

# **pbxnsip**

*"The voice communications platform of choice."*

## Getting Started Guide

## **sipJack**



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## Overview

The sipJack is a plug computer that lets you have the world's smallest IP-PBX. It runs on just one-tenth the power of a typical PC and can be plugged directly into a standard wall socket with or without the power cord. The sipJack can run network-based services normally requiring a dedicated personal computer and is ideal for the small office running an IP-PBX or as a backup for larger offices.

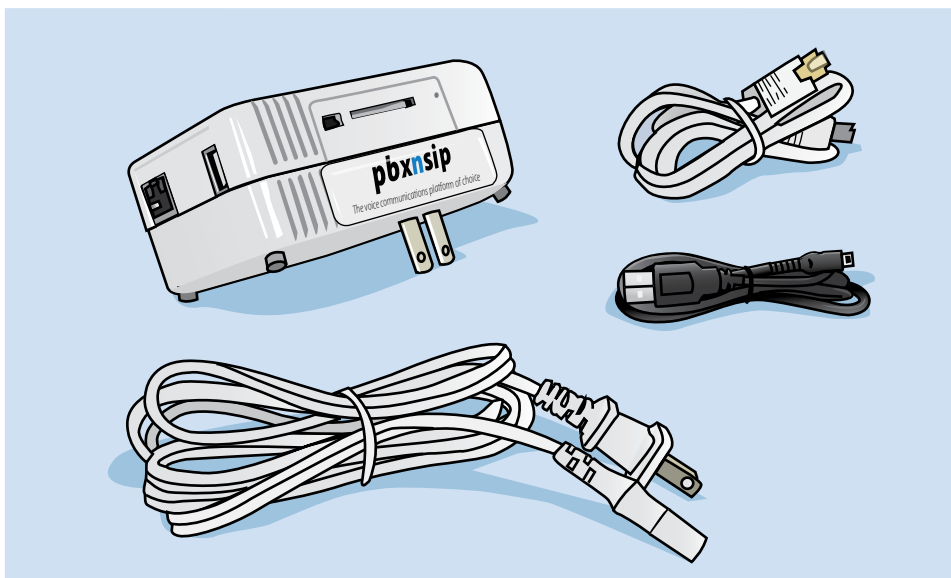
This user guide describes how to install the pbxnsip sipJack. Device specifications are also included. Once the sipJack has been installed, refer to the following documents to learn how to use the pbxnsip PBX-IP Office software. (The documents can be download from [www.pbxnsip.com/sales/pbxnsip\\_user\\_guides.php](http://www.pbxnsip.com/sales/pbxnsip_user_guides.php).)

- *pbxnsip PBX Administrator Guide, Release 4.0*
- *pbxnsip PBX User Guide, Release 4.0*
- *pbxnsip PBX Quick Reference Guide, Release 4.0*

## Equipment Contents

The sipJack device ships with the following accessories:

- 1—CAT 6 1.8 m LAN cable (standard)
- 1—Power cord
- 1—USB cable



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Figure 1. sipJack Shipping Contents

## Device Specifications

### CPU

- Linux-based Giga operating system
- Marvell Sheeva 88F6281 RISC Architecture ARM processor 1.0 to 1.2 GHz
- 32 KB of instruction cache (I-cache)
- 32 KB of data cache (D-cache)
- 256 KB of L2 cache
- Eight-channel Generic DMA controller

### Memory and Storage

- 128 MB of DDR2 or memory
- 512 MB NAND of flash storage

### Input/Output Ports

- USB 2.0 port that supports 0.5A loads
- Giga LAN port that supports 1000 Base-T, 100 Base-T, 10 Base-T
- Shielded RJ-45 connector with built-in LEDs
- Marvell 88E1118R Gbit PHY
- One optional COM port (TX and RX only)

### Power Supply

- Built-in AC high-efficiency power supply
- Power input: 90–240VAC, 50–60 Hz
- Automatic resettable fuse
- US mains plug (US model)

### LEDs

- Bi-color (green power LED/red fail LED)
- Link bi-color green/yellow LED integrated IN LAN jack
- Link-Activity green LED integrated in LAN jack

### Switches

- Recessed software defined pushbutton
- Exposed software defined pushbutton

### Enclosure

- Aluminium moulded cover part for improved heat dissipation
- ABS plastic bottom part with internal metallized shielding
- Glossy white painting. Other colors and printed logos available at special orders.

