

Copper IAD Gateway with WiFi

GW-521EW



The GW-521EW is a FXS gateway works as a bridging between local PSTN and IP network for voice and FAX services. The GW-521EW gateway provides two FXS ports connecting to local PSTN. IT is an interface to access PSTN with IP-PBX solution. A 10/100Base-TX interface connects local Ethernet network with IP phone and H.323 Gatekeeper or call manager. The data and voice service are working in a local Ethernet network and VoIP-based IAD (Internet Access Device), which is designed to interoperate with end-to-end fiber from major vendors to meet the worldwide market requirements of triple-play services. It is Class 1 laser product complying with EN 60825-1. The integrated Ethernet switch features automatic crossover-correction and auto-negotiation for easy connection to user's PCs or LAN environment. The GW521EW model also features a built-in 802.11g WLAN which brings relief to those troublesome wirings. Two lines of telephony service are provided using VoIP technology with SIP and MGCP signaling protocol.

Electrical Interface

Connector	RJ45
Datarate	10Mbps, 100Mbps
Duplex mode	Half / Full duplex
Cable	10Base-T Cat.3, 4, 5, UTP, 100Base-TX Cat.5, 5e or higher
Standard	IEEE 802.3, IEEE 802.3u
Indications	LED (FX Link, TX SPD, TX Link/Act)
Power Input	12VDC
Power Consumption	< 5W
Dimension	190 x 376 x 124mm (D x W x H)
Weight	360g
Temperature	0 ~ 50°C (Operating), -25 ~ 70°C (Storage)
Humidity	10 ~ 90% non-condensing
Certification	CE, FCC, RoHS
MTBF	75,000 hrs (25°C)

Features

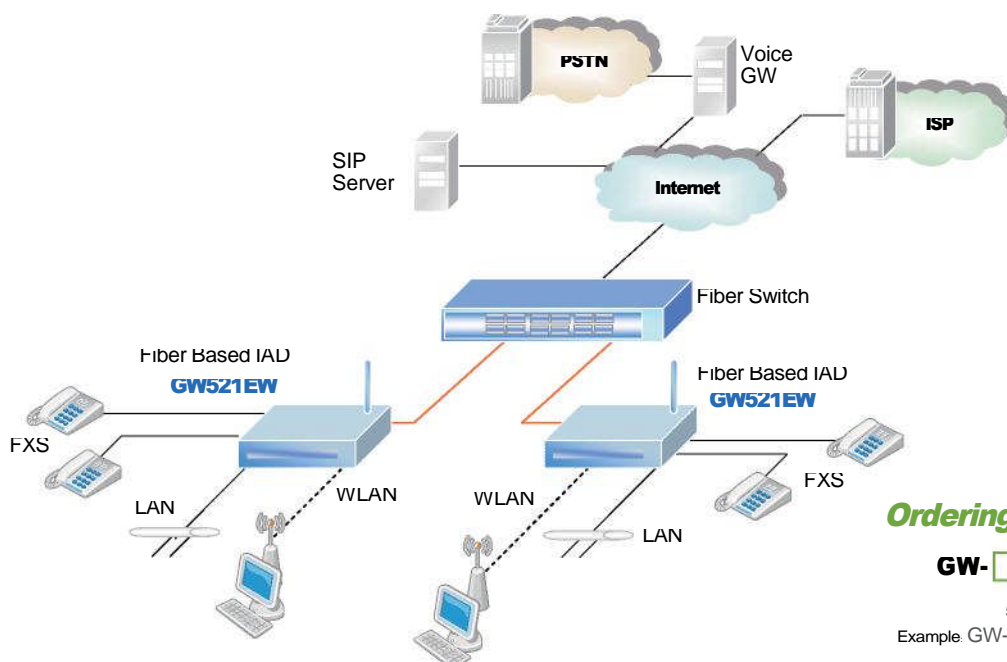
Voice Features

- G.711 a/p-law, G.723.1, G.726, G.729A/B
- DTMF Detection and Generation
- Silence Suppression & Detection
- Comfort Noise Generation (CNG)
- Voice Activity Detection (VAD)
- Echo Cancellation (G.165/G.168)
- Adaptive (Dynamic) Jitter Buffer
- Call Progress Tone Generation
- Programmable Gain Control
- Inbuilt Local Mixer

SIP Call Features

- Peer to Peer Call
- Call Hold / Retrieve
- Call Waiting
- Call Pick Up
- Call Park / Retrieve (SIP Server Required)
- Call Forward - unconditional, busy, no answer
- Call Transfer - attended, unattended
- Do Not Disturb
- Speed Dialing
- Repeat Dialing

