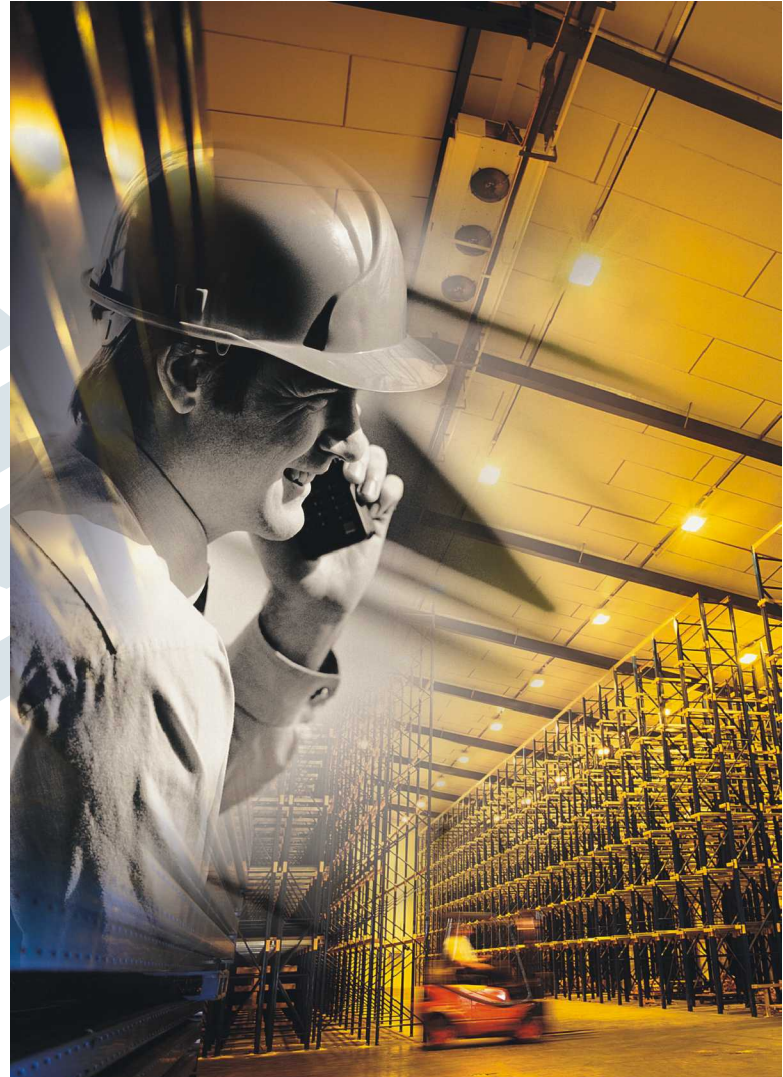# Wireless Communications
at anywhere, anytime

SENAO

Wireless Communication Partner
Long Range, Data & Voice Convergence

Founded in 1979, SENAO International Co., Ltd., has been publicly traded in the Taiwan stock market since 2001. Today, the SENAO group has 2 R&D labs, one in Taipei, another in Seattle, USA and 11 overseas sales offices in China, Singapore, Indonesia, India, Russia, UAE , Brazil, Mexico, USA, and Canada respectively. SENAO specializes in the supply, manufacturing, marketing and support for an array of wireless communications products that provide cost effective voice and data solutions.

Main Product Includes:
-Wireless PBX (WPBX)
-Long Range Cordless Telephone (LRCT)
-Wireless VoIP Telephony

Index

Wireless PBX

With sophisticated digital signal processing and high quality design, Senao wireless PBX (WPBX) system provides users unparallel mobility and flexibility in a wide variety of business settings, ranging from factories, hotels/resorts, convention facilities, warehouse, farms/ranches, multi-floor business complexes, construction sites, school/campus environment, car dealerships, and other demanding business environments.

