

# InnoMedia

## iPBX-412 Quick Install Guide



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## Introduction

This document describes the ways to

- install iPBX in your corporate network
- create extension numbers, and assign devices to users
- configure SIP trunk lines with an ITSP
- verify communications

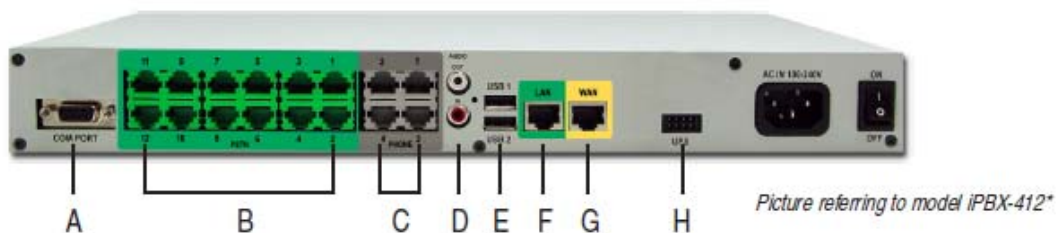


Figure 1. Hardware Interface

- A. COM port
- B. 12 FXO port for PSTN connection
- C. 4FXS ports for legacy analog devices
- D. 1 Audio In for MOH, 1 Audio Out for overhead paging
- E. 2 USB host ports, for system restore/backup
- F. 1 LANports for up to 256IP phones
- G. 1 WANport
- H. 1 UPS for battery backup

## Install iPBX in your corporate network

### Step 1 - Connecting Panel Ports

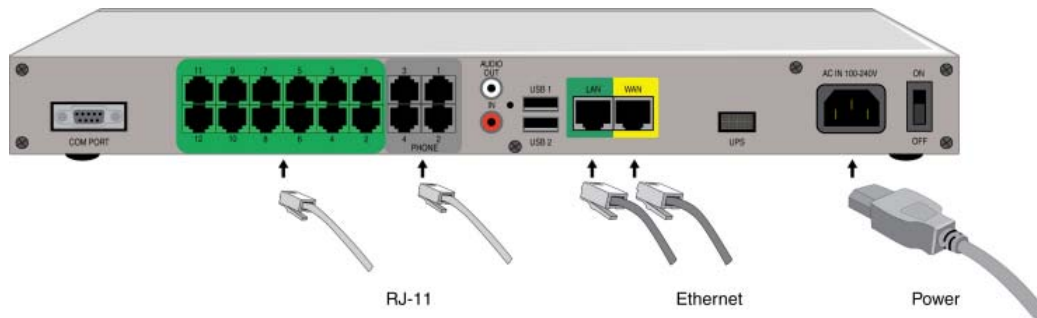


Figure 2 iPBX Hardware interface port

- 1. Connect the power cord to the iPBX.**

Connect the power cord to the iPBX and power on iPBX. The Power LED will then turn ON.

- 2. Connecting the LAN Port**

Connect iPBX LAN interface to the hub or switch that is connected to your internal network using RJ-45 Ethernet cable. The LAN indicator LED should glow, if the LAN port is successfully connected to the local network.

- 3. Connecting the WAN Port**

Connect iPBX WAN interface to the Internet router or Internet access device by a RJ45 Ethernet cable. The WAN indicator Led should glow, if the WAN port is successfully connected to the Internet.

- 4. Connecting the FXS Ports**

Connect analog devices such as phones, FAX, or low speed modem (such as credit card reader) to the FXS ports of iPBX via RJ-11 cables.

- 5. Connecting the FXO Ports (only available at model iPBX-412).**

Connect external PSTN lines to FXO ports on the back panel of the iPBX-412 via RJ11 cables.