- Three-way Calling
- MWI (RFC-3842)
- Hot Line and Warm Line



Ordering Information

GW-□□□□□ Optional card

521EW

Example: GW-521EW

VoIP Router	<p>Protocol: SIP (RFC3261) / MGCP (RFC2705)</p> <p>Voice: 2FXS, Ethernet: 1WAN 4LAN, Wi-Fi IEEE802.11b/g, TR069 / 104, SIP over TLS</p> <p>ACK, BYE, CANCEL, INFO, INVITE, MESSAGE, NOTIFY, OPTION, PING, PRACK, PUBLICSH, REFER, REGISTER, SUBSCRIBE, UPDATE</p> <ul style="list-style-type: none"> • In-Band DTMF, Out-of-Band DTMF Relay (RFC2833 or SIP INFO) • DTMF / PULSE Dial Support • Caller ID Generation / Detection: DTMF,FSK-Bellcore Type 1 & 2, FSK-ETSI Type 1 & 2, FSK: Calling Name, Number, Date and Time, vMWI • Polarity Reversal Detection (FXO) and Generation (FXS) • T.30 FAX Bypass to G.711, T.38 Real Time FAX Relay • Failsafe mechanism: Network, Service, Power Failure, (FXS relay to FXO) • Life Line Support (OB-201L, OB-110) • Recordable Greeting Message (FXO) • Emergency Number Table (FXO) • Modem over IP Up to V.34 • PSTN Call Tone Detection (FXO) and Generation (FXS) • ROH Tone (Receiver Off-Hook Tone @ 480 Hz) • Loop Current Suppression • 802.11 b/g Access Point and Client mode (WISP), Wi-Fi compliant
SIP Method Support Telephony	<ul style="list-style-type: none"> • 802.1x, WEP, WPA TKIP and WPA2 AES/Mixed mode for PSK and TLS (Radius) • Wireless Auto-channel selection • WDS supported with WEP, TKIP and AES encryption • Wireless access control by MAC address (deny or accept) • Support Ad-hoc and infrastructure mode • Support MAC Clone (single Ether device) and NAT2.5 (Multiple Ether clients) • Support site survey scan and manual connect • Support WPA/WPA2 TLS client • Support universal repeater mode • WAN: Static IP, PPPoE, DHCP, PPTP
Wireless	<ul style="list-style-type: none"> • Network Protocol Support: IP, TCP, UDP, TFTP, FTP, RTP, RTCP, ARP, RARP, ICMP, NTP, SNTP, NMP v1/v2, HTTP, HTTPS, DNS, DNS SRV, Telnet, DHCP Server, DHCP Client, STUN Client, UPnP, IGMP • NAT Functions : Support up to 255 Clients, Port Forwarding (Virtual Servers), DMZ, Port Triggering • QoS Support: WAN: DiffServ, IP Precedence, Priority Queue, Rate Control, 802.1Q (VLAN Tagging), 802.1p (Priority Tag), LAN: Rate Limit • DDNS Support: Dyndns.org (Dynamic and Custom), TZO, Peanut Hull, 3322.org • PPTP VPN Client, Port Filtering, IP Filtering, MAC Filtering, Virtual Server, URL Filter • DIGEST Authentication, MD5 Encryption, DoS Protection
IP Network	<ul style="list-style-type: none"> • Web Based Configuration • Telnet • IVR • Reset to Default Button • Auto-provisioning (HTTP / HTTPS / TFTP) • FTP / TFTP / HTTP Remote Software Upgrade • Configuration Backup and Restore • TR-069/104 (Option)
Network Security	<ul style="list-style-type: none"> • Support Outbound Proxy • Register up to three SIP servers • SIP Registration Failover Mechanism • Group Hunting ■ Privacy Mechanism / Private Extensions to SIP • Session Timers (Update / Re-invite) • DNS SRV Support • Call Types: Voice / Modem / FAX • Call Routing by Prefix Number • User Programmable Dial Plan Support • Toll-Free Support (FXO) • Automatic Calling Number Manipulation (VoIP & FXO) ■ CDR Client • Phone Book Manager Client • Manual Peer Table (for P2P calls) • E.164 Numbering, ENUM support • Symmetric RTP • By port registration • By device registration (share account) • Mixed mode (Hunt number for inbound, by port number for outbound) • Invite with Challenge • Register by SIP Server IP Address or Domain Name • Support RFC3986 SIP URI format
Management	<p>IETF MGCP V.1.0, RFC 2705</p>
SIP Call Management	
SIP Account Management	
MGCP CALL MANAGEMENT (OPTION)	

Fiber IAD Gateway with WiFi GW421FW



The GW421F is a single mode Fiber and VoIP-based IAD (Internet Access Device), which is designed to interoperate with end-to-end fiber from major vendors to meet the worldwide market requirements of triple-play services. It is Class 1 laser product complying with EN 60825-1. The integrated Ethernet switch features automatic crossover-correction and auto-negotiation for easy connection to user's PCs or LAN environment. The GW421FW model also features a built-in 802.11g WLAN which brings relief to those troublesome wirings. Two lines of telephony service are provided using VoIP technology with SIP and MGCP signaling protocol.

