

# Install on the RasPBX (Asterisk for Raspberry Pi)



A 4GB card is required. First download the image disk to flash it in your MicroSD.

Get it from :

- [Downloads \(from raspbx-asterisk.org\)](https://raspbx-asterisk.org/downloads)

The latest image available for download is based on Raspbian (Debian 8 / Jessie) and includes:

- SD Image name raspbx-22-09-2016.zip (for 4Go microSD)
- Asterisk 13.11.2
- FreePBX 13.0.188.8

## Install the RasPBX suite

Follow those instruction to flash the SD image :

- [Flash Image \(from raspberrypi.org\)](https://raspberrypi.org/flash-image)

Connect to SSH (raspbx/raspberry) to complete the installation with the Voximal installer package.  
The default login acces is :

SSH login:

- user: root
- password: raspberry

Default FreePBX login:

- user: admin
- password: admin

```
Raspbian GNU/Linux8 raspbx tty1
```

```
raspbx login : root  
Password:
```

```
Welcome to RasPBX - Asterisk for Raspberry Pi
```

```
RasPBX is based on Debian. The programs included with the Debian GNU/Linux  
system are free software; the exact distribution terms for each program are
```

described in the individual files in /usr/share/doc/\*/copyright.

RasPBX comes with ABSOLUTELY NO WARRANTY, to the extent permitted by applicable law.

List of RasPBX specific commands:

```
-----  
-  
raspbx-upgrade      Keep your system up to date with the latest add-ons and  
                    security fixes  
configure-timezone  Set timezone for both system and PHP  
install-fax         Install HylaFAX  
add-fax-extension   Add additional fax extension for use with HylaFAX  
install-fail2ban    Install Fail2Ban for additional security  
install-dongle      Install GSM/3G calling capability with chan_dongle  
raspbx-backup       Backup your complete system to an image file
```

Last login: Sat Mar 5 18:56:10 2016

Once your RasPBX has successfully booted, run this command on the console to install the latest additions and improvements:

```
root@raspbx:~# raspbx-upgrade  
RasPBX upgrade tool  
Run "raspbx-upgrade --help" for additional options  
Base version: 06-03-2016  
Installed upgrade:      21  
Local upgrade available: 21  
Online upgrade available: 24  
Running apt-get update && apt-get dist-upgrade.  
  
... (lot of logs...)  
  
132 upgraded, 2 newly installed, 0 to remove and 0 not upgraded.  
Need to get 164 MB of archives.  
After this operation, 10.4 MB of additional disk space will be used.  
Do you want to continue? [Y/n] y  
  
... (installing packages...)  
  
Setting up libraspberrypi0 (1.20160620-1) ...  
Setting up libraspberrypi-dev (1.20160620-1) ...  
Setting up libraspberrypi-doc (1.20160620-1) ...  
Setting up libraspberrypi-bin (1.20160620-1) ...  
Setting up raspbx-upgrade (1.0-43) ...  
Setting up raspi-config (20160527) ...  
Installing new version of config file /etc/init.d/raspi-config ...  
Processing triggers for initramfs-tools (0.120+deb8u2) ...  
Processing triggers for libc-bin (2.19-18+deb8u4) ...  
Processing triggers for systemd (215-17+deb8u4) ...  
Installing upgrade 22.
```

```
-----
Fixing Asterisk startup problems in recent 2016 images
-----
Installing upgrade 23.
-----
Increasing swap size to 200MB; installing en_US locale
-----
Generating locales (this might take a while)...
    en_GB.UTF-8... done
    en_US.UTF-8... done
Generation complete.
Installing upgrade 24.
-----
1. Updating GPG keys for FreePBX
2. Enabling Apache2 rewrite module
-----
gpg: refreshing 2 keys from hkp://pool.sks-keyservers.net
gpg: requesting key 69D2EAD9 from hkp server pool.sks-keyservers.net
gpg: requesting key B33B4659 from hkp server pool.sks-keyservers.net
gpg: key 69D2EAD9: "FreePBX Mirror 1 (Module Signing - 2014/2015)
<security@freepbx.org>" 2 new signatures
gpg: key B33B4659: "FreePBX Module Signing (This is the master key to sign
FreePBX Modules) <modules@freepbx.org>" 2 new signatures
gpg: Total number processed: 2
gpg:          new signatures: 4
gpg: 3 marginal(s) needed, 1 complete(s) needed, PGP trust model
gpg: depth: 0  valid:   1  signed:   1  trust: 0-, 0q, 0n, 0m, 0f, 1u
gpg: depth: 1  valid:   1  signed:   0  trust: 0-, 0q, 0n, 1m, 0f, 0u
Enabling module rewrite.
To activate the new configuration, you need to run:
    service apache2 restart
Finishing RasPBX upgrades installation, installed version is now: 24
root@raspbx:~#
```

