officeBOX *Installation Guide*

Bicom SYSTEMS

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Introduction

Installation guide takes you through the process of setting up the officeBOX appliance, this takes a small amount of time after which you can use your officeBOX appliance.

Requirements

Requirements for the usage of officeBOX are:

- 10/100Base TCP/IP – based local area network (LAN)
- One of the following web browsers:
    - Internet explorer 6.0+
    - Firefox 1.0+
    - Opera 9.0+

    To manage officeBOX from the web administration interface, web browser must support Javascript, CSS and you must enable cookies.
- Network parameters which include officeBOX IP address, the subnet mask of your network and a gateway or router address if communicating with other networks can be obtained by:
    - Connecting a monitor to officeBOX and obtaining IP from command prompt
    - Installing the PBWware Finder on a Windows machine which is also connected to the same network. PBXware Finder can be obtained at:

      http://downloads.bicomsystems.com/pbxware_finder/pbxware-finder-1.0.exe
    - Obtaining it from the DHCP server

Important Safeguards

For your safety, please read all the instructions regarding officeBOX appliance.

a. Safety precautions

For your protection when setting up the equipment, observe:

- All cautions and instructions marked on the equipment should be followed
- Make sure that your power source voltage and frequency matches the one required by your equipment
- Never insert objects through openings on the equipment. This can be dangerous and can damage the equipment.

b. Symbols

Following symbols may appear in this guide:

Caution sign: There is a risk of injury and damage to the equipment.

Warning sign: Hazardous voltages are present. To reduce the risk of electrical shock follow the instructions.

Tip sign: Useful suggestions or tips that can help you in the setup procedure.

c. Power source and power cords

Make sure that your power source voltage and frequency matches the one required by your equipment.

officeBOX is designed to work with single-phase power systems. To reduce the risk of electrical shock, do not plug the equipment into any other power system. If you are not sure what kind of power system your facility has, contact the facility manager or a qualified electrician.

Your officeBOX power supply is shipped with a grounded type power cord, so to reduce the risk of electrical shock, always plug the cord into a grounded power outlet.

Not all power cords have the same current ratings, and not all power cords fit your officeBOX power supply. Thus the usage of other power cords is not recommended.

d. Electrical Shock

To reduce the risk of electrical shock, do not disassemble or tamper in any way with the power supply. Opening the power supply may expose you to dangerous voltage, and incorrect reassembly will damage your equipment

e. Top cover

In order to add cards or internal storage, first you must remove the top cover. Make sure to place the top cover back before turning on the appliance.

Do not work with the officeBOX without its top cover in place. Failing to do so may cause injury and equipment damage.

f. Equipment modifications

Do not make any hardware modifications to the equipment. Bicom Systems is not responsible for any damage or injury as a result of the equipment modification.

g. Ventillation

Although officeBOX does not use active cooling, it will not overheat within defined room temperatures. Nevertheless, good ventillation space is required for the proper working of the appliance. Openings on the appliance must not be covered or blocked and should be kept free from dust.

h. Placement

Openings on the top cover are meant as a ventillation of any small amount of exccess heat that is not transfered to the side aluminium cooler, and they should be free. That means that you should place the appliance in a well vented place.

Do not put the appliance near a radiator or any other heat emmiting device. Doing so can cause your appliance to overheat and malfunction.

i. Regulations and information

This device complies with the CE and FCC Rules and Regulations which can be obtained from the supplier

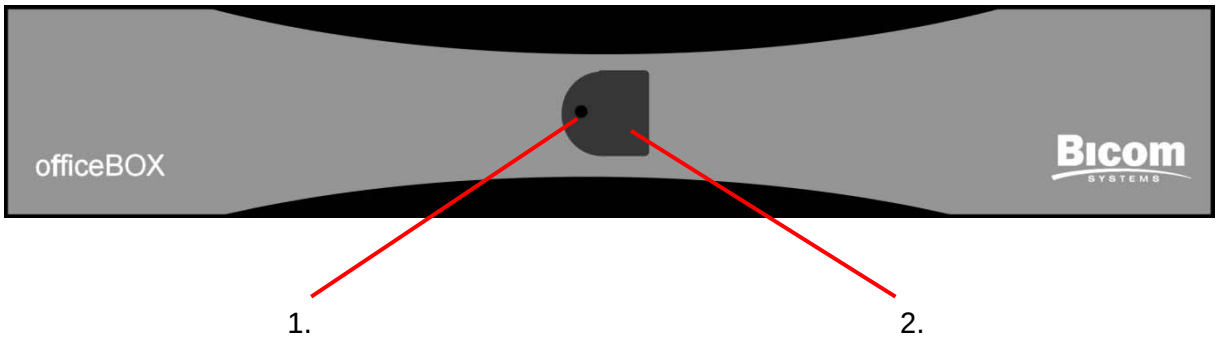
Overview

Installation of the officeBOX appliance takes place in three steps:

