



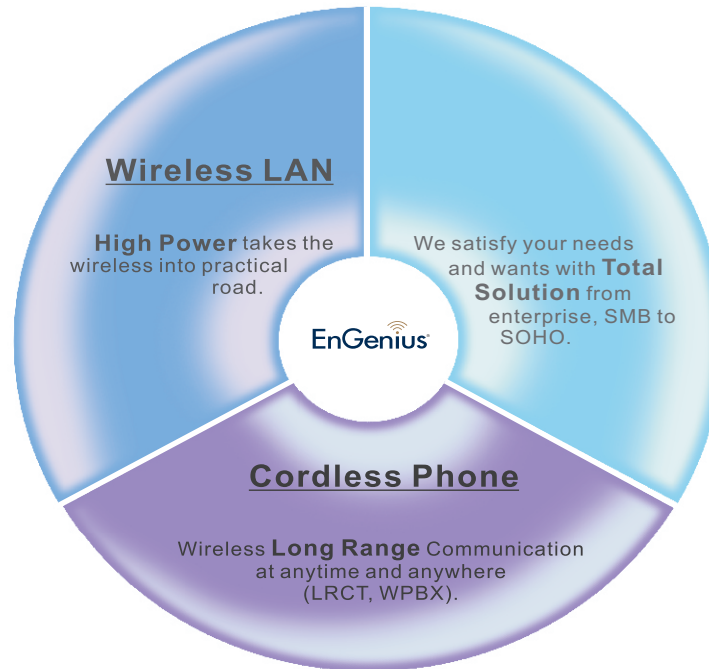
Product Guide
2008

GET CONNECTED • GET ENGENIUS



EnGenius®
www.engeniustech.com.sg

We Offer What You Need And Want



About us

EnGenius Networks Singapore Pte Ltd (*Affiliate with Senao Networks, Inc.*), was established since 1993 as a sales, service and marketing hub for Europe, Asia Pacific, South Africa and Africa. To enhance our services and support to our business partners, a warehouse and technical lab were set up in Singapore as well. EnGenius was positioned as a wireless solution provider in the last mile. Our products were designed for enterprise and industrial market providing wireless data & voice communications in demanding business environments.

Our current product line includes the following:-

- Wireless LAN Products & Accessories
- Wireless PABX
- IP PBX
- WiFi Phones
- Long Range Cordless Phones

Wireless / Wired LAN

Business Class Products

- MESH AP
- Outdoor CPE
- Indoor CPE
- High Power Embedded System
- High Power USB Adapter
- Home & Home Office

Home Network Products

- Broadband Router
- USB Dongle
- Gigabit Switch

Accessories

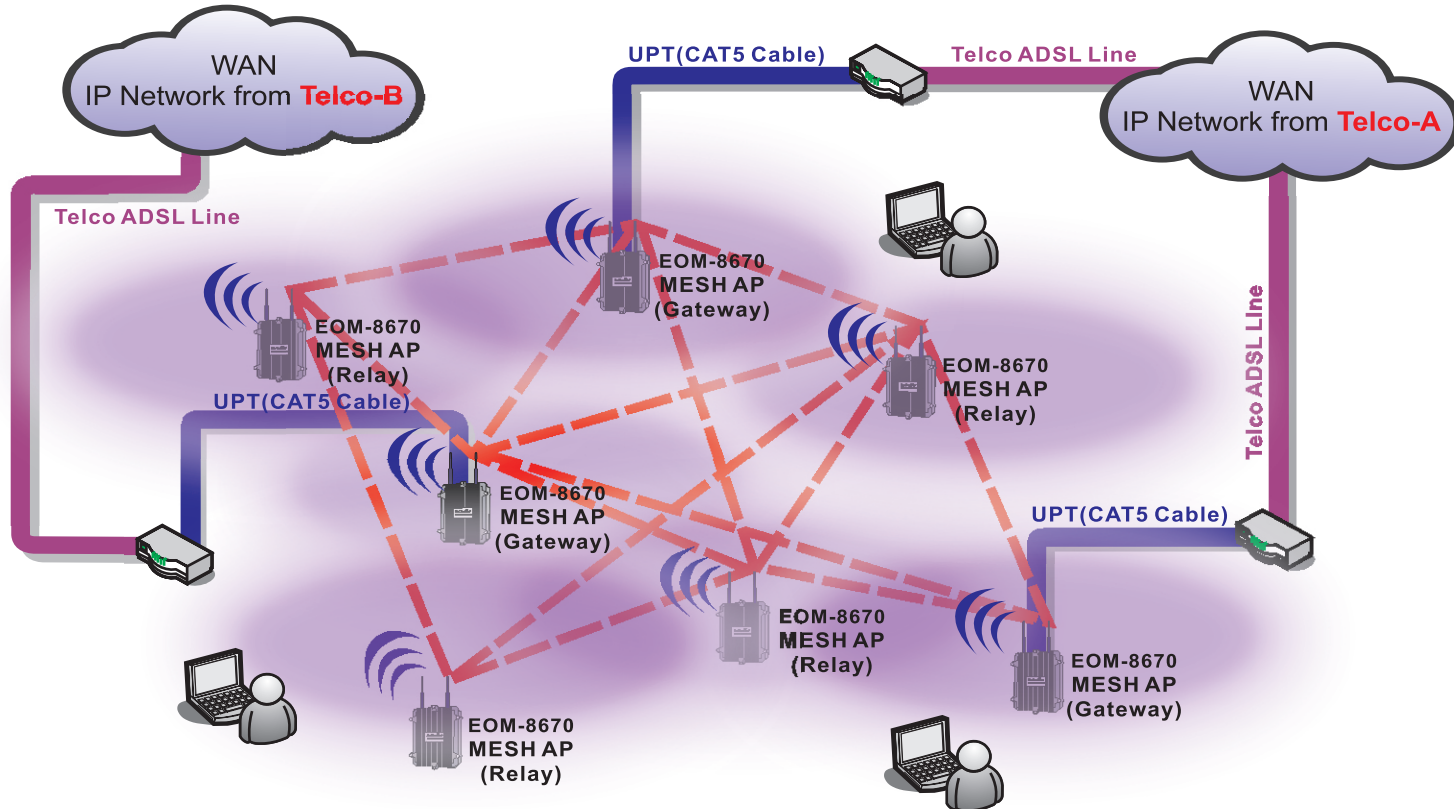
- PoE Injector
- PoE Splitter
- Surge Arrester

Wired Products

- 10/100/1000 Ethernet Switch

MESH AP-Smart Software Advanced Security & Real Seamless Roaming

Application

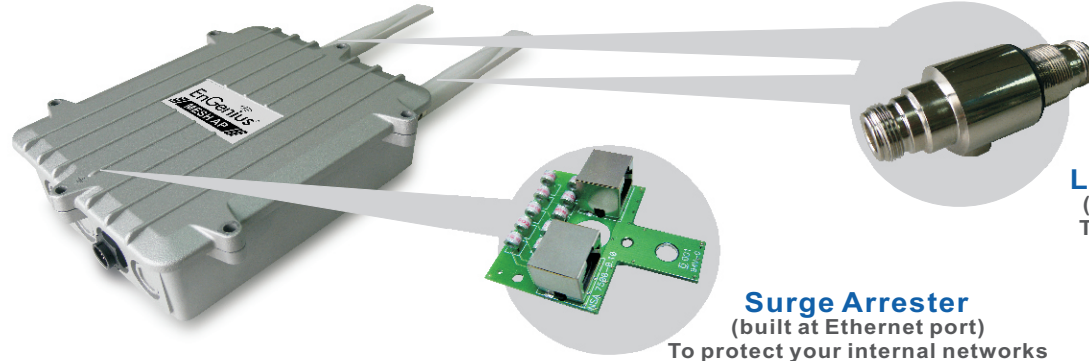


Outdoor WiFi MESH Network -Network Architecture with 3-Gateway MAP and 4-Relays MAP

- * Robust Design
- * Highly Scalable
- * Self Configurable
- * Self Healing
- * Self Adaptive
- * Seamless Mobility

MESH AP - Professional Hardware Design

Robust Design for Lighting Protection



Lightning Arrester
(built at antenna port)
To protect your device

Surge Arrester
(built at Ethernet port)
To protect your internal networks

MESH AP Mechanical Features

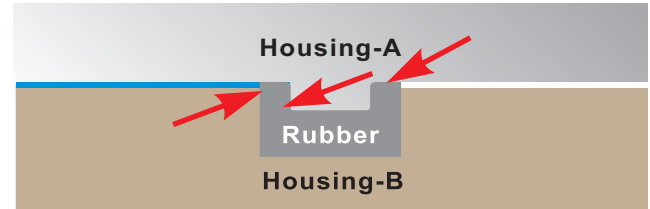
-The Pioneer of Outdoor Facility Provider