Senao WPBX has been successfully introduced to many blue chip companies including Sears, FedEx, and Williamson Auto Center. Equip with Senao WPBX phone system, mobile workers enjoy the effective communication with mobile handsets which enable to stay in touch with their internal colleagues and external business partners.
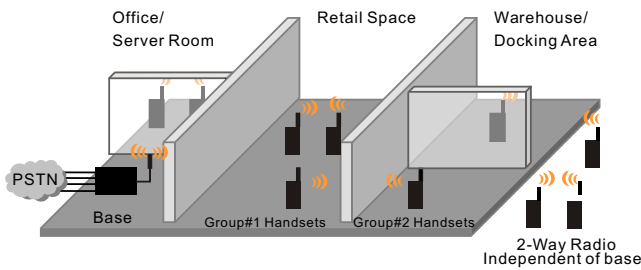
SENAO
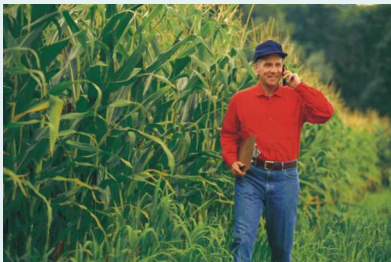
System Configuration

WPBX configurations can be either the "stand-alone" system to replace the traditional PBX system or "adjunct" system as the wireless extensions behind the tradition PBX system.

Stand-Alone System

Office/Server Room   Retail Space   Warehouse/Docking Area

PSTN

Base   Group#1 Handsets   Group#2 Handsets

2-Way Radio
Independent of base

Adjunct System

Server Room   Meeting Room   Office

PSTN

PBX   Base   Group#1 Handsets

Group#2 Handsets   Group#3 Handsets

Production Area   Warehouse/Docking Area
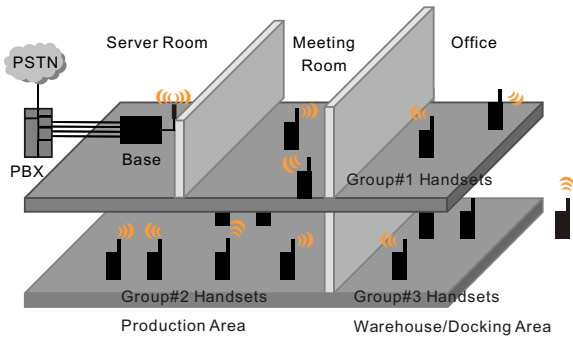
Product

Single-Line   4-Line

NEW

SN-1302   SR-436S   SP-932S/EP-490

Industrial Long Range Cordless Phone, 900MHz
SN-1302

Long Range: 160,0000 sq.Meter(250,000 sq. Feet)

- Simplex broadcasting
- 2-way radio, independent of base
- Expendable up to 4 lines (1 line per base), 36 handsets (9 handsets per base)
- Call manager program
- Handset ring vibrator
- Caller ID, call waiting, call transfer
- 30 name/number speed dial directory
- Rugged handset to enhance durability

NEW   Single-Line

FC

Wireless Long Range Phone System, 2.4GHz
SR-436S

Long Range: 4,0000 sq.Meter(62,500 sq. Feet)

- 2-way radio, independent of base
- Multi-handsets, expendable up to 90 handsets
- Value-added PBX functions:
  - -Auto-attendant
  - -Text messaging between handsets
  - -Built-in voice mail
  - -Three-way conference call
- Auto line-detection and line selection
- Excellent floor penetration, up to 6 floors
- Handset ring vibrator
- DTMF/FSK caller ID

4-Line

FC

Wireless Long Range Phone System, 900MHz
SP-932S/EP-490

Long Range:160,0000 sq.Meter(250,000 sq. Feet)