- Installation, explains the mounting process and physical connection to the network and to a power source.
- Adding new functionality by installing various cards.
- Software Setup, explains the process of setting up the appliance in a network environment using the web-based Setup Wizard

Front view of the officeBOX™

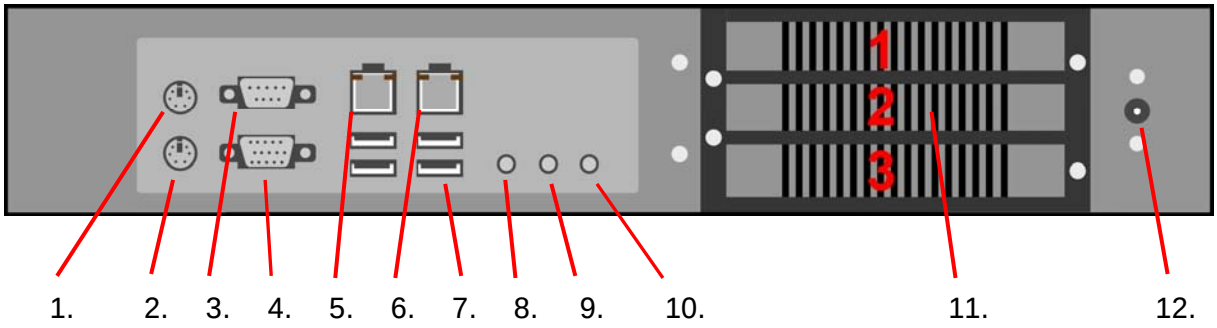
Figure 1. Front view of the officeBOX appliance.



1. Hard Disk activity LED
2. On/Off Button

Rear view of the officeBOX™

Figure 2. Rear view of the officeBOX appliance.



1. PS/2 connector for connecting a mouse
2. PS/2 connector for connecting a keyboard
3. Serial connector
4. VGA for connecting a monitor if needed
5. Ethernet connector for LAN network integration
6. Ethernet connector for WAN network integration
7. Four USB connectors for additional USB devices
8. Line Out jack
9. Line In jack
10. Microphone jack
11. Three PCI mounting places of which you use first and second.
12. Power Supply connector

Installation

In this chapter we will guide you through the process of adding new functionality, mounting of the appliance and connecting it to the network and power supply.

First, we will explain how to expand the appliance's functionality in the subchapter "Installing PCI cards," where details about adding cards will be presented.
In the chapter "OfficeBOX mounting" we will explain where and how an officeBOX appliance can be mounted.
Software setup is described in another document which is also available from the website.

Installing PCI cards

Although officeBOX is a fully functional communication appliance, new functionality can be added by installing various PCI cards. You can add PSTN, ISDN or E1/T1 functionality of your choice, and with an enclosed PCI riser it is possible to add two cards into officeBOX.

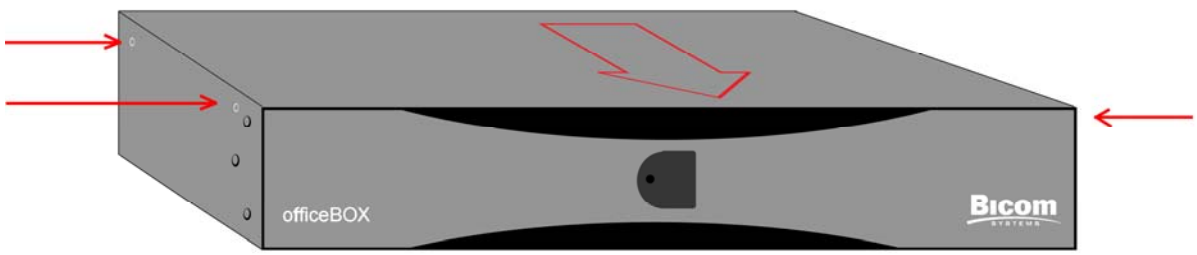
A list of supported devices is available on Bicom Systems website:
www.bicomsystems.com/support

The procedure of installing new cards is simple and we will take you through it step by step.