Professional Mechanical Design

Waterproof, IP68 compliant

Surge Arrester
To protect your
internal networks

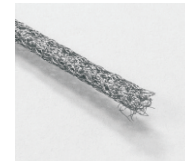
Internal Networks



EMI/RFI

MESH wire materials :

- Monel
- Stainless Steel



Seamless Integration With WiFi Networking Technologies & Backbone Infrastructure

Features	Benefits
Dual radio for independent backhaul and local access	Allows operators to set up at both 2.4GHz for long range and 5GHz to reduce the frequency interference
Self configuration and healing	Automatically searches and links with gateway AP and other nearest node MESH AP The routing mechanism automatically finds the optimal link once the link status changes or breaks
Adjustable output power	Helps compliance for different countries' regulations
Lightning protector in both antenna and Ethernet ports	Prevents a lightning stroke to damage the internal equipments
Wide temperature range and robust mechanical design (IP68)	Delivers reliable, top performance in the most demanding environments to avoid water invasion and weather corrosion
Power over Ethernet (PoE)	Easy installation and cost effective
Supports dynamic routing (layer 3)	OLSR protocol provides optimized path of routing
Supports NAT (Network Address Translation) / NAPT	Shares single internet account and provides a type of firewall by hiding internal IP addresses to protect it from hackers
Static route support	Forwarding data in a network via a fixed path in multi-subnet
Supports multiple SSID for client access mode	Distinguishes separate networks within the same wireless space to provide secure connection
Supports VLAN	Reduces the size of each broadcast domain, which in turn reduces network traffic and increases network security
Supports 802.1x (EAP-TLS/TTLS/SIM.PEAP), 802.11i (WPA/WPA2, AES), VPN pass- thru mechanisms	Provides mutual authentication (client and dynamic encryption keys) to enhance security
Hides SSID	Avoids users from sharing bandwidth thus increases efficiency of the network
Supports MAC addresses access control list	Ensures secured networks connection
Supports WMM extension	Improves the users experiences for audio, video and voice applications by prioritizing data traffic
Bandwidth control	Enables operators to specify the max. line bandwidth that a particular transfer operation can use
Supports SNMP v2c/v3	Allows network administrators to manage the networks with ease
Centralized management software	Easy to manage volume MESH AP via central control system to save the management cost

Security & Networks Service

Security

- **EnGenius** has built-in enhanced security features with standards which protects the backhaul mesh connection as well as the client end-user access Privacy & Security is achieved with the following features :
 - * 64/128 bit WEP encryption
 - * AES & IEEE802.1x
 - * Both WEP & AES & WPA1/2
 - * Firewall (user configuration)
 - * VPN (all VPN protocol pass through, such as PPTP and L2TP)
 - * HTTP login
 - * HTTPS login with SSL encryption
 - * Authentication via RADIUS server
 - * Zero configuration for clients interface with proxy bypass, including DNS feed through

Network Service

- **Mesh AP** equips with 1 x 10/100Mbps RJ-45 Auto-Negotiation network interface for WAN and/or local server connection, and also to provide network extension via UTP Cable (when necessary) PoE (IEEE802.3af) via WAN port or alternative DC power supply via adapter
- The following are the services that are provided within the EnGenius MAP solution
 - * Static IP addresses, DHCP server/client
 - * PPPoE client with PAP, CHAP
 - * PPTP client
 - * Firewall
 - * NAT
 - * VLAN (depending on customer's specifications)
 - * 200kb internal web space (optional) at each Mesh AP

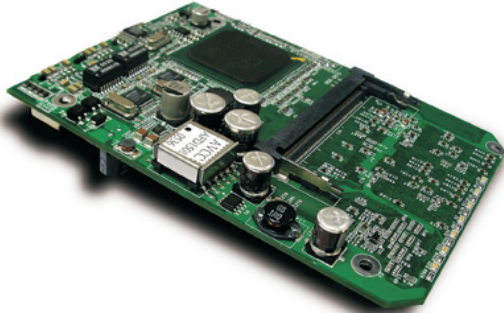
Seamless Integration With WiFi Networking Technologies & Backbone Infrastructure

EnGenius MESH Summary

- **EnGenius** WiFi Wireless Mesh AP solution addresses the market requirements for
 - * Robust Design
 - * Highly Scalability
 - * Self Configurable
 - * Self Healing
 - * Self Adaptive
 - * Seamless Mobility
- In general, EnGenius Mesh Solution offers end users with secure, seamless roaming beyond traditional WLAN boundaries and our solutions provides easy deployment in areas that do not support or with insufficient wired backhaul.
- WiFi Wireless Metropolitan Mesh Network Solution is well-suited for providing broadband wireless access in areas that traditional WLAN systems are unable to cover or with limitations in deployment (such as limited backbone or inability to deploy).

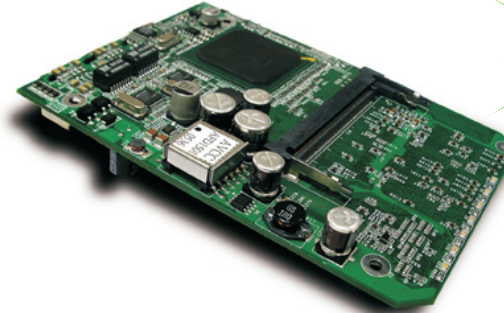
Intel IXP425 Platform

EOP-8670



EOP-8670 is an embedded processor board with popular network I/O interface support. With Linux boot loader pre-installed, software designer will save time in hardware-related design effort, hence focus on value-added software application program.

Enboard1



Enboard1 is a combination of an embedded processor board with Ikarus OS. It has on board dual mini-PCI slots, 802.2af PoE and serial port. Enboard1 is an ideal choice for enterprise-level dualband AP/Router supporting WiFi, WiMAX and Mesh.

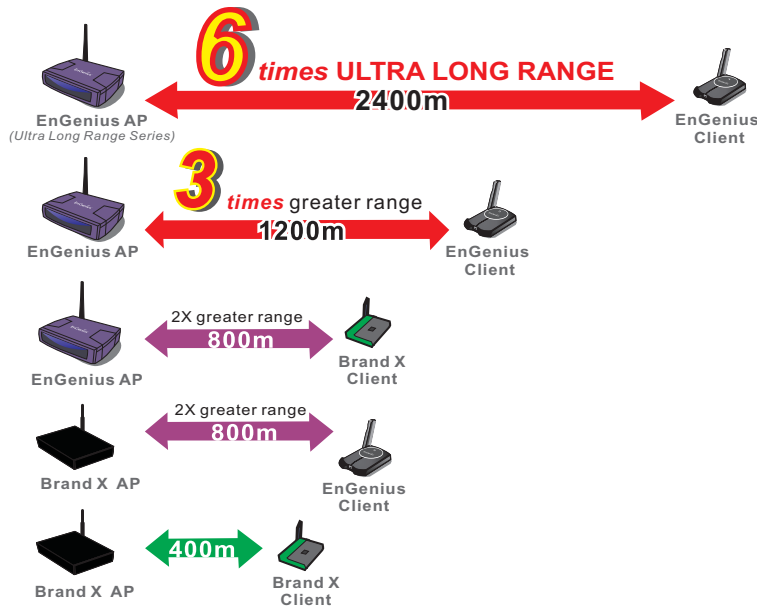
High Power & Ultra Long Range CPE

Why Engenius High Power

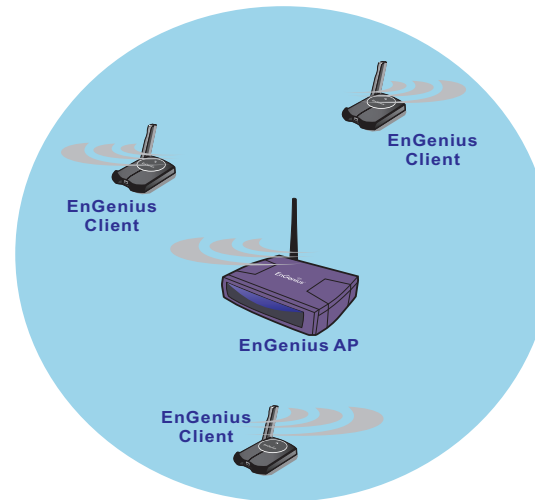
Liberate restrictions of **normal** WiFi networks

- * 3 times better range and coverage with high RF power and sensitivity
- * No dead spots
- * Higher stability when roaming between APs

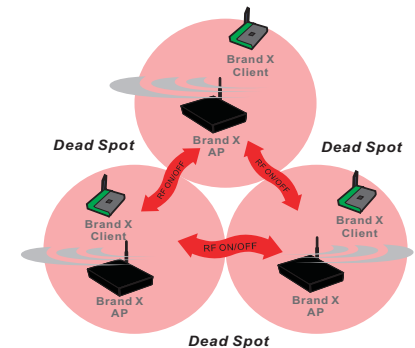
We give you the solutions



D (distance) = f (Power, Sensitivity, Antenna Gain, Cable Loss)