- 2-way radio, independent of base
- Multi-handsets, expendable up to 90 handsets
- Value-added PBX functions:
  - -Auto-attendant
  - -Text messaging between handsets
  - -Built-in voice mail (SP-932S only)
  - -Three-way conference call
- Auto line-detection and line selection
- Excellent floor penetration, up to 12 floors
- Handset ring vibrator
- DTMF/FSK caller ID
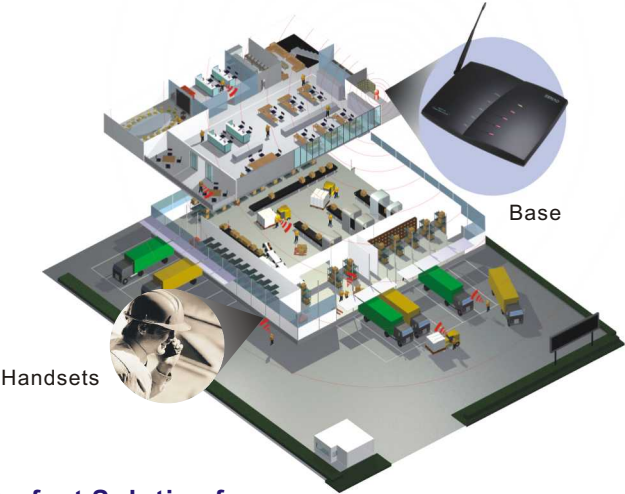- SP-932S: sliver / EP-490: black

4-Line

FC CE

* Actual range performance is subject to the application environments.

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Optional Accessories

Model	SR-436S	SP-932S/EP-490	SN-1302
Handset Kits	★	★	★
Rugged Case	★	★	
Leather Pouch	★	★	
Belt Clip	★	★	★
Battery	★	★	★
Headset	★	★	★
Audio-in Cable	★	★	★
Outdoor Antenna	★	★	★
Lightning Protector	★	★	★
Antenna Splitter W/ 3M cable	★	★	★

Application Scenario

Base

Handsets

Perfect Solution for

Manufacturing	Warehouse	Hotel/Education /Resort	Farm/Ranch

Instant communication: increase productivity **Prompt reply:** improve service quality **Keep in touch:** Enhance campus safety **Immediate respond:** Advance problem solving

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Long Range Cordless Phone

As the professional service provider for last-mile communications, Senao specializes in designing and manufacturing the industrial cordless phone system with excellent communication range and lots of value added features. Senao′s long range cordless phone series products with communication range from 15 to 150 km are the ideal solutions for users in an applications where need extra long ranges such as construction sites, oil fields, farms, or rural area with less telecommunication Infrastructure.

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System Application

Integrated local trucking network
Suitable for : Farm, Harbor, Forestry, Construction site, Oil field, Islands, Marine......etc.

Product

SN-1258

SN-458 RU

SN-358 RU PLUS

Booster

SN-258PLUS NEW-1

SN-568B

SN-868R
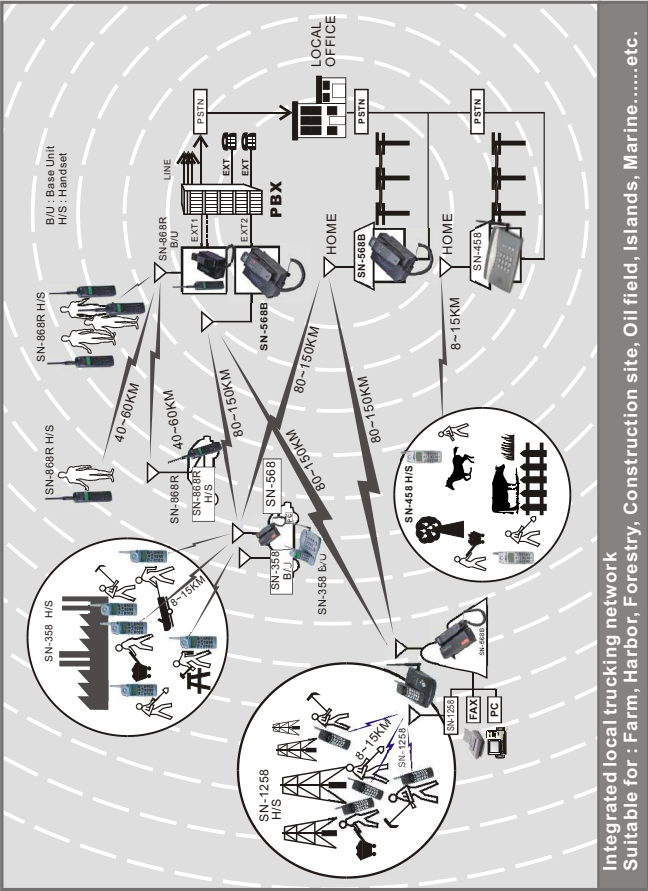
Extra Small and Smart Cordless Phone
SN-1258

