



# TVP-221H 4-Port VolP Gateway

The TRENDWARE TVP-221H is a Voice over IP (VoIP) gateway providing Toll Class voice quality and manageability from an intuitive yet powerful user interface. The TVP-221H VoIP Gateway is an H.323 Standards Compliant Gateway with 4 analog telephony ports (2 FXS and 2 FXO) allowing for up to 4 concurrent voice connections. This combination of analog telephony ports gives users the flexibility of making direct VoIP calls via analog phone/fax device or through PBX/CO lines respectively.

#### **FEATURES**

- Supports up to 4 channels of real-time concurrent voice and / or fax communications.
- Field programmable CP tone detection and generation to support PBX and CO line interconnections.
- Supports programmable line interfaces with country specific telephone settings.
- Supports ITU standard voice codecs and voice processing algorithms including G.711, G.723.1, and G.729 A/B, and G.168 Echo Cancellation as well as Fax T.30 and T.38
- Intuitive management interfaces (Web, Telnet and Console) ensures rapid deployment / reduces demands on MIS resources.
- Network administrators can remotely monitor and perform routine maintenance / trouble-shooting via Internet browser or telnet session.
- H.323 standard v.3 compliant (including H.323 fast-start mode) ensure interoperability with 3rd Party H.323 Standards Compliant Devices.
- Supports IP Precedence prioritized Voice before Data packets providing best effort QoS
- Built-in TFTP and Flash memory for firmware download and upgrade via network
- · Support Call forwarding and Call Transfer
- Supports Dynamic IP/ PPPoE client support
- · Supports DHCP client support
- · Supports Dynamic DNS for deployed in a dynamic IP environment
- Bulk Call successful rate over 99.98%
- · Recommend to use with dedicated broadband connection
- 5-Year Warranty

## **BENEFITS**

#### **Easy Implementation:**

Intuitive, user-friendly, yet powerful management interface (Web / Telnet / console), that can dramatically reduce IT personnel resource requirements, and complete VoIP deployment in a short time.

#### **Cost Reducing**

Eliminate cost of long distance calls and pay for local calls only.

#### Traffic Control:

Integrate Voice and Data and Controls network traffic with QoS, DMZ, and Virtual Server.



# **TVP-221H**

# 4-Port VoIP Gateway

## **TECHNICAL SPECIFICATIONS**

#### Telephone Interface

Physical interface	Desktop with 4 Analog Ports	
	- Loop start 2 x FXO (RJ-11) - Loop start 2 x FXS (RJ-11)	
Programmable line interfaces	Complex line impedance	
Protocols	• H.323v3 (Normal/fast-start mode) • Supports gateway-gateway direct routing and gateway-gatekeeper assisted routing mode	
Voice coders support	• ITU-T G.711 u-law, G.723.1, and G.729A/B, auto-switching (Frame-rate/packet: 1 - 8)	
Fax	• Supports T.30 G3 fax on PSTN Interface; ITU-T T.30 fax spoofing; ITU-T T.38 • TCP/IP, NetBEUI, IPX/SPX	
Simultaneous connections	• 4 channels voice/fax	
Media processing	Gain control; G.168 echo cancellation (16 ms); Voice activity detection (VAD); Comfort noise generation (CNG);	
	Call progress detection; DTMF detection/filtering/regeneration (H.323v3/IMTCv1)	

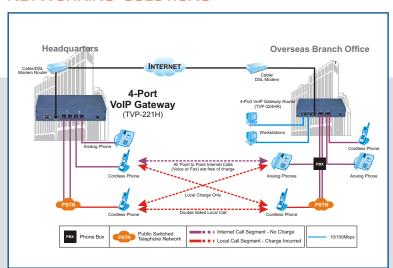
### Data Network Interface

Physical interface	• LAN: 1 (10Base-T/100Base-TX, Auto-Negotiation)	
Protocols	• TCP/IP, DHCP, HTTP, DNS	
Advanced functions	• IP Precedence, PLAR, DDNS	

#### System

Call Control	Built-in three-tier dialing plan and destination hunting		
	• Supports gatekeeper call routing control and gateway mapping • Call accounting information on gateway (via RS-232) or gatekeeper		
Management	• RS-232 (DCE mode) • Built-in HTTP Web-based remote management • Telnet remote management		
System upgrade	Flash memory and built-in TFTP allowing firmware and feature upgrade via network		
LED Indicators	• System: 2 Power, CPU • LAN: 4, Link/ACT, Speed, Collision • Voice: 2 per channel (Ringing, Active)		
Interoperability	Microsoft NetMeeting*; Cisco AS5300, 3600; RADVISION gatekeeper; Cisco gatekeeper		
Dimensions (L X W X H)	• 241 x 135 x 45 mm (9.5 x 4.3 x 1.8 inches)		
Weight	• 1.9 kg (4.2 lb)		
Input Voltage, AC	• 90-260 VAC, auto ranging, 50-60 Hz		
Power	• 12V DC, 2A (External Power Adapter)		
Operating environment	• Operating temperature: 0° ~ 50° C (32° ~ 122° F)		
Input Voltage, AC	Humidify: 90% (non-condensing)		
Certifications	• CE: FCC, UL		

### **NETWORKING SOLUTIONS**





#### ORDERING INFORMATION

#### TRENDware International, Inc.

3135 Kashiwa Street, Torrance, CA. 90505. USA

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Web: www.TRENDNET.com Email: sales@trendware.com

To Order Please Call:

1-888-326-6061

## **TVP-221H**

# 4-Port VolP Gateway

### TELEPHONE LINE MODULE SPECIFICATIONS

#### **FXO Ports**

Signaling	Loop start/DTMF
Number of channels	•2
Interface connectors	• 2 RJ-11 2-pin modular jacks
Line impedance	• 600 $\Omega$ ;900 $\Omega$ ;Complex line impedance
Insertion loss	• 2 dB nominal
Frequency response	• 300 Hz ~ 3400 Hz +/- 2 dB w.r.t. 1004 Hz
Return loss	• ≥ 18 dB
Input level adjustment	• -6 dB to +6 dB
Output attenuation	• 0 dB to 13 dB
Longitudinal balance	• ≥ 45 dB
Disconnect detection	Loop current; Customizable tone detection

### **FXS Ports**

Signaling	Loop start/DTMF
Number of channels	• 2
Interface connectors	• 2 RJ-11 2-pin modular jacks
Line impedance	• 600 $\Omega$ ;900 $\Omega$ ;Complex line impedance
Insertion loss	• 2 dB nominal
Frequency response	• 300 Hz ~ 3400 Hz +/- 2 dB w.r.t. 1004 Hz
Return loss	• ≥ 18 dB
Input level adjustment	• -6 dB to +6 dB
Output attenuation	• 0 dB to 13 dB
Longitudinal balance	• ≥ 45 dB
Loop current	• 25 mA nominal
Ring voltage	• 40 Vrms nominal
Ringing tone	• 16.67 Hz, 20 Hz (default), 25 Hz or 50 Hz
Disconnect detection	Loop current

## **PACKAGE CONTENTS**

• TVP-221H	Quick Installation Guide
• Cat 5 Cable (1.8m/6ft.)	RS-232 Cable
CD-ROM (User's Guide)	Power Adapter (12V DC, 2A)

### **RELATED PRODUCTS**

TVP-224HR • 4-Port VoIP Gateway Router

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