

Small Office Pack “ S.O.P ”

Product Specification

V.04



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1. Overview

This Small Office Pack solution (same as S.O.P) includes one 4 port (FXO) IP PBX (Model: 4604-SOP) via IP Phone (Model: Mercury 2130 or 2131) with Maximum party of 30 which can support Small office size from 4 up to 30 employees.

However, the intensions of this "S.O.P" are: i. Replace the existing analog system PBX/KTS which is available today ii. Cost saving iii. Bring advance features that regular analog PBX can't accomplish alone.

However, there are differentiations as setup environments between current analog PBX and IP-PBX which small office customers usually have bias view on the complexity of IP-PBX installations. This bias will probably lead the adoption of IP-PBX to grow slowly. Thus, how to simplify the installation for IP-PBX will be the key to bring such solution to small office market.

Why S.O.P?

Small business user characteristics:

- No enough knowledge about IP or telephony system
- No MIS staffs in house
- No dedicated server room or telecom room
- No intension to spend time learning, installing & maintaining
- No knowledge to configure the system
- No need to purchase additional network equipments
- No idea for how to construct their network architecture

Our approaches

- Solution pack for IP-PBX & IP Phone, No Inter-operability Issues
- Fully auto-configurable & extremely easy-to-install
- No additional network equipments needed
- No need to change any existing network environment
- Straightforward user operation and simple as plug & play

2. How Do We Make It Happen?

1 Focusing on small office user needs

- 1.1 System functions are specially designed for small office users
- 1.2 Physical product size are designed for small business
- 1.3 Straightforward installation process as plug & play
- 1.4 Economic model to lower small business's budgeting for telephony equipments

2 Fully auto-configurable & extremely easy-to-install

- 2.1 Adaptive network architecture
If customer has a functional IP environment, SOP will leverage customer's DHCP; if do not, SOP will generate an IP environment itself and will not effect customer network. Customers do not need to know anything about IP networking.
- 2.2 Auto-provisioning
No matter customers plug in an IP phone while first installing or add more IP phones when company growths, SOP will assign phone numbers, config IP phones, and make system work automatically. Customers do not need to know anything about SIP, and can add more IP phone in any time they want.

3 Do not need to add any new network equipment or change any existing network environment

- 3.1 All components of SOP provide 2 Fast Ethernet ports, which mean you can keep the same network topology, and fully leverage existing network. Customers do not need to add any new switches.
- 3.2 SOP works whether Internet is accessible or not. Customers don't have to change their router and firewall setting unless they want to make IP call to ITSP.

4 Imitate Features as Key phone system

4.1 Multiple Line appearance(Maximum of 4 CO Lines)

IP Phone call features are just like traditional key phone, but are more flexible to use, more scalable to add phones, with more functions, and with bigger capacity.

4.2 Call by name

Users can insert their name in the phone, and save it in the phone book which will be generated and exchanged by system. Then users can dial out from the phone book directory. The callee will also be able to receive the caller's name and display on the LCD.

4.3 Call Transfer

Unlike other IP-PBX solution, our system is easy to operate, the call can be automatically transfer after user had pressed the extension number and doesn't need to wait for dial tone or callee to pick up the call.

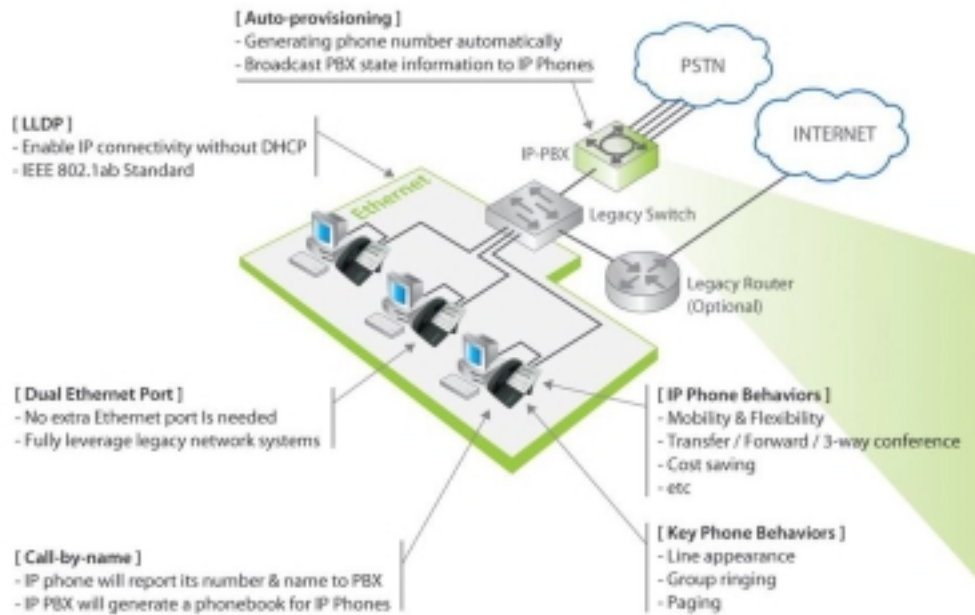
4.4 Paging

Any extension number can broadcast all the other extension phone when is not occupied.