Long Range: up to 15km in town

- Extra small handset (only 123x47x25mm) and base (150x116x45mm)
- Polyphonic Ring tones
- Walkie-talkie between handsets
- Multiple channel access
- Multiple handsets, up to 15
- Built-in scrambler for secure communication
- Keypad lock
- Group call
- 2-way paging and hands-free intercom
- Ring and voice volume adjustable

NEW

Polyphonic Ringtones

SN-1258 + Base booster

SN-1258 Only

| 0 | 5 | 15 | 20 | 25 | 30 | 35 (km) |
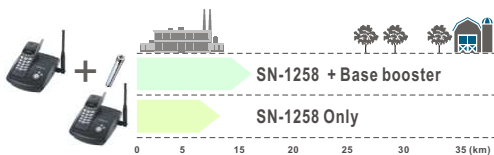
Compact & Lightweight Cordless Phone
SN-458 RU

Long Range: up to 15km in town

- Compact and lightweight handset: only 103g, thin and small
- Personalize handset screen display
- 6-color LCD screens for 6 caller groups
- Built-in booster in base for perfect range performance
- Handset ring vibrator
- User friendly interface with up/down scrolling key for menu selection
- Multi-language display
- Multiple handsets, up to 99
- Walkie-talkie between handsets
- 50 phone book memory
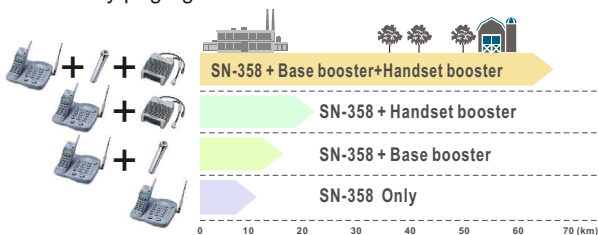- Speakerphone and dial keypad on the base

Cordless Phone for Mobile Conference
SN-358RU PLUS

Long Range: up to 15km in town

- Support H358B RU PLUS SLIC booster for
  point to point application
- Handset screen and keypad with backlight
- Speakerphone for handset and base
- Smart switch: menu access with one thumb
- Pocket size handset: only 176g
- Walkie-talkie between handsets
- Multi-language display
- Multiple channel access
- Multiple handsets, up to 99
- Built-in scrambler for secure communication
- 30 caller ID memory with time/date (FSK & DTMF)
- 50 phone book memory
- Two-way paging and hands free intercom

Handset with
Backlight

SN-358 + Base booster+Handset booster

SN-358 + Handset booster

SN-358 + Base booster

SN-358 Only

0   10   20   30   40   50   60   70 (km)

Booster
Base Booster/ Handset Booster

Extend the operating range

- Embedded SLIC to link fax machine,
  modem, and corded phone
  (only for SN-H358B RU PLUS)
- Extend communications coverage
- Die-casting cover provides efficient
  heat radiation

Booster for Base		
Booster	Compatible with	
SN-B358B NEW	SN-358, SN-1258, SN-258PLUS NEW/ SPORT	
SN-B358B RU	SN-358 RU, SN-358 RU PLUS	
Booster for Handset Unit		
Booster	Compatible with	
SN-H358B RU	SN-358 RU	
SN-H358B RU PLUS(W/SLIC) (for Point-to-Point)	SN-358 RU PLUS	

Long Range Cordless Phone
SN-258 PLUS NEW-1

Long Range: up to 15km in town

- Walkie-talkie between handsets
- Multiple channel access
- Multiple handsets, up to 15
- Built-in scrambler for secure communication
- Keypad lock
- Group call
- 2-way paging and hands-free intercom
- Ring and voice volume adjustable

Point-to-point Long Range Cordless Phone
SN-568B

Long Range: 80-150km in town

- Mobile unit with built-in PSTN interface for fax machine and repeater connection
- Ring and voice volume adjustable
- Handset ring vibrator
- Base with speakerphone and handhold phone
- 2-way paging and hands-free intercom