EnGenius Coverage
(3 times range and no dead spot)

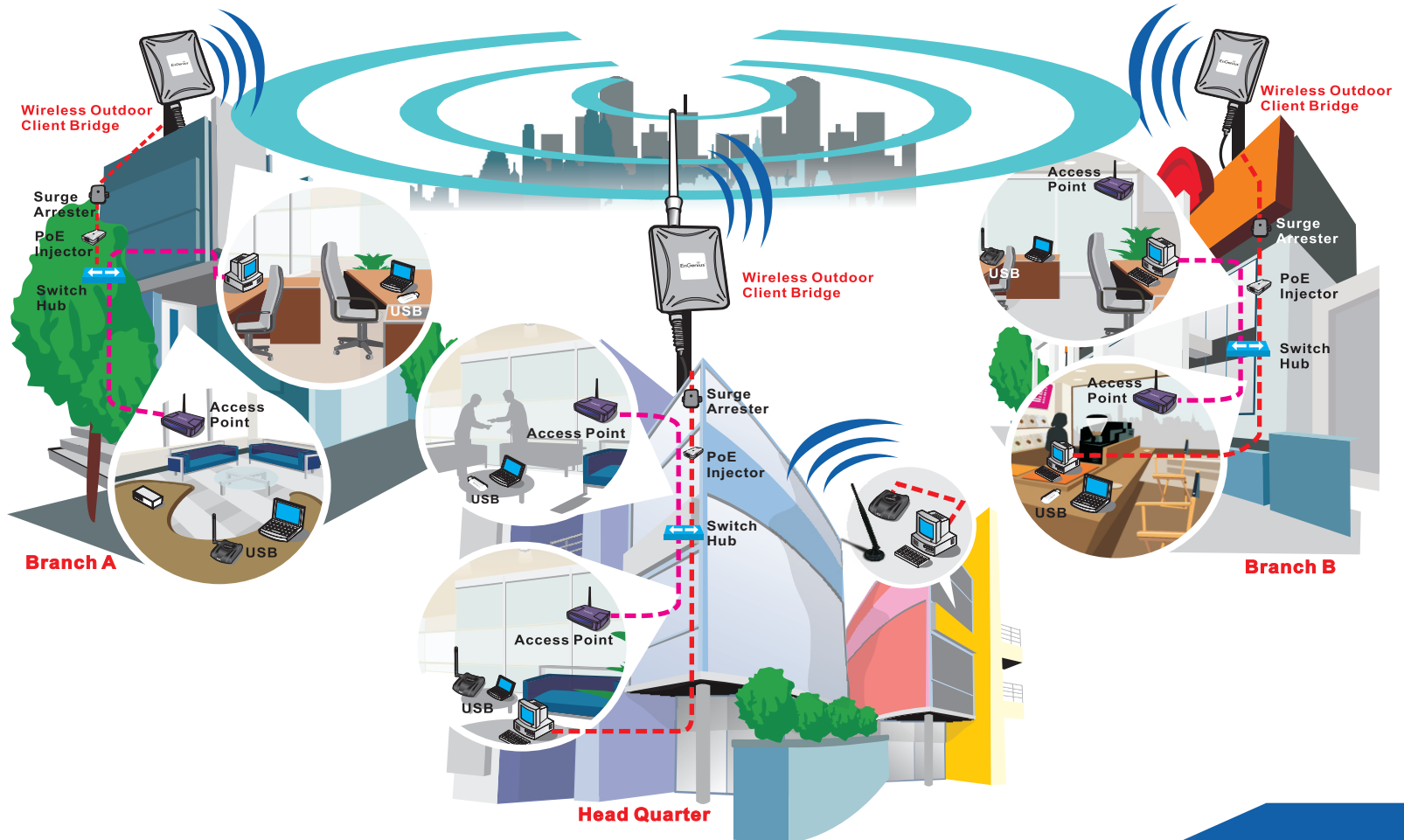


Brand X Coverage

Outdoor CPE

Application

- To create a wireless LAN between headquarter and remote branches.



High Power Outdoor Multi-Client Bridge / AP

Value added software features

- * Point-to-Point, Point-to-Multipoint wireless connectivity
- * WDS (PtP/PtMP) support
- * WPA / WPA2/ WEP encryption support
- * 802.1x authentication support
- * Hide SSID in AP mode
- * DHCP client / server
- * MAC address filtering (AP mode)
- * MAC/ IP transparent
- * SNMP V1, V2C (MIBI, MIBII, Private MIB) Support
- * VLAN pass through support
- * Telnet/ Web configuration
- * Layer2 isolation in AP mode
- * Wireless Multimedia Enhancements Quality of Service (WMM) support

EOC-3220 PLUS



11b/g

EOC-3220 PLUS

High Power & High Gain Wireless Bridge / Client Router / AP / Repeater

- * IEEE802.11b/g compliant
- * High RF output power for greater range
- * Integrated 16dBi directional patch antenna
- * Supports WPA/WPA2/IEEE802.11x
- * 802.3af PoE compatible for flexible deployment
- * IP67 rated enclosure for high resistance against fire, smoke, water and weather conditions

EOC-3220 EXT / EOC-3220



11b/g

EOC-3220 EXT / EOC-3220

High Power Multi-Client Wireless Bridge / Client Router / AP / Repeater

- * IEEE802.11b/g compliant
- * High RF output power for greater range
- * IP67 rated enclosure for high resistance against fire
- * Supports WPA/WPA2/IEEE802.11x
- * Power-over-Ethernet (PoE) injector included
- * EOC-3220 has integrated 9dBi directional antenna
- * EOC-3220EXT uses external antenna

Ultra Long Range Series Outdoor Multi-Client Bridge / AP

EOC-3610S EXT



11b/g

Wireless Outdoor Multi-Client Bridge / AP / WDS

- * IEEE802.11b/g compliant
- * Supports WPA/WPA2/IEEE802.1x
- * Point-to-point, Point-to-multipoint Wireless Connectivity
- * IP67 rated enclosure for high resistance against fire, smoke, water and weather conditions
- * Support Multiple SSID
- * Support VLAN pass through
- * Support Power-over-Ethernet (PoE) IEEE802.3af

EOC-8610S PLUS



11a/b/g

Wireless Outdoor Multi-Client Bridge / AP / WDS

- * IEEE802.11a/b/g compliant
- * Support WPA/WPA2/IEEE802.1x
- * IP67 rated enclosure for high resistance against fire, smoke, water and weather conditions
- * Hide SSID
- * DHCP Client/Server
- * Support Power-over-Ethernet (PoE) IEEE802.3af

EOC-8610S EXT



11a/b/g

Wireless Outdoor Multi-Client Bridge / AP

- * IEEE802.11a/b/g compliant
- * IP67 rated enclosure for high resistance against fire, smoke, water and weather conditions
- * MAC address filtering
- * External antenna for flexible deployment
- * Support Power-over-Ethernet (PoE) IEEE802.3af
- * Support WPA/WPA2/IEEE802.11x

EOC-3660 EXT



Coming Soon!

