcement

Call Hold

Configurable Call HOLD Tone or Music

Call Transfer

Flexible Dial Plan

Dial Plan: Dial out immediately when matched leading digit and total digits count ( 50 entries )

Digit Manipulation (Drop and Replace Rule) :

Apply Rule to FXO dialing out, IP incoming to FXO or pre-program 4 different groups

Insert pause key (p) by 2 sec at DM group only

Matched Prefix Code

Matched minimum digit length

Replace start and stop digit position

Replace number

Call Routes :

Support Peer to Peer (P2P) Call only

Matched Called Prefix code

Matched Minimum Called digit length

Secondary Backup Routes

Support additional Digit Manipulation Group rule

Hot Line

Outgoing SIP Caller ID Selection

Flexible Routing Plan

Prefix Match and Length

Priority Ring

Cyclic Ring

Simultaneous Ring

Programmable Hunting Cycle

Backup Routing with Digit Manipulation

Default Routing

FAX Transmission mode : T.38, Bypass or Auto

FAX Bypass Keyword required from SIP Server

FAX Bypass Codec : G.711 u-Law or G.711A-Law

Support Peer to Peer Dialing

ON-HOOK Voltage -48Vdc

Configure Ring Cadence, Frequency and Voltage

Distinctive Ring Pattern by incoming Caller ID digit length

Provide world wide country telephone line Impedance

Ring Frequency range setup : 15 to 100 HZ

Ring AC RMS Level Voltage : 0 to 94 Vrms

Support Polarity reversal for Billing

Service Up to 5 Kilo-meter distance from/to PSTN switch

Detect Current Drop Time (Open Loop Disconnect time)

### MANAGEMENT :

Administrative Telnet, HTTP, HTTPS

WAN IP address voice announcement by dialing #126# to Line 1

LAN IP address voice announcement by dialing #120# to Line 1

HTTP/FTP provision through MAC address

3 Levels of User Access Right with Password protection

(Administrator, Supervisor and User)

HTTP/HTTPS Service Access limitation from WAN port

Provides System Status Logs

Status display: Network, Line, SIP Trunk status

Diagnostics (debug through Syslog Event Notice)

Debug in real time by Telnet

Configuration Backup/Restore

Upload user recorded voice announced file: Greeting, Hold Music, and Network Failure

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## 8-Port FXO SIP IP Gateway

Dual Firmware Image Backup

Reset to factory Default

### Environmental :

Actual Dimension: 24(W) × 3.4(H) × 16(D) CM

Weight: 1.5kg (One unit with packing)

Operating Temp. & Humidity

- Temp.: 0°C~45°C (32°F~113°F)
- Humidity: 10%~90% relative humidity, non-condensing

Power Adaptor:

- INPUT: AC100V~240V, 50/60Hz
- OUTPUT: DC 12V, 3.0A

### Approvals:

CE, FCC (Part 15, Class B), LVD and RoHS

### Country of origin:

Made in Taiwan

### Packing Accessories

WellGate 2680	x 1 pcs
AC to DC+12V Power adaptor	x 1 pcs
CD User Manual	x 1 pcs

### Warranty

One year