Longest Talk Time Cordless Phone
SN-868R

Long Range: 40-60km in town

- Multiple handsets, up to 9
- Multiple base system
- 2-way paging and hands-free intercom
- Handset ring vibrator
- 3-way conference

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Optional Accessories

Optional Accessories	SN-458	SN-358 RU PLUS	SN-1258	SN-568B	SN-868R
Handset Kits (w/ Charger)	★	★			
Handset Kits (w/ TravelCharger)			★		
Charger Kit (w/ ACAdapter)	★	★	★		
Charger (Charging Cradle)	★	★	★		★
Travel Charger	★	★	★		
Vehicle Charger (CigaretteAdaptor)	★	★	★	★	★
Battery	★	★	★		★
Leather Pouch	★	★	★	★	★
Ear-microphone (Headset)	★	★	★		★
Ear Phone Jack		★			
Base AC Adaptor	★	★	★		
Charger AC Adaptor	★	★	★		
Base Booster		★	★		
Handset Booster		★			
Base Antenna	★	★	★	★	★
Handset Telescopic Antenna	★	★	★	★	★
Handset Rubber Antenna				★	★
Outdoor Antenna	★	★	★	★	★
Car Antenna				★	★

Specification Summary

Functions	SN-458	SN-358 RU PLUS	SN-1258	SN-568B	SN-868R
Communication Range (in Town)	8-15km	8-15km	8-15km	60-150km	40-60km
Frequency	307/343MHz	307/343MHz	262/388MHz	254/380MHz	307/343MHz
Multi-Channel Access	★	★	★	★	★
Auto Channel Scanning	★	★	★	★	★
Change Channel during Conversation	★	★	★	★	★
Multi-Handset	Up to 99	Up to 99	Up to 15	Up to 9	Up to 9
Multi-Base	★	★	★		★
Walkie-Talkie between H/S	★	★	★		
Group Call	★	★	★		
Speakerphone	B/U	B/U & H/S		B/U & H/S	B/U
Base with Keypad	★	★		Coded Phone	Coded Phone
Battery Type	Li-ION	Hi-MH (Standard) Li-ION (Optional)	Ni-MH		Ni-MH
Booster	Built-in on B/U	Optional for B/U & H/S	Optional for B/U		
2-Way Paging and Hands-Free Intercom	★	★	★		
Ring Vibrator	★	Optional	Optional		★
Ringtone Selection	B/U: 10 H/S: 12	B/U: 10 H/S: 15	9 (Polyphonic)	9	9
Ringer Volume Control	★	★	★	★	★
Voice Volume Control	★	★	★	★	★
Keypad Lock	★	★	★	★	★
Handset with Backlight	★	★		★	★
LCD Color Selection	★		★		
LCD Color with Caller ID	★				
Caller ID	30 (FSK & DTMF)	30 (FSK & DTMF)			
Call Waiting	with Caller ID	with Caller ID		★	★
Call Transfer	★	★	★	★	★
Redial	B/U: Last 1 H/S: Last 10	B/U: Last 1 H/S: Last 10	Last 1	Last 1	Last 1
Memory Dial	20	20	10	10	10
Phonebook	50	50			
Out of Range Alert	★	★	★	★	★
Flash Time Programmable	★	★	★	★	★
Voice Scramble	★	★	★	★	★
Compander	★	★	★	★	★
Power Level Adjustable	H/S	H/S		B/U & P/U	B/U & H/S
Dimensions (LxWxH mm)	B/U: 244x167x66 H/S: 125x44x20	B/U: 172x158x93 H/S: 130x48x30	B/U: 150x116x45 H/S: 123x47x25	B/U: 258x140x165 P/U: 208x140x88	B/U: 225x140x130 H/S: 165x43x52
Weight	B/U: 832g H/S: 103g	B/U: 470g H/S: 176g	B/U: 380g H/S: 140g	B/U: 4000g P/U: 3000g	B/U: 3800g H/S: 400g

B/U: Base Unit
H/S: Handset
P/U: Portable Unit

Wireless VoIP Telephony

Senao Wireless VoIP solutions provide supreme flexibility for fast-changing organizations-enabling them to easily redeploy or expand the workforce without the substantial delays and expense of installing cable.