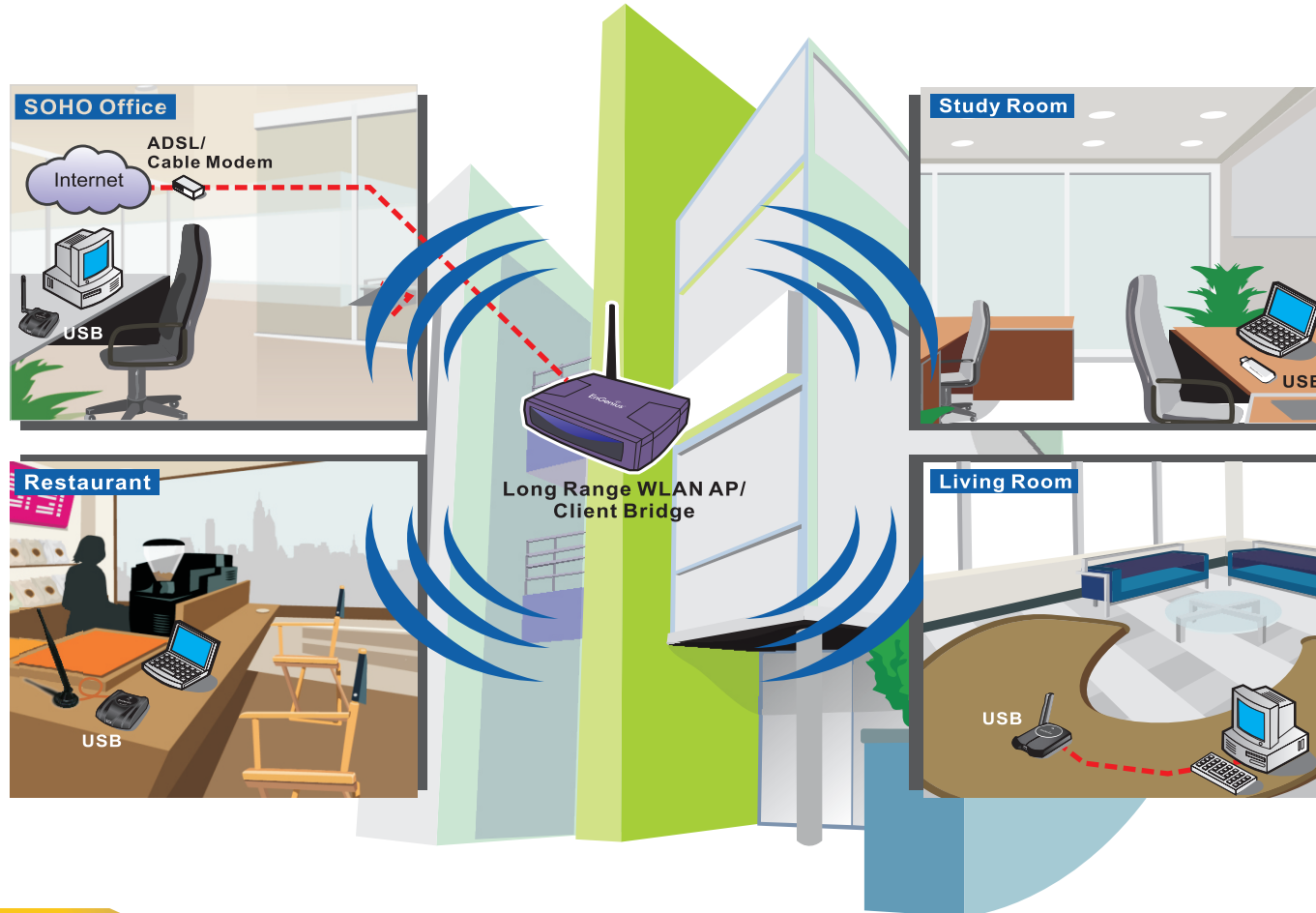
11b/g

Wireless Client Bridge / AP / WDS / Repeater

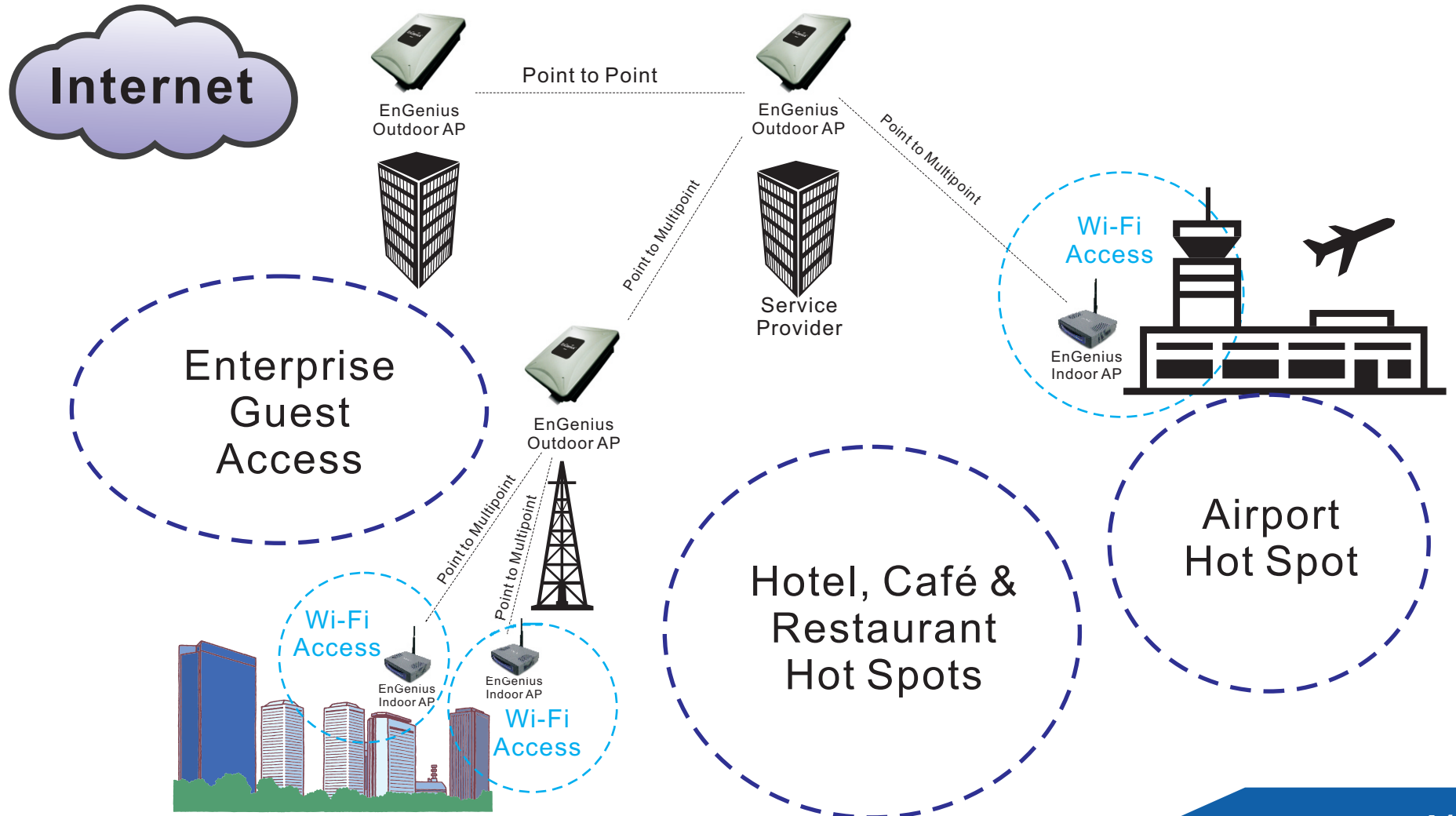
- * IEEE802.11b/g compliant
- * Support Multi-SSID function
- * Diversity support
- * Support 7+1 Multi-Functions
- * Support RSSI indicator loss
- * Bandwidth selection
- * Watertight and weatherproof enclosure to avoid weather corrosion
- * WPA2/WPA/IEEE802.1x support
- * Support PPPoE function

Indoor CPE - High Power Client Bridge / AP

Application

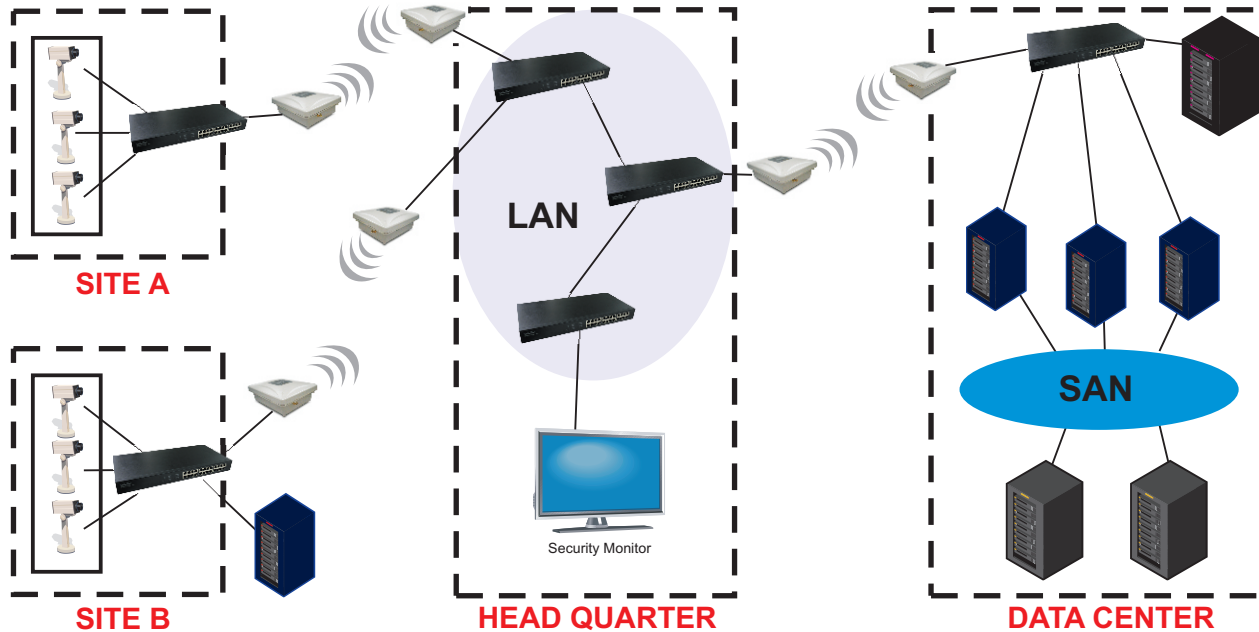


EnGenius Wireless & Hot Spots Solution

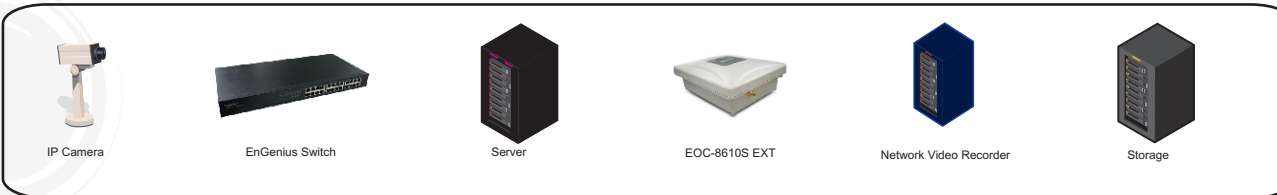


EnGenius Wireless & Wired Solution

Application : CCTV on IP Security Surveillance Network Solution Architecture



Legend



* Also available for indoor unit (ECB-8610S)