3. Environments Setup

Under LAN/WAN Environment Architectures

This solution will support maximum of 30 IP phones, simultaneously. End customers only need to connect all devices to their LAN by plugging Ethernet cable to their switch, and do not need any computers, network environments as DHCP, NAT, or WAN.

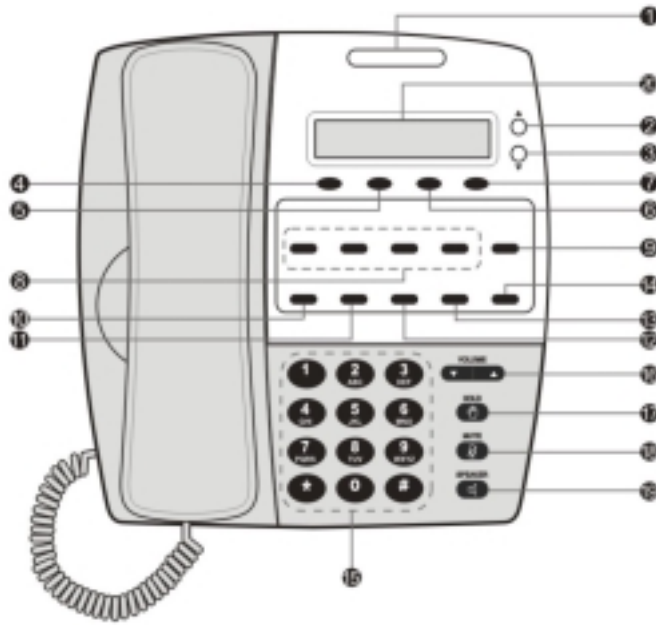


4. S.O.P Product Specifications

4.1 Model number & features

Solution Model No.	IP-Phone	1. Mercury 2130(with external Power Adapter Only) 2. Mercury 2131(with PoE Only)
	IP-PBX	4604-SOP
Solution Network Features	Protocol (SIP)	RFC 3261
	Solution Codec	G.729
	Solution IP Address Support	DHCP/LLDP
	Echo Cancellation	G.168
	Number of CO Line(FXO)	Max. to 4
	Maximum of users	30
	Concurrent Call	Max. to 24

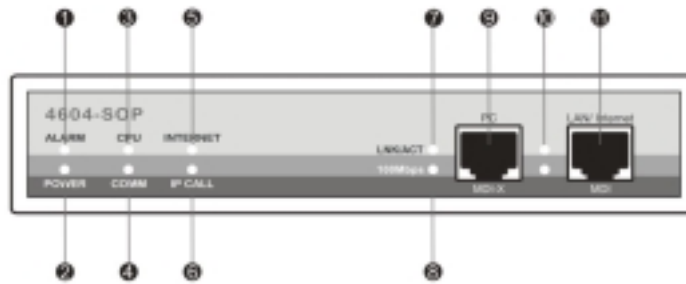
Design



Phone's Functional Key's definition

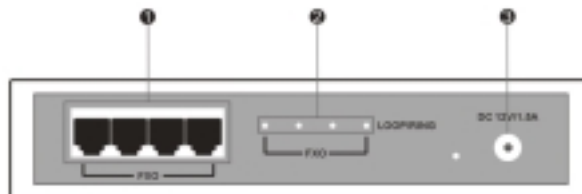
1	Call Indicator	This LED will flash when there's incoming call.
2	'Up' Key	Move cursor up (in menu)
3	'Down' Key	Move cursor down (in menu)
4	'Menu' Key	Enter the phone's main menu or exits from a sub-menu
5	'Delete' Key	Delete an entered character
6	'Select' Key	Enter a sub-menu
7	'Confirm' Key	Save changes when you're entering text / number
8	Line 1~4 Key	Keys for 4 landlines activation
9	IP Call	SIP Call (via IP gateway)
10	Redial	Dial last dialed number
11	Transfer	Transfer an active call to another phone
12	Conference	Activate three-way conference
13	Paging	Broadcast voice messages
14	Privacy	Mute ringer sound
15	Number Keys and * # Keys	Input number 0~9, *, and #
16	Volume (Up and Down)	Increases (Up) and decreases (Down) handset, speaker, or ringer's volume
17	'Hold' Key	Holds (keeps) an active phone call
18	'Mute' Key	Switches the microphone off temporarily
19	'Speaker' Key	Activate speakerphone mode
20	LCD Display	User can see the status & information from the LCM display

IP PBX Status Indications(Front)