## Step 2 – Check the administrative computer that configures iPBX

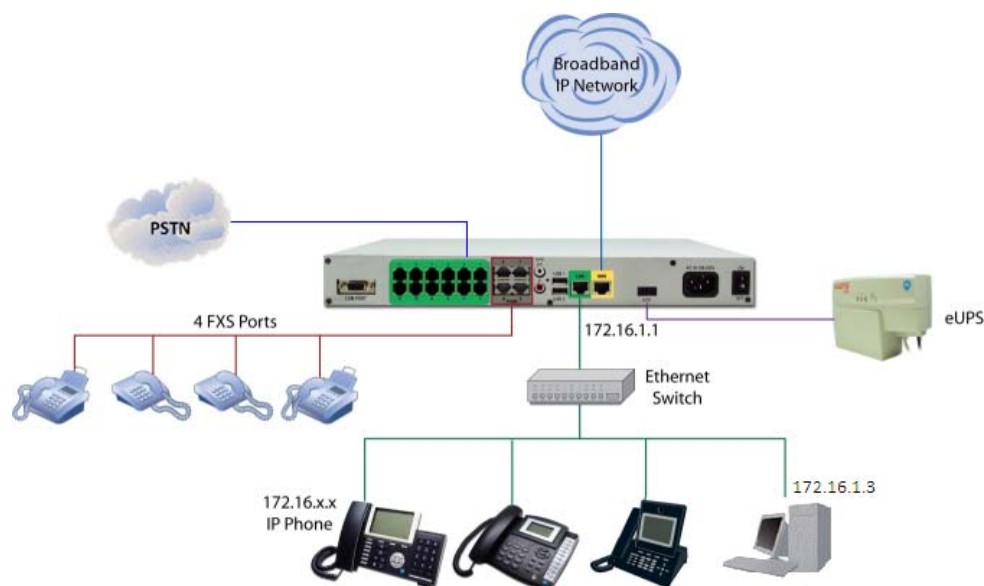


Figure 3 iPBX Network Placement (the picture is of model iPBX-412)

The iPBX configuration described in the Installation guide is for when the iPBX is residing on a corporate network which is behind an existing corporate firewall. For other placements of iPBX in the corporate network such as on DMZ or public network, please refer to the Administration manual (which can be obtained from your contact at InnoMedia).

1. The default LAN IP of iPBX is 172.16.1.1 with the Subnet Mask of 255.255.0.0. The iPBX should be placed on the same LAN segment where your IP phones will reside.
2. Configure your PC with appropriate IP address (i.e., 172.16.1.3) within the same subnet as iPBX.
3. Connect iPBX LAN port to the administrative computer.

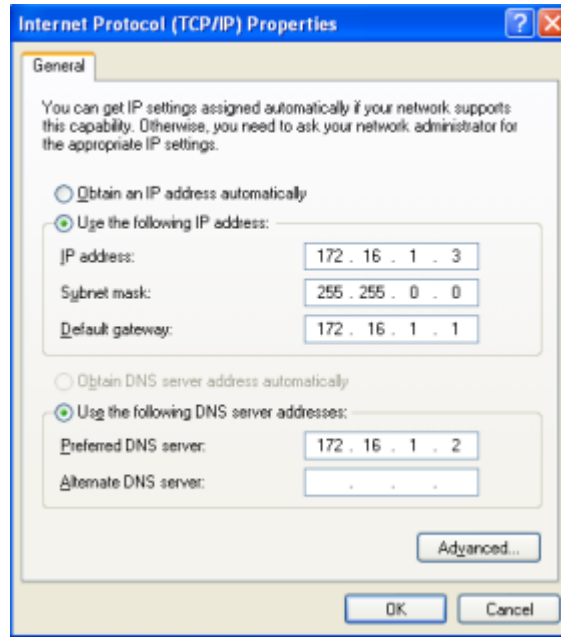


Figure 4. Configuring the IP address of the administrative computer

### Step 3 - Configuring Network – LAN

Start your web browser, and enter “<http://172.16.1.1>” in the Address field to connect to the iPBX. The login page will appear. The default User Name is “**admin**” and the Password is “**123**”. Click the <Login> button to enter the iPBX home page.

A static IP address should be manually assigned to the server to avoid unexpected IP address changes, which may result in a loss of connectivity. You should avoid DHCP for iPBX LAN IP obtaining if possible.

1. To change the LAN settings, go to the page at “Network → Settings → LAN.
2. Give an appropriate static private IP address and associated netmask value that you will assign to iPBX. For example, LAN private IP address for iPBX is “172.16.20.33” with associated netmask as “255.255.255.0”. In any case, you should check the network configurations of your organization.
3. iPBX automatically reboots after you change the LAN IP address.

### Step 4 - Configuring Network – Internet connection

1. Login to iPBX admin web console.
2. To change the WAN settings, go to the page at “Network → Settings → Internet Connection”.



3. Choose one Internet connection type from the 'Connection Type' drop-down list, such as PPPoE, DHCP Client or Static IP.
4. Enter the required information provided by your ISP in the corresponding fields or use any of default values. Click the <Apply> button.
5. If the WAN is successfully configured to connect to the Internet, the "Connection Status" should display "Connected".

## Step 5 - Configuring iPBX DHCP Server

IP-Phone and iPBX must connect to same subnet.

1. Go to the page of "*Network → Settings → DHCP*".
2. Make sure the "Starting IP Address" and "Ending IP Address" are configured to a proper range.
3. If you desire the iPBX to manage the IP address of only the IP Phones then check, "Only for managed devices". Otherwise if you need the iPBX to manage the IP address for both IP Phone's and computers on the LAN, then ensure that "Only for managed devices" is unchecked.
4. Check the "Enabled" check box and click the <Apply> button.
5. When the above configurations take effect the iPBX will start to manage and provision the connected IP phone devices.