Top cover removal

Remove the top cover by removing three screws, one on the right side and two on the left side. Then, by placing four fingers of both hands on the cover and using thumbs to push the front of the appliance, pull the cover slightly towards yourself as in Figure 12. Once the cover is released from its locks, you can take it off.

Figure 3. Placement of the screws and removal of top cover

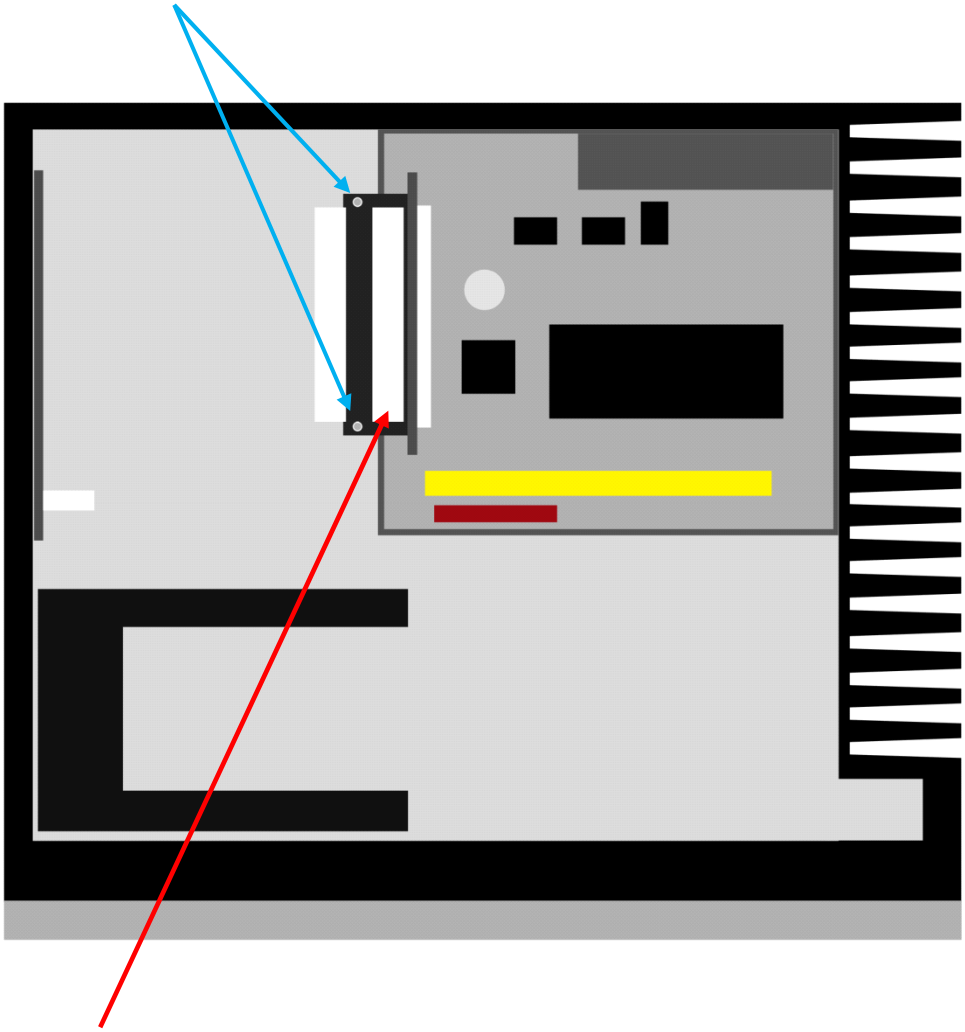


PCI riser

When you have opened the appliance, remove the two screws indicated from the PCI riser, then pull it slightly out of the motherboard.