## Install the Voximal module

RasPBX already install Asterisk with FreePBX so you only need to complete your installation with the Voximal package :

Get it from :

- [Lastest Voximal/Raspberry package](#)

You can directly download the Voximal package with the wget tool :

```
root@raspbx:~# wget
http://downloads.voximal.com/voximal/raspbian8/armhf/latest.tar.gz
--2016-09-13 16:52:21--
http://downloads.voximal.com/voximal/raspbian8/armhf/latest.tar.gz
Resolving downloads.voximal.com (downloads.voximal.com)... 84.246.228.252,
```

```

2a02:23e0:0:4:9458:e0ff:feb7:e457
Connecting to downloads.voximal.com
(downloads.voximal.com)|84.246.228.252|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 7819312 (7.5M) [application/x-gzip]
Saving to: 'latest.tar.gz'

latest.tar.gz          100%[=====>]    7.46M  3.34MB/s   in 2.2s

2016-09-13 16:52:23 (3.34 MB/s) - 'latest.tar.gz' saved [7819312/7819312]

```

Untar and execute the installation script :

```

root@raspbx:~# tar xfz latest.tar.gz
root@raspbx:~# cd voximal_14.0_2016xxxx_0voximalxxxraspbian8_armhf/
root@raspbx:~/voximal_14.0_2016xxxx_0voximalxxxraspbian8_armhf# ./install.sh
Compatible module found : app_voximal.so.asterisk_v13.11.2
--- Voximal V14.0 Installation ---
Creating directories
Installing binaries
Installing VoiceXML examples
Installing default voximal.conf
Installing libraries
Installing Voximal module for asterisk
Installing additional sounds
User asterisk exists, set permissions
Restarting asterisk.....
Configuring VoiceXML examples
Installing Voximal FreePBX module
Configuring Voximal FreePBX module
Adding accounts...
- Account "helloworld" added
- Extension 8965 added
Wildcard extension added
Voximal license updated
Voximal configuration updated
Voximal TTS configuration parsed
Generating CSS...Done
Module voximal successfully installed
Updating Hooks...Done
Reloading FreePBX
Successfully reloaded
--- Voximal V14.0 installation has finished ---

```

## Connect with WIFI (option)

If you want to connect you raspberry with Wifi, please follow those steps :

- [Configure Wifi \(from raspberrypi.org\)](https://www.raspberrypi.org/docs/configuration/wifi/)

## Use a GSM/USB dongle (option)

A highly affordable GSM access can be obtained using Huawei E155X or compatible USB modems and `chan_dongle`, providing both inbound and outbound calls on GSM/3G networks.

`Chan_dongle` is able to work with many different USB modems from Huawei, such as K3715, E169 / K3520, E155X, E175X, K3765 and others.

- [Compatibility list](#)
- [More information](#)

You can use the integrated dongle channel to get calls from a plug.

```
root@raspbx:~# install-dongle
Installing GSM VoIP gateway with chan_dongle.
Please read the documentation at http://raspbx.org/dongle

Please enter the phone number of your SIM card
(defaults to +1234567890 if left blank):
Send incoming SMS to email address
(leave empty to disable SMS forwarding):
Forward incoming SMS to mobile phone number (via dongle0)
(leave empty to disable):
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following extra packages will be installed:
  libjim0.75 usb-modeswitch-data

...

Would you like to install a webpage for sending SMS with
chan_dongle? (http://raspbx/sms/) [y/N] n

Please wait...

!!!!amportal is depreciated. Please use fwconsole!!!!
forwarding all commands to 'fwconsole'
Running FreePBX shutdown...

Shutting down Asterisk Gracefully. Will forcefully kill after 30 seconds.
Press C to Cancel
Press N to shut down NOW
[=====] 1 sec
Running FreePBX startup...
Starting Asterisk...
[=====] 57 secs
Asterisk Started
Your configuration has been saved successfully to these files:
/etc/asterisk/dongle.conf
```

```
root@raspbx:~#
```

You will need to configure and **inband route** to link the incoming calls to the Voximal application and account.

## Test your installation

You have two simple ways to test and validate your installation :

- With a soft phone : [Soft Phone connection](#)
- With the test numbers : [Call the test service](#)

From:

<https://wiki.voximal.com/> - **Voximal documentation**

Permanent link:

[https://wiki.voximal.com/doku.php?id=installation\\_guide:raspbx](https://wiki.voximal.com/doku.php?id=installation_guide:raspbx)

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