Ultra Long Range Series Indoor Multi-Client Bridge / AP / PCI Adapter



* Wireless range is **EnGenius** RELATIVE performance measurements based on wireless products from **EnGenius**

ECB-3610S

Wireless Multi-Client Bridge / AP / WDS

11b/g

Wireless Multi-Client Bridge/AP/WDS

- Receive sensitivity up to -95dBm
- IEEE802.11b/g compliant
- **Multiple SSID**
- **VLAN pass through**
- **VLAN tagging**
- Supports WPA/WPA2/IEEE802.1x
- Supports Power-over-Ethernet (PoE) IEEE802.3af
- Layer 2 isolation



ECB-8610S

Wireless Multi-Client Bridge / AP / WDS

11a/b/g

Wireless Multi-Client Bridge/AP/WDS

- Receive sensitivity up to -95dBm
- IEEE802.11a/b/g compliant
- Supports DFS/TPC
- Supports WPA/WPA2/IEEE802.1x
- Supports Power-over-Ethernet (PoE) IEEE802.3af
- Layer 2 isolation



EPI-3601S

High Power WLAN PCI Adapter

11b/g

High Power WLAN PCI Adapter

- 2.4GHz IEEE802.11b/g standard
- High speed data rate up to 108Mbps
- Receive sensitivity up to -95dBm
- Supports QoS
- Supports WPA/WPA2/IEEE802.1x



High Power Indoor Multi-Client Bridge / AP

EAP-3660



Coming Soon!

11b/g

Wireless AP / Repeater / WDS

- * IEEE802.11b/g compliant
- * Supports Multi-SSID function
- * Universal Repeater
- * Diversity support
- * Bandwidth selection
- * WPA2/WPA/IEEE802.1x support
- * Support Power-over-Ethernet (PoE)

ECB-3660



Coming Soon!

11b/g

Wireless Client Bridge / AP / Repeater / WDS

- * IEEE802.11b/g compliant
- * Support 7+1 Multi-Functions
- * Support Multi-SSID function
- * Diversity support
- * Bandwidth selection
- * WPA2/WPA/IEEE802.1x support
- * Support PPPoE function
- * Support Power-over-Ethernet (PoE)

ECB-3220



11b/g

Wireless Bridge / Client Router / AP / Repeater

- * IEEE802.11b/g compliant.
- * High RF output power for greater range.
- * Supports 64/128 bit WEP, WPA/WPA2 encryption, IEEE802.1x authentication.
- * PoE capable for flexible deployment.
- * Telnet/Web configuration.
- * SNMP v1/v2c (MIB I, MIB II, Private MIB) support.
- * PPPoE function support.
- * MAC address filtering.

ECB-1220R



Coming Soon!

11b/g

AP / Client Router / Router / WDS

- * IEEE802.11b/g compliant
- * Built-in 4-Port 10/100 Switch
- * NAT Router
- * Universal Plug & Play
- * Built-in Firewall to prevent malicious access for Internet
- * DoS (Denial of Service) protection
- * PPPoE function support
- * Port forwarding

High Power Embedded System

EMP-8601/8602



11a/b/g

High Power Dual Band Module

- * High transmission power for maximum range and signal
- * High speed data rate up to 108Mbps in SuperA/G (EMP-8601)
- * 802.11i security specifications, provides WPA/WPA2 and WEP 64/128 bit encryption support
- * 802.11e standard, wireless multimedia
- * Enhancements Quality of Service supports (QoS)
- * 5GHz frequency support

EMP-8603

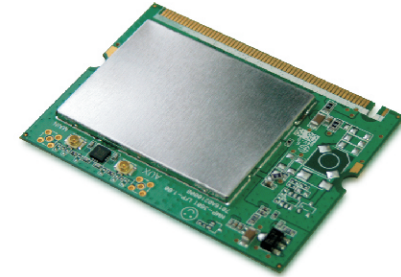


11a/b/g

SuperA/G Dual Band Module

- * High transmit output power in 11a/b/g
- * 11a mode is up to 650mW
- * Support eXtended range technology
- * Optimize for high throughput & range
- * Industrial operating temperature range: -40~85 degree
- * 5GHz frequency support
- * ESD protection
- * MMCX antenna connectors
- * 5/10/20 Channel bandwidth support

EMP-3601/3602



11b/g

High Power Module

- * High transmission power for maximum signal strength
- * High speed data rate up to 108Mbps in SuperG function enabled
- * 802.11i security specifications, provides AES, TKIP and IEEE802.1x client
- * eXtended range technology give WiFi products twice the range of existing designs

High Power Wireless Adapter

EUB-362 EXT



11b/g

USB Adapter with Detachable Antenna

- * IEEE802.11b/g compatible
- * High speed data rate up to 108Mbps in SuperG mode
- * Detachable antenna (SMA RF Connector)
- * AES, WPA/WPA2 support
- * IEEE802.1x client support
- * Wireless Multimedia (WMM) Enhancement, QoS support
- * Windows XP/2K/Vista driver support

EUB-862 EXT2



11a/b/g

USB Adapter with 2 Detachable Antennas

- * IEEE802.11a/b/g compatible.
- * 2 detachable antennas provide more flexible operating environment on 11a and 11b/g mode.
- * 108Mbps high speed data transmit rate in SuperA/G, turbo mode.
- * AES, WAP and WEP support.
- * IEEE802.1x client support.
- * Wireless Multimedia (WMM) Enhancements Quality of Service support (QoS).
- * Atheros XR eXtended range technology giving twice the range.
- * Windows XP/2K/Vista driver support.

EnGenius 802.11n Solution

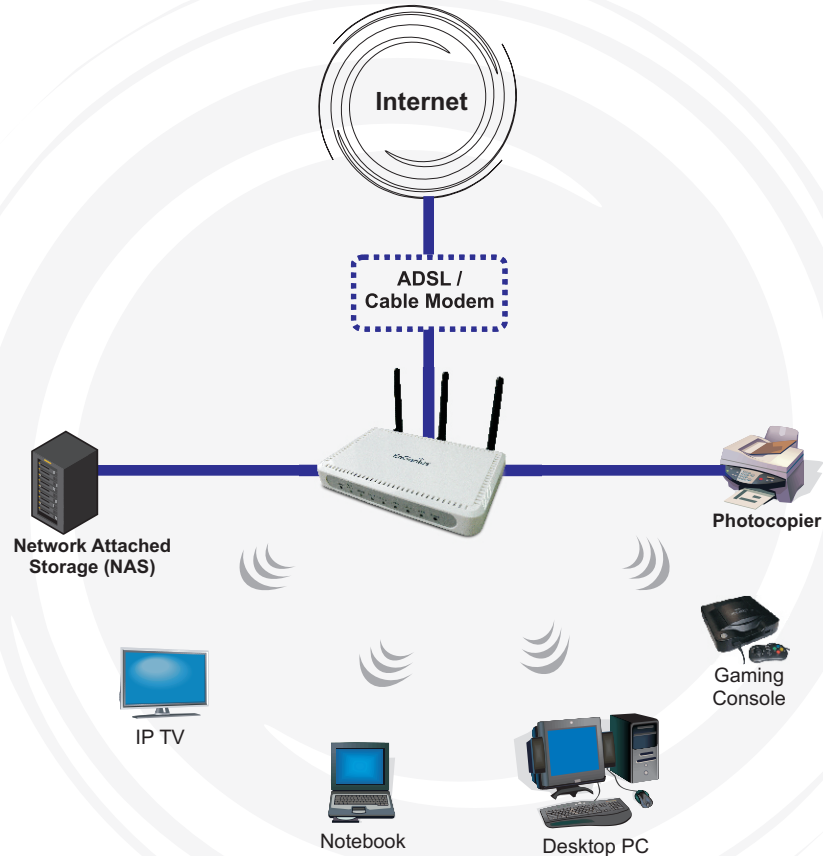
Application

Up to
300Mbps*

Superior QoS
Technology

Advanced
Network
Security

Backward
Compatible



* 300Mbps is the maximum wireless data rate derived from IEEE802.11n draft standard 2.0 specifications. Actual data throughput and range will vary depending upon network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead.