Figure 4. Opened officeBOX

Screws that need to be removed



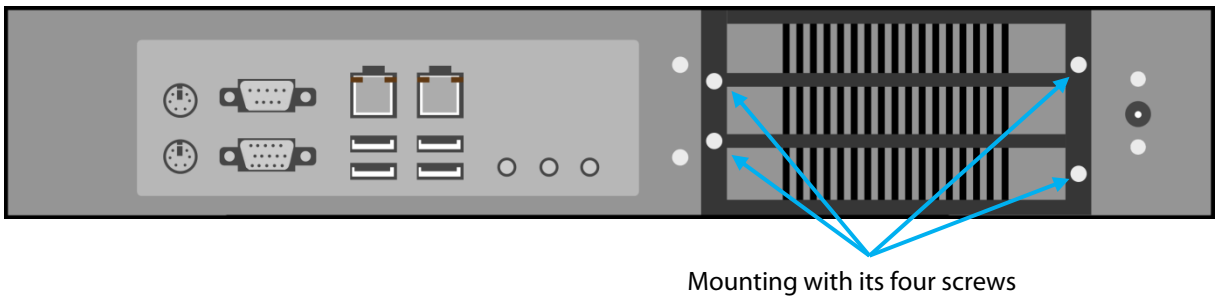
PCI riser that is going to be pulled out

When you take the PCI riser out, be sure not to lose two plastic little tubes that are used as a spans between the two PCI slots on the riser. The screws that hold the riser inside the appliance go through the plastic tubes, so they are important when re-inserting the riser.

PCI card mounting

Remove the screws from the PCI card mounting from the back of the appliance and take it out.

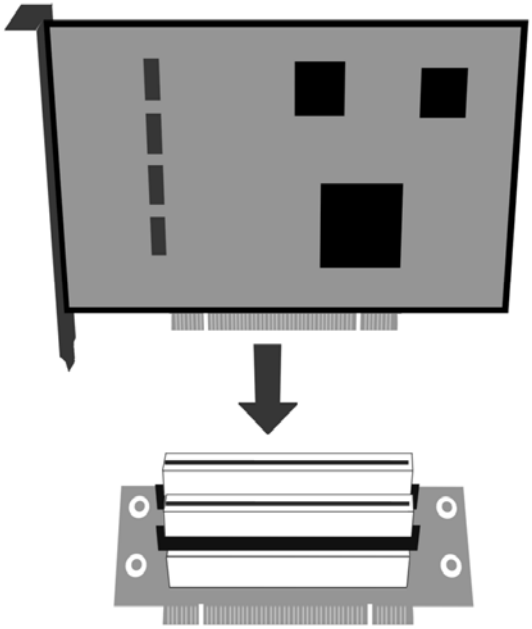
Figure 5. Rear view of officeBOX



When PCI card mounting is out, remove the metal slot cover from slot 1 or 2, depending upon the card placement on the PCI riser.

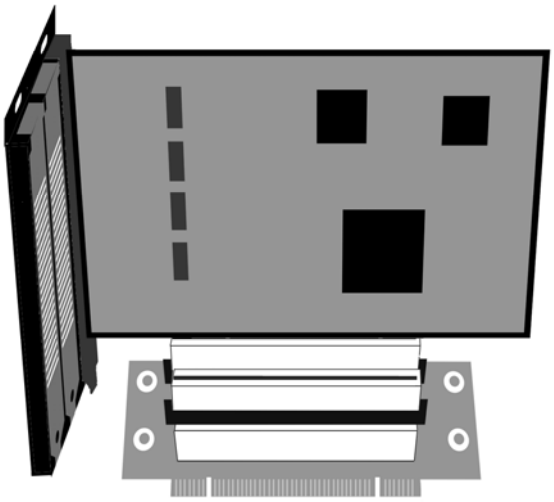
Inserting a PCI card

Figure 6. Inserting a card



Insert desired card into the PCI riser. Attach the PCI card mounting to the card which is inserted into the PCI riser, using the screw which was holding the cover on the mounting.