Features

- Fiber interface supports up to 100 Mbps downstream and 100 Mbps upstream rates
- Integrated four-port Ethernet switch with automatic speed-sensing and crossover correction
- 802.11b/g WLAN supports up to 54 Mbps transmission rate
- Secures transmitting encryption by either 802.1x; WEP; WEP2; WPA; WPA2; TKIP; AES; 802.11i
- One FXO port for failsafe lifeline, two FXS ports for VoIP using POTS phone set
- Supports voice CODECs like G.711, G.726, G.729AB, BV16, ILBC, T.38 etc.; programmable G.168 echo cancellation, adaptive jitter buffer and packet loss concealment
- Voice activity detection (VAD), comfort noise generation (CNG) and caller ID
- DTMF tone detection and generation; Fax / Modem detection and pass-through
- Supports SIP signaling protocol and bonus services like call forwarding, call waiting, call transfer, call busy, call return, enquiry service, CLIP/CLIR and three way conference
- Supports Networking protocols such as PPP, NAT, Routing, DHCP server / relay / client
- Configuration and management by Web-browser through the Ethernet interface and remotely through WAN interface

Optical Interface :	Connector :	SC
	Data rate :	100Mbps
	Duplex mode :	Full duplex
	Fiber :	SM 9/125µm
	Distance :	WDM 20km
	Wavelength :	T1310/R1550nm
	Connector :	RJ45
Electrical Interface :	Data rate :	10Mbps, 100Mbps
	Duplex mode :	Half / Full duplex
	Cable :	10Base-T Cat.3, 4, 5, UTP, 100Base-TX Cat.5, 5e
Indications	Power, WAN, Internet, TEL1, TEL2, Ethernet, WLAN	
Power	DC 15V In	
Power Consumption	< 15W	
Dimensions	220x 165x 29mm(D x W x H)	
Weight	450g	
Temperature	0~50°C (Operating) ,0~70°C (Storage)	
Humidity	10~90% non-condensing	
Certification	CE, FCC, RoHS	
MTBF	57,000 hours	



<p>Software Routing</p>	<p>Support point to point protocol (PPPoE) and user authentication via PAP, CHAP or MS-CHAP Routing information protocol (RIP) v1 and v2, static route DHCP client, server and relay agent NAT/PAT - RFC 1631 with support for extensive ALGs DNS relay NAT: 16 sessions, DMZ and ALGs</p>
<p>Firewall</p>	<p>Stateful packet inspection (SPI) with DOS protection - Ping of death, SYN flood land Protection against IP and MAC address spoofing UPnP NAT traversal and VPN/IPSec pass-through Supports 802.1x ; WEP ; WEP2 ; WPA ; WPA2 ; TKIP ; AES ; 802.1i Hidden SSID</p>
<p>Wireless</p>	<p>WMM for advanced Quality of Service AES in hardware 125 High speed mode: Standards-plus performance enhancement delivers best real-world performance as the client card use the same 125 high speed mode FXO for failsafe lifeline Supports vocie CODEC s like G.711, G.726, G.729AB, BV16, ILBC, T.38 etc. G.168 line echo cancellation with programmable tail</p>
<p>Voice</p>	<p>Adaptive jitter buffer, packet loss concealment (PLC), voice activity detection (VAD), comfort noise generation (CNG) and Caller ID DTMF tone detection and generation ; Fax/Modem detection and pass-through Supports SIP (RFC 3261), SDP (RFC 2327, RFC 3264) as well as both TCP and UDP transport Supports User agent Client (UAC) - User agent server (UAS) call, or proxy call routing Supports SIP and telephone URL addressing</p>
<p>VoIP and Telephony Bonus Services</p>	<p>Supports in-band DTMF tone sending/receiving and out-band DTMF signaling with RTP, as per RFC 2833 Bonus services include - Call forwarding: Unconditional, No response, On busy - Call waiting: Force busy, Pickup and release old, Pickup and put old on hold, Switch between two calls - Call Transfer, Call back busy subscriber, Call back last number called (call return) - Enquiry service Provisioning through TFTP client with configuration profile SNMP GETs, SETs and TRAPs for four group in MIB-II Embedded syslog ; SNMP with DHCP options UPnP Internet gateway device (IGD) compliance Management and configuration via Web/HTTP Firmware upgrade using HTTP and TFTP</p>
<p>Configuration and Network</p>	<p>Supports TR-069 and with parameters: Device info, management server, time, IPPing diagnostic, etc. Supports TR-014</p>
<p>Management</p>	

Ordering Information

GW- Model type

421FW

Example. GW-421FW