EnGenius Home & Home Office

ESR-9710



11b/g/n

Wireless-N Gigabit Router

- * High speed data rate up to 300Mbps
- * Supports DNS/DDNS
- * Firewall supports virtual server mapping, DMZ, IP Filter, ICMP blocking, SPI
- * Supports 802.1x authenticator, 802.11i (WPA/WPA2,AES), VPN pass-thru mechanisms
- * Universal Plug and Play (UPnP™)
- * Filter scheduling
- * Real time alert
- * Web configuration
- * "One-touch" WiFi Protection
- * Set-up wizard included

ESR-9750

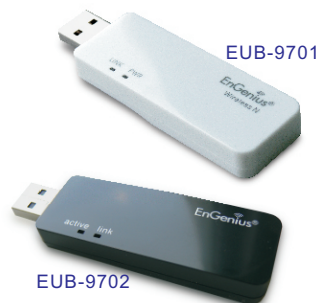


11b/g/n

Wireless-N Broadband Router

- * High speed data rate up to 300Mbps
- * Fully interoperable with IEEE802.11b/g/n devices
- * Built-in 4-Port 10/100 Switch
- * Support DNS/DDNS
- * Firewall supports Virtual Server Mapping, DMZ, IP Filter, ICMP Blocking, SPI
- * Support 802.1x authenticator, 802.11i (WPA/WPA2, AES)
- * VPN pass-thru mechanisms
- * Support WDS

EUB-9701/9702



11b/g/n

Wireless-N USB Dongle

- * 2.4GHz MIMO USB 2.0 adapter
- * Supports 2T x 2R radios (EUB-9701)
- * Supports 1T x 2R radios (EUB-9702)
- * Fully backward compatible with IEEE802.11b/g
- * WEP 64/128, WPA, WPA2 support
- * Operating system: WinXP, 2K, Vista, Linux, MAC
- * Qos-WMM, WMM-PS

EUB-9701 EXT2



11b/g/n

Wireless-N USB Adapter with 2 Detachable Antennas

- * 2.4GHz MIMO Premium USB 2.0 adapter
- * Supports 2T x 2R radios
- * With 2 detachable antennas enhancement (SMARF connector)
- * Fully backward compatible with IEEE802.11b/g
- * Operating system: WinXP, 2K, Vista, Linux, MAC
- * Qos-WMM, WMM-PS
- * Cisco CCX-V1.0, 2.0

EnGenius Home & Home Office

ESR-1220



11b/g

Wireless Broadband Router

- * 802.11b/g broadband Wi-Fi SOHO router.
- * RF output power up to 23dBm (11Mbps), 16dBm (54dBm).
- * Built-in 4-port 10/100M Switch with automatic cable type detection.
- * Advanced wireless security with WEP/WPA/WPA2
- * IEEE802.1x authentication.
- * MAC address filtering, Access control, NAT, firewall and VPN pass-through support.

EUB-3701 EXT



11b/g

Wireless USB Dongle with Detachable Antenna

- * USB 2.0 interface.
- * IEEE802.1x client support (TLS, TTLS, LEAP).
- * WPA/WPA2(IEEE802.11i), WEP 64/128 support.
- * WMM (IEEE802.11e) standard support, Wireless Multimedia Enhancements Quality of Service support (QoS).
- * Detachable Antenna
- * Windows 2000/XP/Vista and Mac OS

EUB-8301



11a/b/g

Wireless USB Dongle

- * USB 2.0 interface.
- * IEEE802.1x client support (TLS, TTLS, LEAP).
- * WMM (IEEE802.11e)
- * standard support, Wireless Multimedia Enhancements Quality of Service support * (QoS).
- * DFS/TPC support.
- * Low power consumption.
- * Windows Vista/XP/2K/ME/98 support.

ESG-8805/8808



5-Port/8-Port/10/100/1000 Gigabit Switch

- * 8-port 10/100/1000 Gigabit desktop switch.
- * 5-port 10/100/1000 Gigabit desktop switch.
- * Full duplex operation up to 2000Mbps.
- * Jumbo Frames (up to 9.6K), Maximize efficiency of transmission for giant packets.
- * Auto-negotiation.
- * Wall mountable.
- * Auto MDI/MDI-X crossover.

EPE-6818af



5-Port Desktop (10/100Mbps) Switch with 1 PoE Port

- * Power-over-Ethernet function and power sourcing equipment
- * Built-in 5-Port 10/100 Switch
- * One port supports 48V DC power to PoE powered device
- * Compliant to IEEE802.3af
- * Plug * Play
- * Best wiring extension partner

PoE & Surge Arrester

ESA-7500



Surge Arrester

- * Superior lightning and surge protection.
- * Compatible with Power-over-Ethernet (PoE).
- * Supports normal and reverse polarity PoE.

EPE-4818



PoE Injector

- * Delivers power over Ethernet cable.
- * Centralized power supply with each remote device.
- * Input: 48V/0.375A, with 18W power supply
- * Protects equipment from power surge.

EPE-5818af



PoE Injector(802.3af)

- * Delivers power over Ethernet cable.
- * Centralized power supply with each remote device.
- * Input: 48V/0.375A
- * Protects equipment from power surge.
- * Compliant to 802.3af standard PSE

EPD-5818



PoE Splitter(802.3af)

- * Compliant to 802.3af standard PSE
- * DC: 48V in, 12V power out to the device
- * For device that do not support PoE function

10/100/1000 Ethernet Switch

ESW-8816



16-Port 10/100 Ethernet Switch

- * IEEE802.3/802.3u/802.3x compatible
- * Supports TP interface Auto MDIX function for auto TX/RX swap
- * Automatic Source MAC Address Learning and Aging
- * LED indicators for diagnostics and management
- * Plug and Play

ESW-8824



24-Port 10/100 Ethernet Switch

- * IEEE802.3/802.3u/802.3x compatible
- * Supports Store and Forward architecture
- * Broadcast Storming Filter function
- * LED indicators for diagnostics and management
- * Plug and Play

ESW-8826



24-Port 10/100 + 2 Gigabit 1000BASE-TX Switch

- * IEEE802.3/802.3u/802.3x/802.3ab compatible
- * Supports TP interface Auto MDIX function for auto TX/RX swap
- * Back Pressure function for Half-duplex operation
- * LED indicators for diagnostics and management
- * Plug and Play

ESW-8228



L2 Management 24-Port 10/100 + 4 Gigabit 1000BASE-TX Switch

- * IEEE802.3/802.3u/802.3x/802.3ab/802.3z compatible
- * Supports 49 groups Port-Based VLAN and 512 groups 802.1q tag VLAN
- * Supports port mirror
- * Supports SFP (Mini GBIC)
- * Supports Spanning Tree and RSTP protocol
- * Supports IGMP snooping and IP stackable
- * Supports SNMP V1/V2, RMON MIB
- * Broadcast, Multi-cast and Flooded storm control

Why migrate to EnGenius Wireless Network?

Organisations are encouraged to migrate to EnGenius Wireless Network to increase employee productivity and efficiency, gain a competitive advantage and provide network users with a new level of freedom and flexibility.

Some of the major reasons customers are choosing to migrate to EnGenius Wireless Network include:

- Simplified WLAN deployment
- Low-cost management
- Reduced total cost of ownership (TCO)
- Performance
- Extended Connectivity
- Scalability
- Mobility
- Secure guest access
- Outdoor wireless Mesh networking
- Advanced Security feature

SUMMARY

EnGenius Wireless Network supports the industry's most comprehensive product line for enterprise WLANs. It combines the best elements of wireless and wired networking to deliver secure, scalable, high-performance WLANs with a low total cost of ownership.

EnGenius will evolve the EnGenius Wireless Network to support new business applications, WLAN technology developments and enterprise-class network demands.