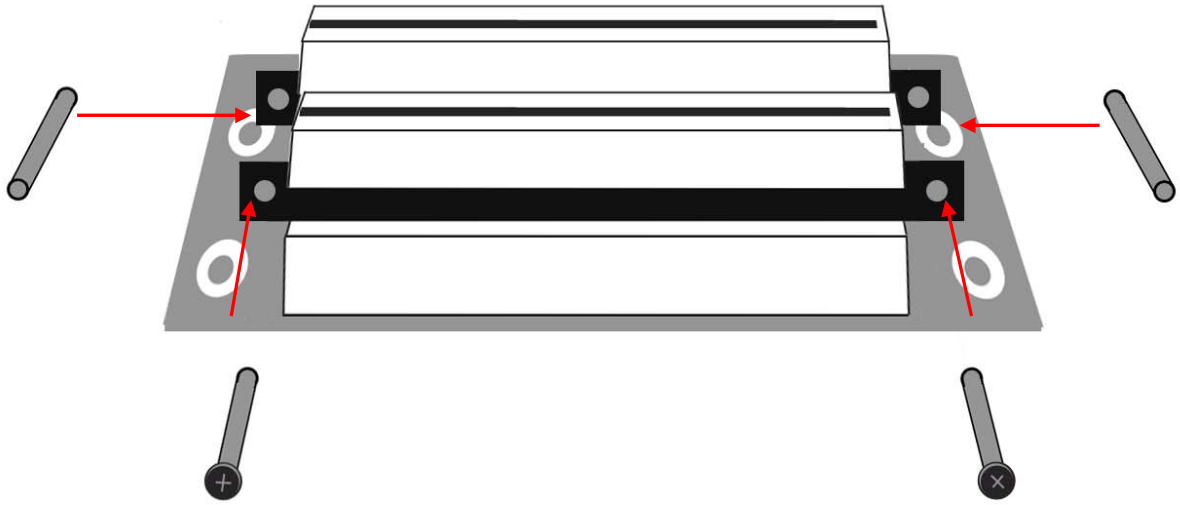
Figure 7. Everything put together



Fitting everything into officeBOX

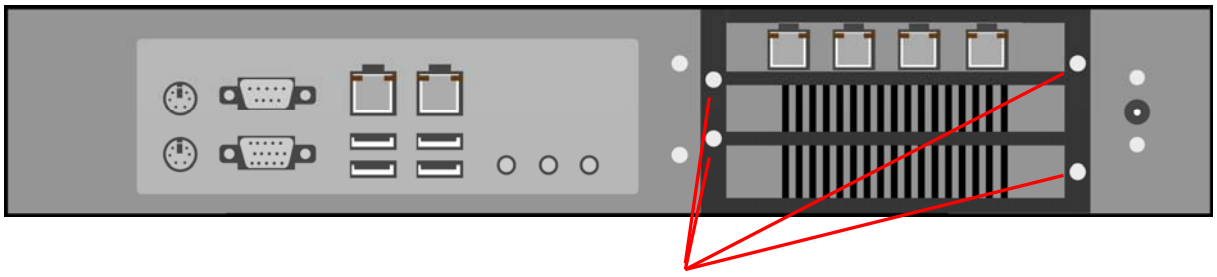
When the PCI card mounting is attached to a card in the PCI riser, put the spans back between the PCI slots, and insert the screws that attach it to the appliance through the holes as shown in Figure 17 (card and mounting are omited for simplicity).
Figure 17. is showing top view of the PCI riser which means that the screws which hold it, must be placed from the top, so they can attach everything properly to the appliance.

Figure 8. Putting spans between PCI slots first, then screwing through it.



Now that everything is assembled, it is time to put it all back into officeBOX. Push lightly the PCI riser back into its place and use the screws previously adjusted, to attach it to the appliance.

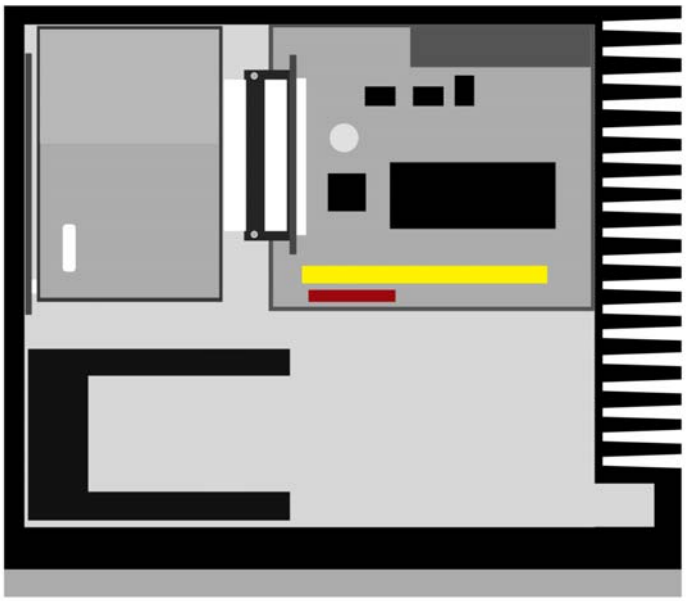
Figure 9. Rear view with card placed inside the appliance