## Safety Instructions

Follow the instructions in this manual and other applicable documentation of the device.



Avoid placing the sipJack into the wall socket where people may bump into it and disengage it. This will disrupt your PBX service and can damage the device.



This device is for indoor use only! Do not install outdoors!



Do not install the device in rooms with high humidity (for example, in bathrooms, laundry rooms, damp basements). Humidity range should stay between 5% and 95% (noncondensing). Do not immerse the device in water, and do not spill or pour liquids of any kind onto or into the device.



Maintain an operating temperature range of between 0°C and 40°C (32°F to 104°F).



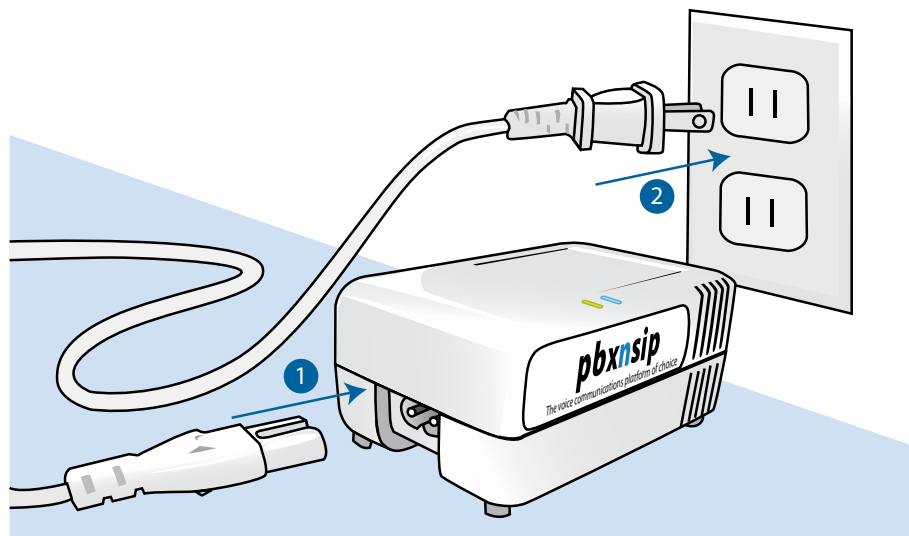
Store device between temperatures of -25°C to 70°C (-13°F to 158°F).

## Hardware Setup

### Connecting the Router

This section describes how to connect the sipJack to the router:

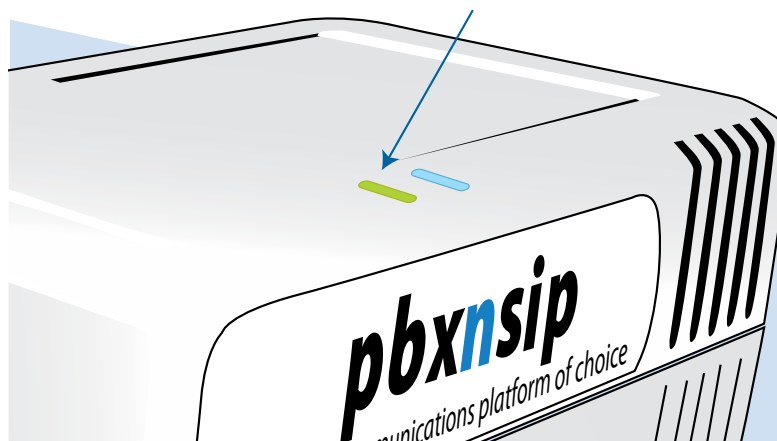
1. Plug the power cord into the sipJack.
2. Plug the outlet end of the power cord into the wall outlet.