VoIP Solution

VoIP Solution Application

Four IN One SOHO IAD

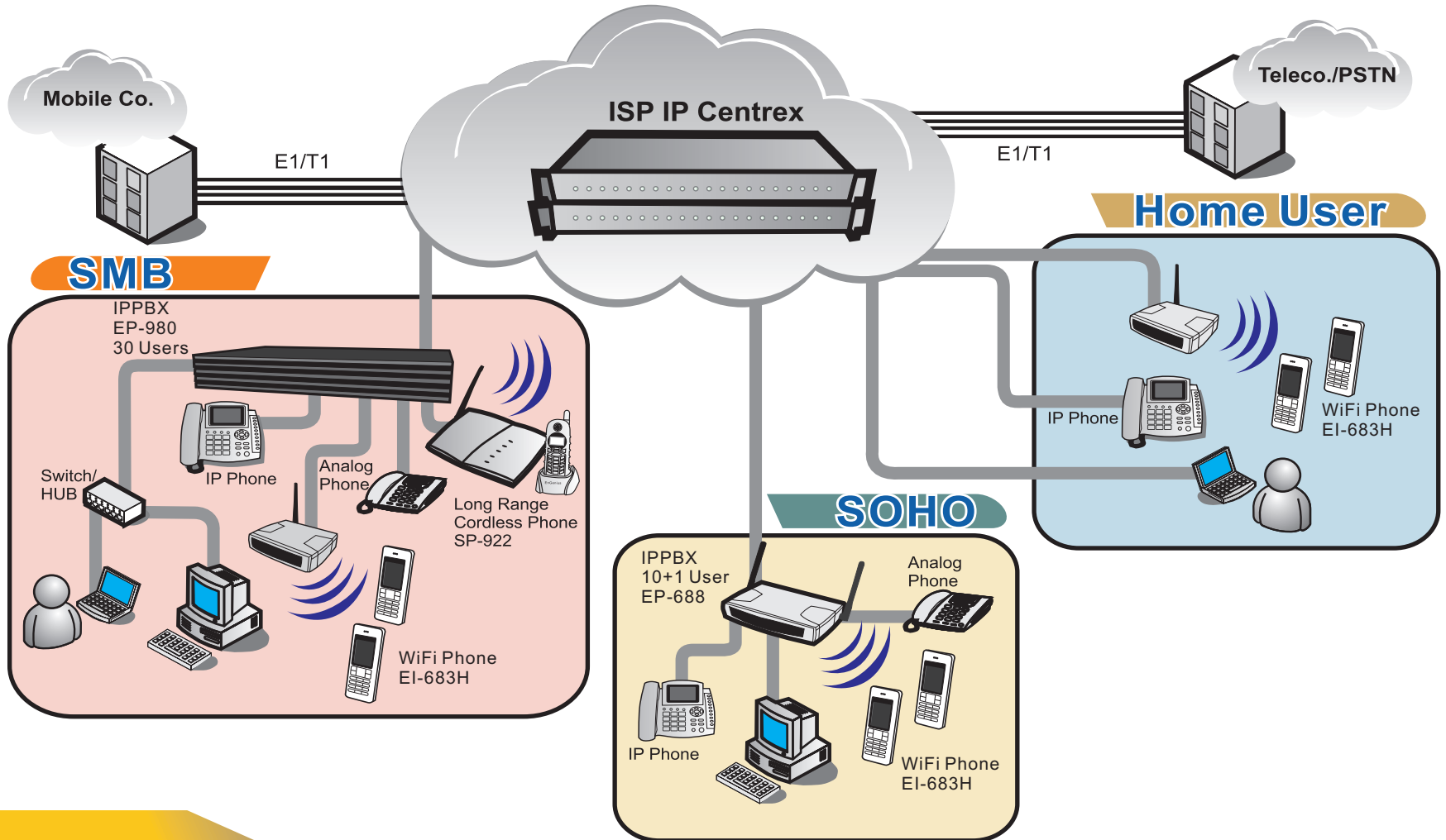
IP PBX-SME

WiFi Phone

Cordless Phone System

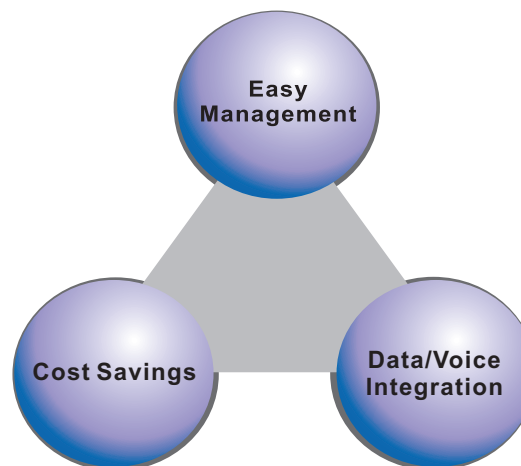
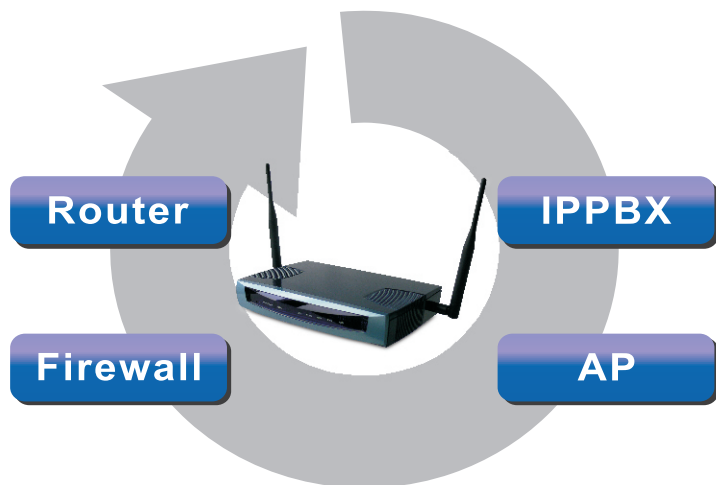
VoIP Solution Application

ISP IP Centrex Application Topology



EP-688 Four-In-One SOHO Integrated Access Device

The **EP-688** is the first wireless SOHO router integrated with Voice Over IP soft switch and advanced PBX features. The enriched router features give SOHO users easy connection either to internet or to another router using the same network.



SOHO Benefits

Money Saving

Cost Saving Through VoIP
Peer To Peer Free Call

Easy Setup/Management

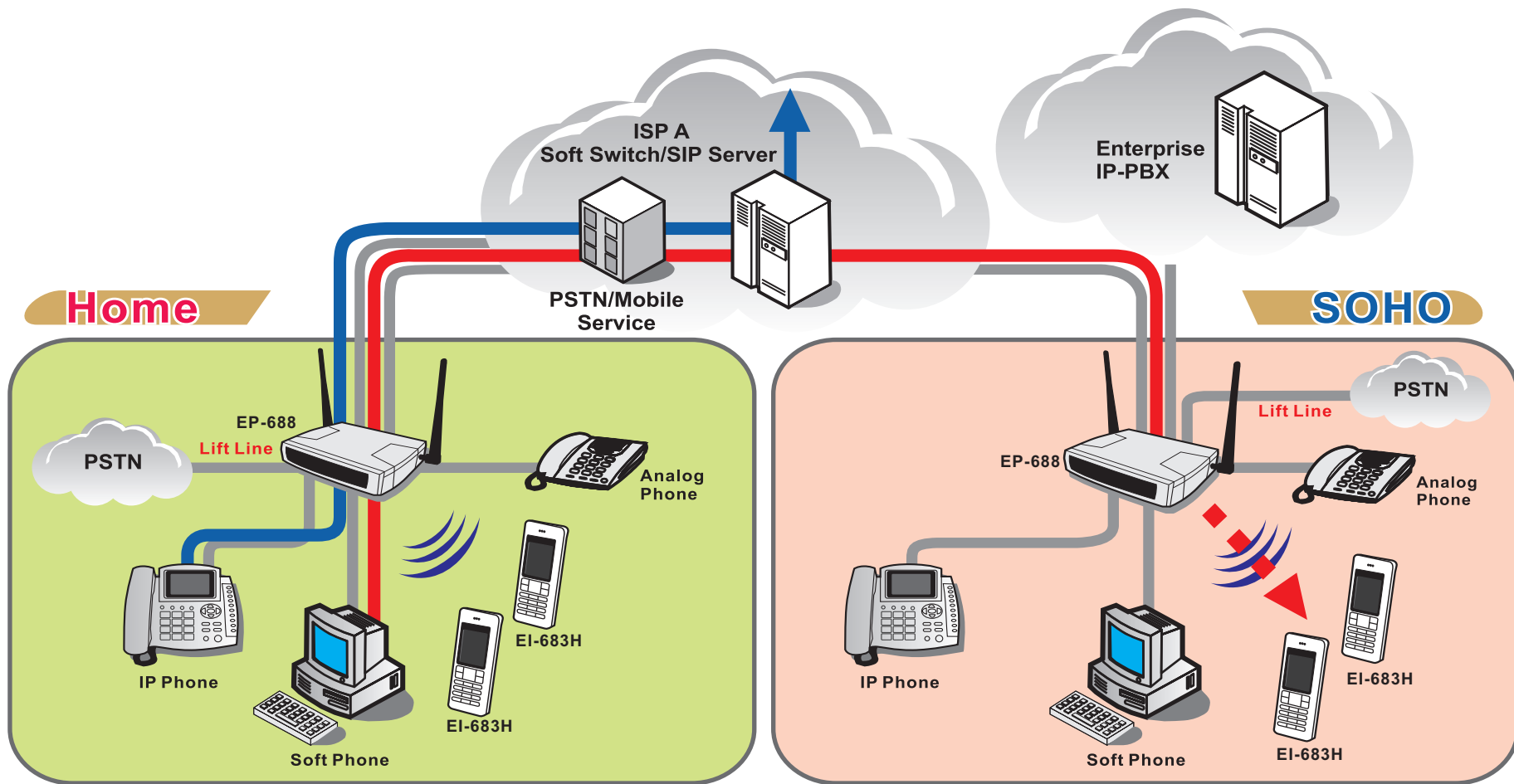
Smart Wizard Setup
Web GUI
Remote Configurable