1	ALARM LED	Indication if there is issue occurring for SOP system
2	POWER LED	Indication of SOP power system
3	CPU LED	Indication of SOP operation status
4	COMM LED	Indication if S.O.P. system is communicating with remote system via network connection
5	INTERNET LED	Indication of Internet connection
6	IP CALL LED	Indicating status of the IP Call. Green means active
7	Link / ACT (PC)	PC port's Internet linking indication status
8	100Mbps (PC)	PC port 10/100Mbps indication status.
9	'PC' Port	This Ethernet port provides Ethernet connection to your existing Ethernet devices like desktop or laptop computer
10	'LAN/Internet' Port	LAN port's Internet linking indication status
11	100Mbps (LAN / Internet)	LAN port's 10/100Mbps indication status

IP PBX Status Indications(Back)




1	FXO Jack	The S.O.P. system provides 4 FXO RJ-11 ports
2	FXO (LED)	Reporting FXO port status.
3	DC 12V/1.5A Jack	Insert power adapter plug to provide the S.O.P. system with electrical power.

Call Feature	Direct Outward Dial	V
	Call Conference (Maximum of 6 rooms for 3-way Conference)	V
	Call Transfer	V
	Call Forward	V
	Call Mute	v
	Call Hold	v
	Paging	v
	Privacy	v
	Redial	v
	Dial by name (from Phone Book or Call Records)	v
Caller ID's Feature	Caller ID Display	v
	Caller Name Display for Intercom	v
IP-PBX Features	Music on Hold	v
	Auto attendant/Ring Group Modes	v
	Voicemail	Store Maximum of 120 mins
	Auto-generated Phone Book	Maximum of 30 internal extension
	Date/Time Setting	Local Setting or Sync with the PBX
	Maintenance Firmware Upgrade	Local Upgrade by PC
IP-Phone additional Features	Call Records(Miss, Dialed, Received)	10 records for each
	Menu Setup features include:	<ol style="list-style-type: none"> 1. Change extension number 2. Change User Name 3. Review Phone Book 4. View Call records/make calls from the call records 5. Change Ringer Type 6. Date & time Setting 7. View Phone firmware version
	Hands-free Speakerphone	Half-duplex
	Selectable Ringers	3 types
	Engineering Mode features include: < Configurable through IP-Phone>	<ol style="list-style-type: none"> 1. Time Synchronization 2. Auto-Attendant On/Off 3. IP call Settings 4. Cold/Warm Restart IP-PBX
	Maintenance Firmware Upgrade	Local Upgrade by PC

4.2 Hardware Specifications

4.2.1 IP-Phone

Design		
	Color	Black
	Type	Desktop
	Dimension(L x W x H):	210 x 190 x 150mm
	Weight	1.8lbs(~0.8kg)
Display	Mono Display	16*2 Characters
Physical Interface	Ethernet Port	10/100 Fast Ethernet 2 Ports (1 for LAN and 1 for PC)
	DC Jack	□ v
	Handset Jack	v
Power	Normal	Input 5V, 1.2A Power consumption< 3W
	PoE(48V, compliant with 802.3af)	1. Mercury 2130(with external Power Adapter Only) 2. Mercury 2131(with PoE Only)
Accessories	Gift Box: Brown Card board	1pc
	Ethernet Cable: CAT 5, 6 Ft.	1pc
	Handset	1pc
	Handset Cord	1pc
	Power Adapter: 5V, 1.2A Voltage: 110~240VAC	1pc
Environmental	Operation Temperature:	0 ~ 40 °C
	Operation Humidity:	< 95%
	Storage Temperature:	-10°C~60°C
	Storage Humidity	10%~90%
Compliance & Safety requirement	FCC, UL, VCCI, JATE, CE, CCC, CB	v

4.2.2 IP-PBX

Design



Design	Color	Black
	Type	Desktop
	Dimension	172 x 35 x 176mm
	Weight	0.8kg
Physical Interface	CO Line(FXO Ports)	4
	DC Jack	1
	Ethernet Port: 10/100 Fast Ethernet	2 Ports (1 for LAN and 1 for PC)
Power	Normal	12V, 1.5A(Power Consumption: 12W) Voltage 100VAC~240VC
Accessories	Gift-Box: Brown Card board	1pc
	Ethernet Cable: CAT 5, 6 Ft.	1pc
	PSTN Cables: 6Ft	4 pcs
	Quick user installation Guide	1pc
	CD(includes user manual & the PC software upgrade exe file)	1 pc
	External Power Adapter(12V, 1.5A)	1pc
Environmental	Operation Temperature:	0 ~ 40 °C
	Operation Humidity:	< 95%
	Storage Temperature:	-10 to 70°C
Compliance, Safety & Telecom Fulfillments	FCC Part 15 & Part 68, UL/cUL, CE, CB, NCC, MII	v

5. Package

5.1 Starter Kit

Item	Description	Qty
1	IP-PBX Full Package	1
2	IP-Phone Full Package	4
3	Middle Carton for (IP-PBX*1 & IP-Phone*4)	1