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Figure 2. Connecting the Power Cord

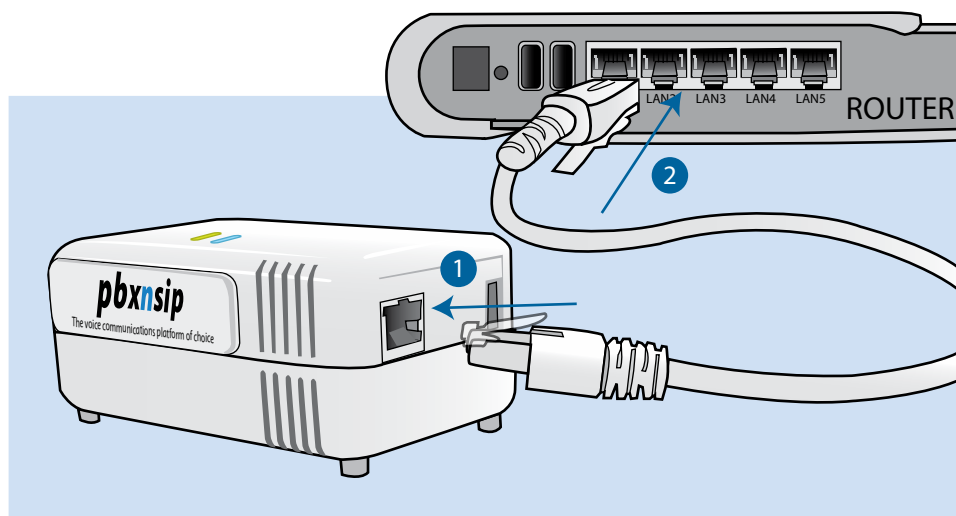
3. Confirm that the blue and green LEDs are lit. This indicates that output is present.



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Figure 3. Confirming LEDs are Lit

4. Insert the Ethernet cable into the Ethernet port on the sipJack.
5. Insert the other end of the cable into an Ethernet port on the router (Figure 4).



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Figure 4. Connecting the Ethernet Cable

# Network Configuration

## Automatic Configuration

This section describes how to find the IP addresses of both the router and the sipJack. (You will need the IP address of the sipJack to access the pbxnsip web interface.)

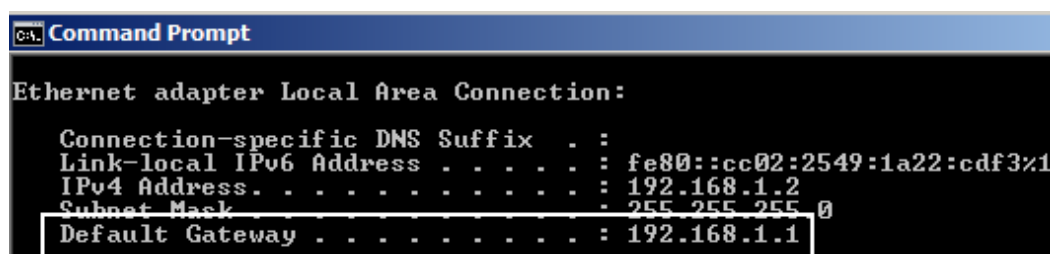
### Finding the IP Address of the Router

1. Open a terminal shell and enter `ipconfig` at the command prompt:



```
C:\>ipconfig
```

The IP addresses that are associated with your local area connection will be displayed:



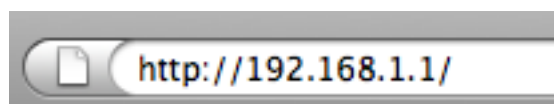
```
Ethernet adapter Local Area Connection:  
Connection-specific DNS Suffix . :  
Link-local IPv6 Address . . . . . : fe80::cc02:2549:1a22:cdf3%1  
IPv4 Address. . . . . : 192.168.1.2  
Subnet Mask . . . . . : 255.255.255.0  
Default Gateway . . . . . : 192.168.1.1
```