Leverage Senao's core competence RF design and expertise in cordless device, Senao aim to deliver the best-in-class wireless IP phone series products to improve internal operation and enhance cost effective communication. Besides, migrate to IP telephony can help company to save lots of money regarding long distance and international calls.
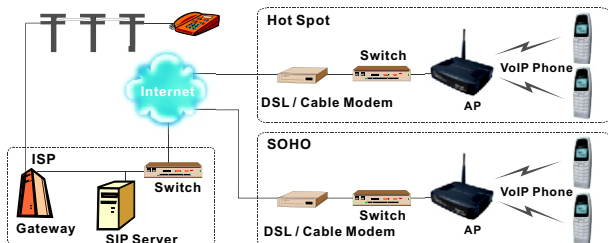
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System Configuration
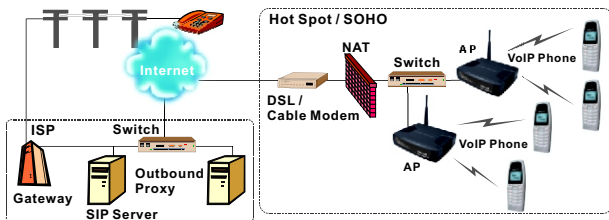
Enterprise
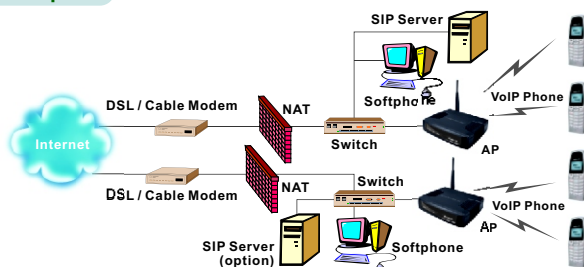
Hot Spot / SOHO (Public IP)

Hot Spot / SOHO (Private IP)

Product

SI-7800H   SI-7800B

Wireless VoIP Phone (WiFi Phone)
SI-7800H

Network Features

- QoS -Proprietary EDCF
- Hand Over -Among APs in the same subnet
- Security - WEP (64/128bits), WPA-PSK
- SIP Network Protocol Support
- G.711, G729ab, G726 codecs with echo cancellation
- IEEE802.11b, Dynamic Rate Scaling at 1, 2, 5.5, 11
- Frequency Range: 2.4-2.497GHz

Phone Features

- 100+ hours standby time and 4 hours talk time
- Hands-free by earphone or speakerphone
- 50 phonebook records
- Volume control for speakerphone and ringer
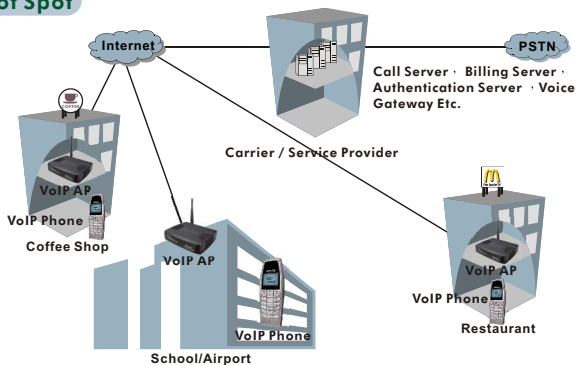- Multi-languages support
- Keypad lock
- RF output power management

Call Features
- Call Setup
- Call Transfer
- Call Mute
- Call Hold
- Call Forward
- Multiple Calls Handling

System Application

Hot Spot

Wireless VoIP Access Point
SI-7800B

General
· Data Rates 1/2/5.5/11 Mbps
· Standards IEEE 802.11b (2.4GHz)
· CSMA/CA
· Modulation DQPSK/DBPSK/CCK
· Transmit Power Control (20mW~100mW)

Management
· SNMP (MIB II)
· HTTP Server
· Serial Console
· Telnet

Networking Functions
· DHCP Server
· DHCP Client
· TFTP Client

Security
· Access Control List
· WEP (64/128bits), WPA
· 802.1x
· Authorization Levels

Quality of Service
· Proprietary EDCF

Roaming
· InterAccess Point Protocol (IAPP)
· Proprietary Layer 3 Handover

SOHO