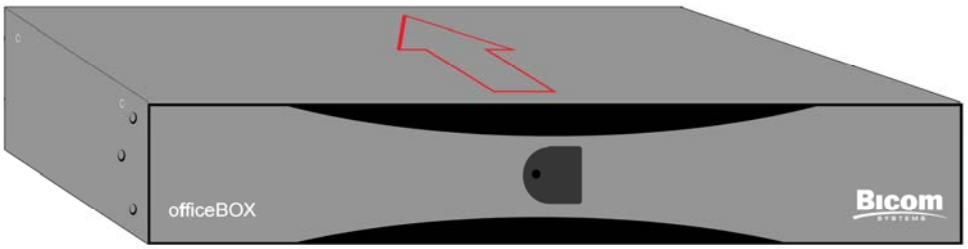
Be sure to put the screws back on the PCI card mounting

Closing officeBOX

Figure 10. Top view of the appliance with everything assembled



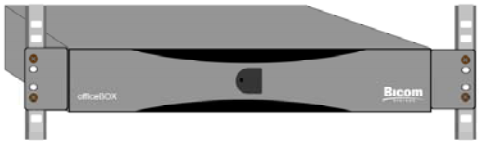
When everything is in the appliance, take the top cover, and put it back on in the reverse order from which it was taken off.
Place the top cover back on the officeBOX, but not directly on the top, just a little forward so you can interlock it with the appliance. Now, push the cover until the holes on it match with the ones on appliance, so you can put back the screws.



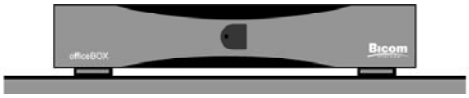
OfficeBOX mounting

OfficeBOX appliance can be mounted on desk, floor, wall or into the rack cabinet.

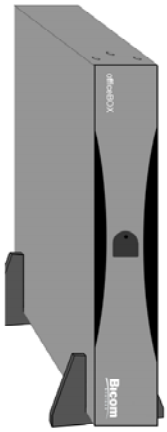
Figure 11. Mounting options



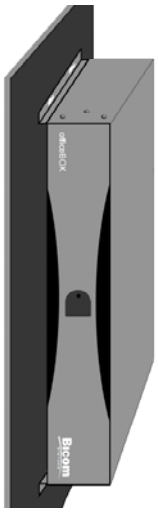
Rack mount



Desk mount



Floor mount

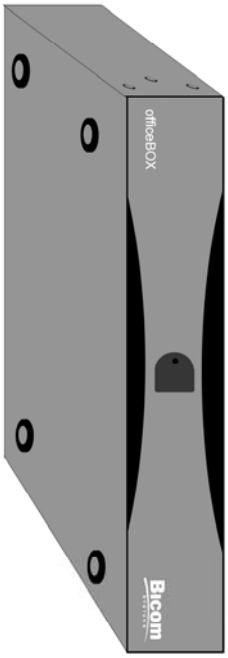


Wall mount

Desk mounting

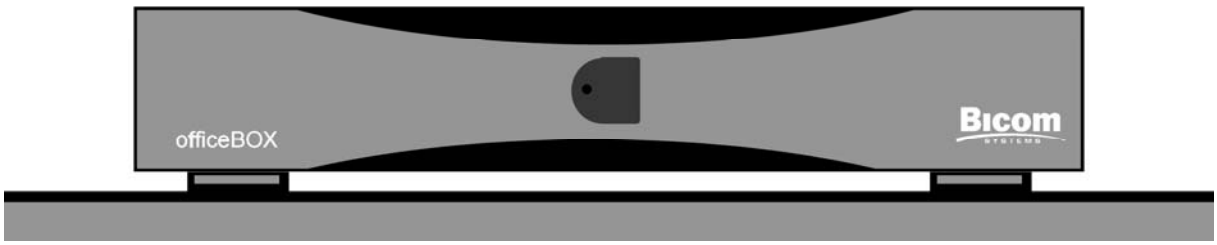
The four rubber feet that came attached to the appliance by default are there if you want to put the appliance on desk.

Figure 12. officeBOX with rubber feet



When the appliance is on the desk, make sure that the surface is flat, that you provide good ventillation for your appliance and keep it away from any heat sources.