## Adding Phones to iPBX

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### Adding IP Phones to iPBX

There are two options to add IP Phones to iPBX.

Option A. Adding IP Phones in the auto discovery mode.

1. Connect IP Phones to local network and power them on. Be sure IP Phones are at the same subnet with iPBX and WAN connection of IP Phones are set to DHCP mode. (Please refer to the iPBX Web page "*System → Provisioning → Device Provisioning*" for the latest certified device model list)



2. Go to the page of *Telephony → Settings → Devices*, and click the **<Discover>** button and then the new devices will appear in device list on the web page.

Option B. Adding IP Phones and configuring associated extensions in a batch mode.


Configuring IP Phones, users, and associated extensions can be done through importing the corporate IP telephony plan file in CSV format. Please refer the steps from the iPBX administrative guide.

### Configuring Analog Phone connecting to iPBX FXS ports

1. Go to the page of *Telephony → Settings → Analog phones*
2. The extension numbers assigned to FXS ports are preconfigured at iPBX from 10 to 13. You may change the extension numbers according to your telephony plan.

### Configure SIP trunk lines with an ITSP

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1. To configure a VoIP trunk, go to the page of *Telephony → Settings → VoIP Trunks*.
  - a) Click the button **"Profile Config"**, the **"Profile Configuration"** screen will appear.
  - b) Click the "Profile1" tab, enter the SIP Server IP address provided by your ITSP in the SIP Proxy "HOST" field, and if ITSP happens to have a SIP Domain, then enter that to "SIP DOMAIN" field as well.
  - c) Click the button **<Apply>** then finish.
2. To configure SIP account, back to the page of *"Telephony → Settings → VoIP Trunks"*.
  - a) Click one VoIP trunk line from the list. The settings are displayed in the edit section at the bottom of the page.
  - b) Enter "User ID", "Auth ID", "Auth Password", select the profile you just configured, and check the "Enabled" check box. Click **<apply icon  >** to activate this trunk line.
3. If VoIP Trunk registers successfully, the status icon of this VoIP trunk will become Green.



## Verifying Communications

To monitor the on going call sessions, go to the page at **Telephony**→ **Monitor**→**View Mode**".

Default telephony plan of iPBX is listed in the following table.

Description	Default Value
Extension number of Analog Phone (FXS)	10 to 13
Extension number of IP Phone	30
Outbound Code for PSTN	5*
Outbound Code for VoIP	None

### 1. Making an Internal Call

Making calls between extensions.

For example, ext "10" calls ext "30".

Note that to expedite the call setup, press "#" after dialing all the digits.

### 2. Making an Outbound Call

Making an outbound call from an IP Phone extension (or an Analog Phone extension) to an external phone number.

For example, ext. "30" calls "4325400" or "5\*4325400".

Note that to expedite the call setup, press "#" after dialing all the digits.

### 3. Making an Inbound Call

Making an inbound call to an IP Phone extension (or Analog Phone extension).

For example, "4325400" calls an iPBX trunk line (either VoIP trunk or PSTN trunk).

By default, the auto attendant is enabled. Hence the caller will hear the voice prompt ("Hello, you have entered the Interactive Voice Response service. If you know the extension number, please dial it now. For directory, please dial 0."), and then dial "30". (You may change the auto attendant IVR later.)






## Panel LEDs

The below table describes each LED indicator.

LED	Blinking State	State
PWR	Steady - Green	The device power is on.
	Off	The device power is off.
RUN	the led will first be green, then red, then off, then steady green	System Booting
	Steady green	Running normally
	Orange blinking	On provisioning
	Red blinking	Provisioning failed
	Red/Orange blinking	Sip trunk register failed
WAN	Blinking – Green (10 Base T) Blinking – Yellow (100 Base T)	PC or Voice Data is being transferred.
	Off	The device is not connected to a broadband network.
LAN	Blinking – Green (10 Base T) Blinking – Yellow (100 Base T)	PC Data is being transferred.
	Off	The device is not connected to an external PC.
FXS	Blinking – Green (once)	The FXS module is internally initialized and the unit is ready to make calls after booting.
	Steady-Green	The connected telephone handset is off the hook.
	Blinking – Green (once)	The connected telephone starts ringing.
	Steady- Orange	The connected telephone is talking.
	Off	The connected telephone handset is on the hook (not in use).



## UPS LED on web page

Status Indicators	Blinking State	UPS State
	Steady Green	The UPS is on utility power. (AC Mode)
	Steady Yellow	The UPS is on battery power.
	Blinking Yellow	The battery is at a low state.
	Steady Red	The battery is missing.
	Blinking Red	The battery fails the Self Test. (Battery replace)