2. Make a note of the Default Gateway IP address, and proceed to the next section.

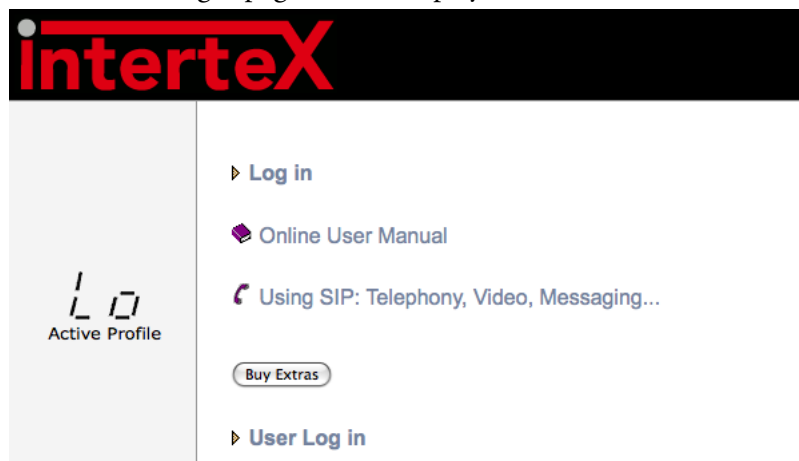
### Finding the IP Address of the sipJack

*Note:* This exercise was done using an Intertex router.

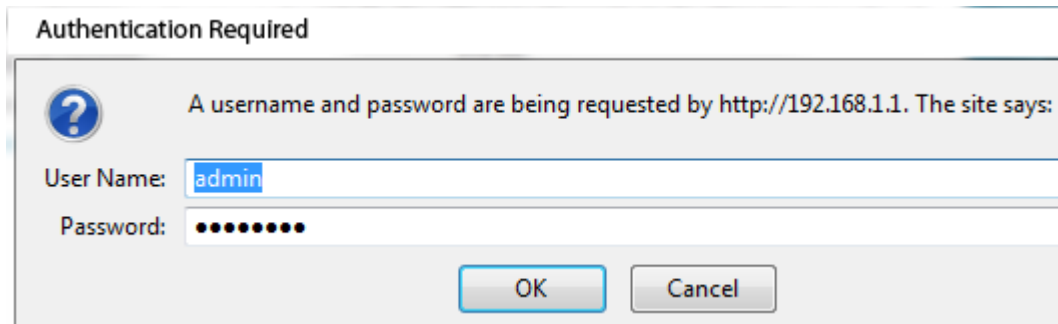
1. Enter the IP address of the router into a web browser:



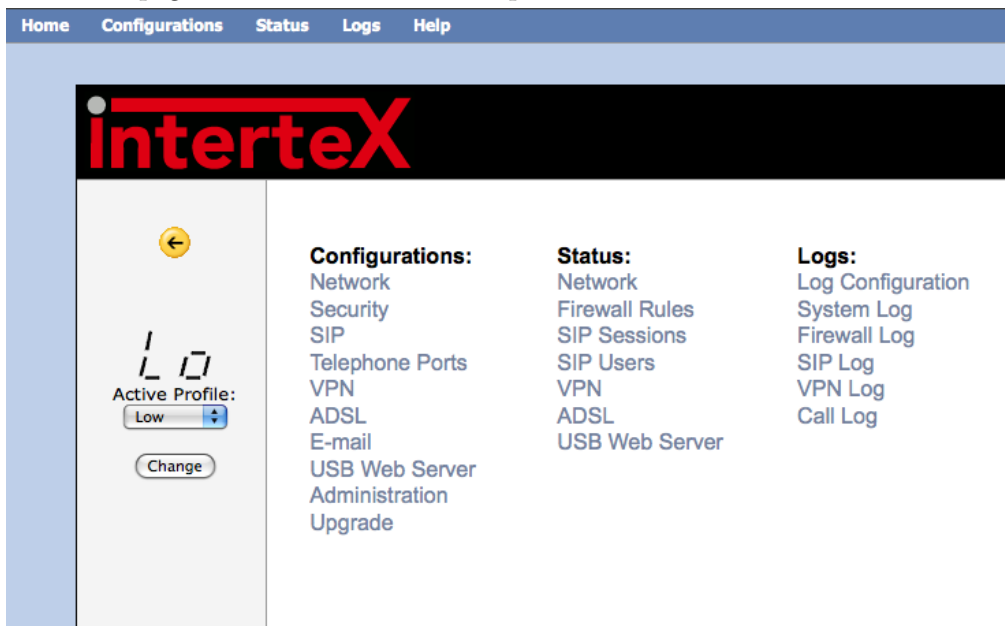
Your router's login page will be displayed:



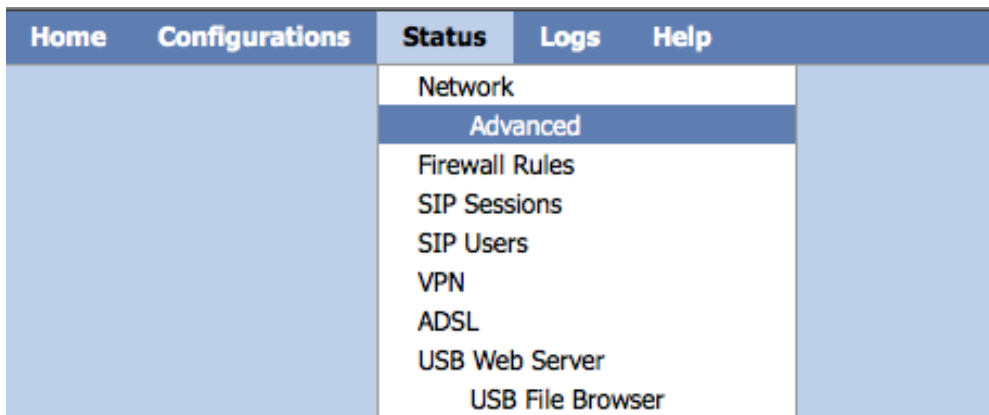
- Click **Login**



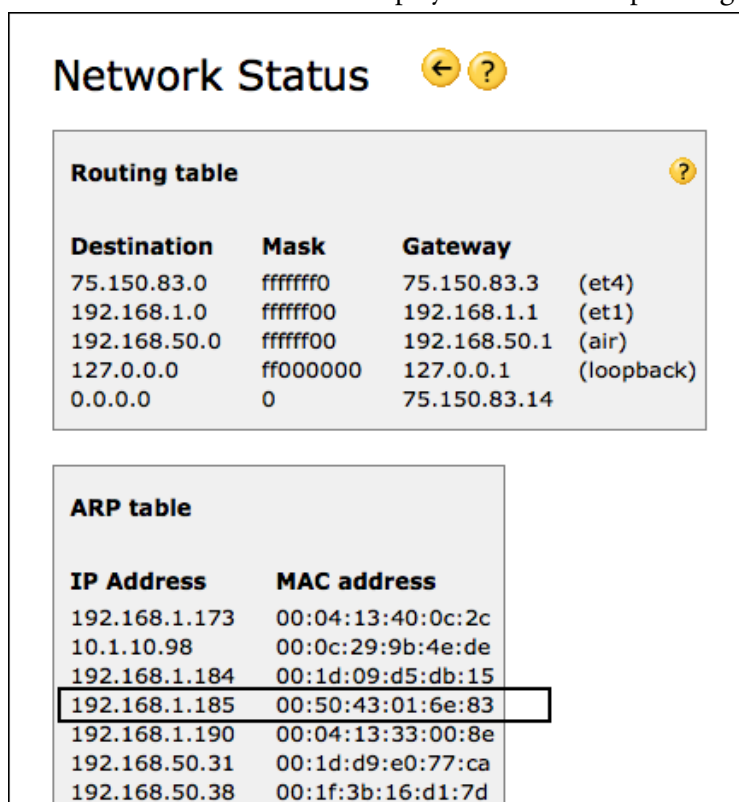
- Enter the username and password for the router. (The default username and password is often `admin`. For a list of default usernames and passwords for many makes and models, use Phenoelit's comprehensive list at <http://www.phenoelit-us.org/dpl/dpl.html>.)
- The home page of your router will be displayed:



- Click **Status > Advanced**. (The web GUI for your router will likely be different from the GUI shown here.)