Integrate Data/Voice

One Network For Office

EP-688 Four-In-One SOHO Integrated Access Device

Application



EP-688 Four-In-One SOHO Integrated Access Device

Specification

Item	Description	Specification
Telephony	FXS Port	1 FXS port for analog phone
	FXO Port	1 FXO port for PSTN (Life Line)
VoIP	Voice protocol	SIP V2 (RFC3261, 3262, 3263, 3264)
	SIP Features	SIP application server
		Proxy
		Registry
		Location server (RFC3263)
		STUN client (optional)
	VOIP users	10 + 1 registrations
		11 voicemail accounts
		Meet - Me conference room (3 users)
		Up to 5 out-bound SIP accounts
	Account Setting	User setting
		Group setting
		User and group list
		Voicemail (maximum internal capacity 30 minutes)
	VoIP Setting	Outbound SIP setting
		Dial plan setting
VoIP Information	Call monitor	
	SIP registry	
	SIP peers info	

Item	Description	Specification
VoIP	VoIP Information	Call detail record
	Management	Web based SIP call manager
	Call Routing	Smart routing rule
		Route by called number
	Codecs (Supported in FXS)	G.711a law, G.711u law G.729A
Codecs(Supported in IP phones)	G.711a law, G.711u law G.729A	
LAN	Number	1
	LAN port speeds	10/100 Mbps auto negotiation
	DHCP Servers	Three DHCP pools
		Dedicated IP addresses for designated clients (MAC)
	Connection list	
WAN	Number	1
	WAN port speeds	10/100 Mbps auto negotiation
	Connection Types	Static IP
		DHCP (clone MAC address for WAN included)
		PPPoE
	PPTP (optional)	
	Dynamic DNS	Support
Router	NAT	Many-to-one
	Port Forwarding	With scheduling function

EP-688 Four-In-One SOHO Integrated Access Device

Item	Description	Specification
Wireless	Wireless	IEEE802.11b/g
	Data Rate	802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps
		802.11b : 1, 2, 5.5 and 11 Mbps
	Frequency band	2.412~2.462GHz (US)
		2.412~2.484GHz (Japan)
		2.412~2.472GHz (Europe ETSI)
	Transmit power	Up to 20 or 23 dBm (high power)
Security	WPA / WPA2	
	WEP 64/128bit	
QoS	WMM	
Management/ Configuration	Interface	Management through WAN/ LAN/WLAN (full functions)
	Application Sys log	Web based management HTTP Web based
	FW upgrade	Via Browser and FTP
	Configurations	Backup and re-store via Browser
Application	NTP client	Supported
	NTP Daemon	Supported
	Autoprovisioning Server	For easy Wi Fi IP phone configuration/IP phone
	Mail client	For CDR reports
Storage	USB port	Support storing voice messages in USB flash disk

Item	Description	Specification
Router	ALG	Supported (FTP, IRC, NNS, PPTP, SNMP, TFTP)
	Port Triggering	With scheduling function
	Firewall	Block PING from WAN
		DMZ
	Filtering	MAC address filtering with scheduling function
		IP filtering with scheduling function
		Application filtering (P2P, MSN) with scheduling function
		Block sites URL- keyword blocking
	VPN	PPTP, IPSEC, L2TP pass through
	QoS	Priority queue (2 queue, IP port based)
Bandwidth allocation (VOIP and FTP)		
Firewall	Stateful Packet INSP	Supported
	IP/ TCP/UDP/ ICMP Related	LAND attack
		Zero length IP option Corrupted IP option Unknown IP protocol
		Smurf attack
Firewall	IP/ TCP/UDP/ ICMP Related	IP source route
		IP unaligned time
		IP spoofing

IP PBX - SMB

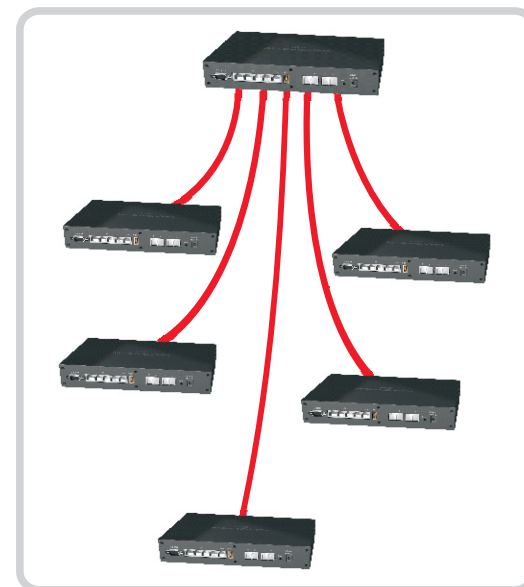
EP-980

Main Feature

- ▲ 10 Concurrent Calls
- ▲ 30 Users Registration
- ▲ 30 Voice Mail Accounts
- ▲ 2 FXO, 2 FXS or 4FXO/S
- ▲ Meet-Me Conference For 8 Parties
- ▲ 5 SIP-Trunk
- ▲ SIP Proxy Server
- ▲ Storage 256MB (For Voice Mail & Recording)
- ▲ 4 x LAN Ports and 1 x WAN Port
- ▲ Codec Support:G.723.1, G.729 a/b, G.711, G.726

PBX Feature

- ▲ Supports call hold, call waiting, 3-way call conference with feature phones
- ▲ Built-in in-line call transfer
- ▲ Unconditional, unavailable, busy call forwarding
- ▲ Per-calling-number forward and rejection
- ▲ Group-based call pick-up
- ▲ Multi-room meet-me conference
- ▲ Auto-attendant
- ▲ Voice mail system
- ▲ Call privilege grouping
- ▲ FXO interface for PSTN (inbound/outbound)
- ▲ Voice mail system
- ▲ Call privilege grouping
- ▲ FXO interface for PSTN
- ▲ Inbound/outbound
- ▲ FXO disconnection tone detection
- ▲ FXO hunt group
- ▲ Caller ID detection
- ▲ Echo cancellation
- ▲ Music on hold
- ▲ Direct line



5 SIP-Trunk

WiFi Phone

EI-683H

Main Feature

- ▲ Wireless: 802.11 b/g compliant
- ▲ 1.8" LCD display, 262K colors, TFT LCD (128 x 160)
- ▲ Language (display): support English, Japanese, Traditional Chinese, Simplified Chinese
- ▲ 60 hours standby time
- ▲ 2.5 hours talk time
- ▲ Audio supports :G 711 A-law/ μ -law, G729ab, G726,G723
- ▲ Calling features: Call Hold, Call Transfer, Call Forward, Call Mute
- ▲ Web authentication supports WEP 64/128 bits SSN/WPA, WISP/ Hotspot support
- ▲ Web Interface Configuration
- ▲ Phone book (100 records)
- ▲ Call History (30 records)
- ▲ Vibrator On/Off
- ▲ Speed dial (10 records)
- ▲ Ring Melody (RTTTL)
- ▲ Calendar



Auto-Provision customized & proprietary auto-provisioning flow

Digital Long Range Cordless Phone System

SP-922SG (DuraFon 4X)

Main Feature

- ▲ Longest range (5 km in open field/ 250,000 sq. feet in warehouse type environment)
- ▲ 4-line base unit
- ▲ 2-way intercom
- ▲ Broadcasting-direct announcement to all handsets or a group of handset
- ▲ Durable handset

Additional Features

- ▲ Auto-attendant
- ▲ 5 hours talk-time/ 80 hours stand-by time
- ▲ 9 programmable PBX soft keys
- ▲ Expandable up to 36 handsets per base
- ▲ Change battery while call is on hold
- ▲ Vibration mode
- ▲ Frequency hopping security-100 times per second
- ▲ Digital privacy and clarity
- ▲ Call transfer-announced or unannounced
- ▲ Keypad lock
- ▲ 30 names/ number speed dial directory
- ▲ Auto power management
- ▲ Call hold
- ▲ Mute/ flash/ last number redial
- ▲ Receive signal strength indicator
- ▲ 6 level volume control
- ▲ Touch any key to answer
- ▲ User-defined long distance dialing prefix
- ▲ Low battery alarm and display
- ▲ Hearing aid compatible
- ▲ Built-in 2.5mm headset jack
- ▲ Optional high gain outdoor antenna-sold separately





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