A list of IP addresses will be displayed and a corresponding list of MAC addresses:



The screenshot shows a 'Network Status' page with two tables. The 'Routing table' lists destinations, masks, and gateways. The 'ARP table' lists IP addresses and their corresponding MAC addresses. The IP address 192.168.1.185 is highlighted with a black box.

Network Status			
<b>Routing table</b>			
Destination	Mask	Gateway	
75.150.83.0	ffffff0	75.150.83.3	(et4)
192.168.1.0	ffffff00	192.168.1.1	(et1)
192.168.50.0	ffffff00	192.168.50.1	(air)
127.0.0.0	ff000000	127.0.0.1	(loopback)
0.0.0.0	0	75.150.83.14	

ARP table	
IP Address	MAC address
192.168.1.173	00:04:13:40:0c:2c
10.1.10.98	00:0c:29:9b:4e:de
192.168.1.184	00:1d:09:d5:db:15
192.168.1.185	00:50:43:01:6e:83
192.168.1.190	00:04:13:33:00:8e
192.168.50.31	00:1d:d9:e0:77:ca
192.168.50.38	00:1f:3b:16:d1:7d

Figure 5. IP Address of sipJack

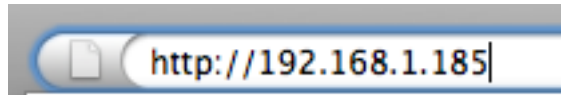
6. Locate the IP address that corresponds to the MAC address of your sipJack. The MAC address is located on the back side of the sipJack device.

*Note:* The format used for the sipJack MAC address is six groups of two hexadecimal digits, separated colons (:) and is located under the first bar code. Example: 00:50:43:01:02:03.

Figure 6. Locating MAC Address of sipJack Device

## Accessing the Web Interface

1. Enter the IP address of the sipJack (Figure 5) into a web browser:



The pbxnsip login screen will be displayed:

Please enter your login information. For more information about the login procedure, please see the [online documentation](#).

### PBX Login

Account:

Password:

Login Type:

Language:

Remember login information.

2. Enter your account and password. By default, the account is admin and the password is blank (no password).
3. For the **Login Type**, use the default (Automatic).
4. For the language, select your language.
5. Click **Login**.

The following screen will be displayed:

**pbxnsip** "The voice communications platform of choice."

Home Help Logout

Settings Domains Email Status

### Set your PBX up!

**Settings** determine the overall behavior of the PBX. You need to enter your license information in here before you can start to use the PBX. Demo codes are available on the [pbxnsip](#) web page.

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**Domains** are necessary to group your users. A domain is quite similar to your email domain, it may have alias names and you have a certain number of users in your domain. Domains can be addressed via DNS. You may assign administrative rights to users that have domain administration rights.

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In the **Email** section you can specify your SMTP server settings and you can tell the PBX what messages you would like to receive as system administrator. You can also overwrite the email templates that the system is using when sending messages to the end user.

\*\*\*

The **Status** is important for you when something is not working as expected or when you want to trace the activity of the PBX. Here you can see call traces and which calls are currently active. You can also access the logfile from here.

Refer to the following documents for detailed information on configuring and using the pbxnsip PBX.

- *pbxnsip PBX Administrator Guide, Release 4.0*
- *pbxnsip PBX User Guide, Release 4.0*
- *pbxnsip PBX Quick Reference Guide, Release 4.0*

These documents can be download from [www.pbxnsip.com/sales/pbxnsip\\_user\\_guides.php](http://www.pbxnsip.com/sales/pbxnsip_user_guides.php).

## Manual Configuration

If you cannot get a connection using the method described in the previous section, you can set up a serial console under Linux. The instructions can be found at the following link: [www.plugcomputer.org/plugwiki/index.php/Setting\\_up\\_Serial\\_Console\\_Under\\_Linux](http://www.plugcomputer.org/plugwiki/index.php/Setting_up_Serial_Console_Under_Linux). The default password for root is nosoup4u.