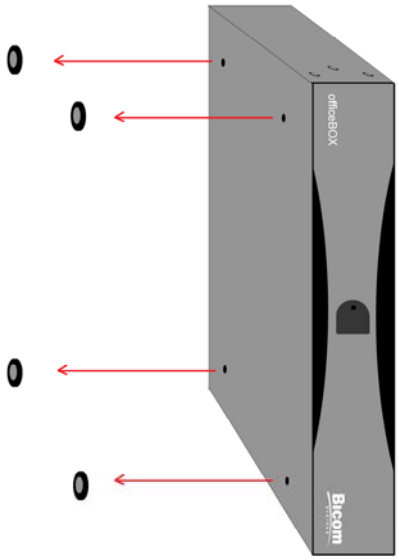
Figure 13. officeBOX with rubber feet mounted on the desk



Floor mounting

The four rubber feet that come attached to the appliance by default, need to be removed prior to floor mounting.

Figure 14. officeBOX without rubber feet



When mounting officeBOX appliance on the floor, you will need two special brackets which will let you mount your officeBOX vertically on the floor.

Figure 15. Brackets for vertical floor mounting

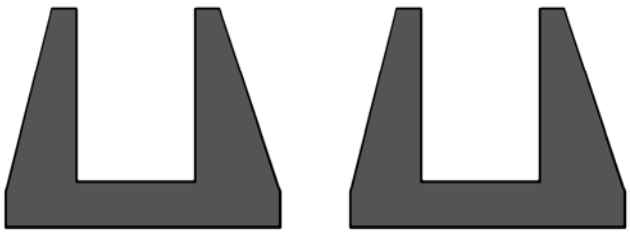
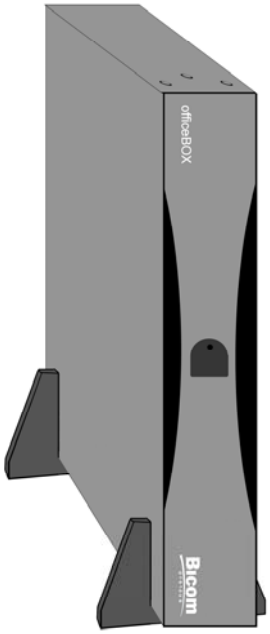


Figure 16. officeBOX with brackets for vertical floor mounting



Suggested method mentioned for desk mounting, also applies for floor mounting.

Rack mounting

If you plan to mount the appliance inside a rack cabinet be sure to remove the three plastic caps that reside on both sides of the appliance. Then attach the rack mounts with three screws that are inserted in place of those caps.

Figure 17. officeBOX without three plastic caps

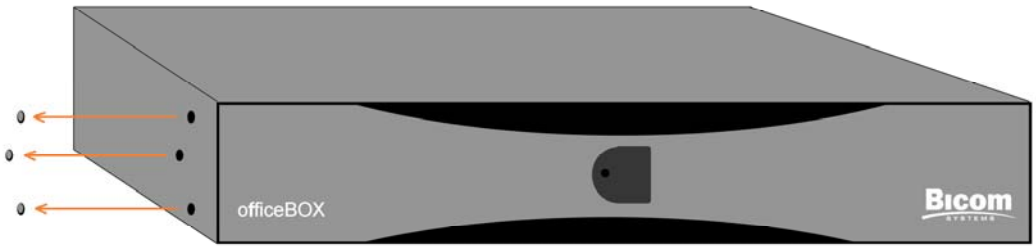
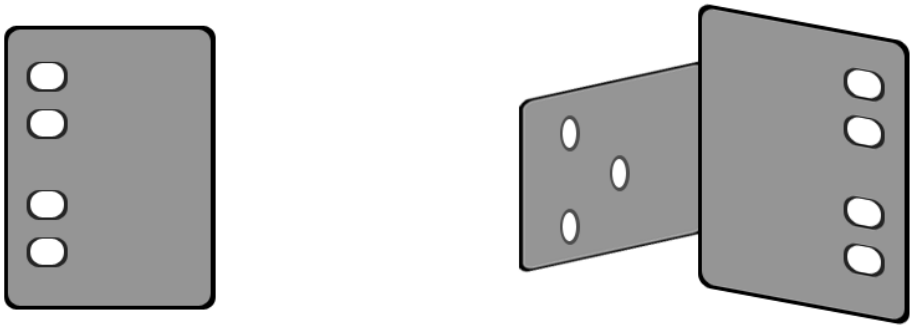
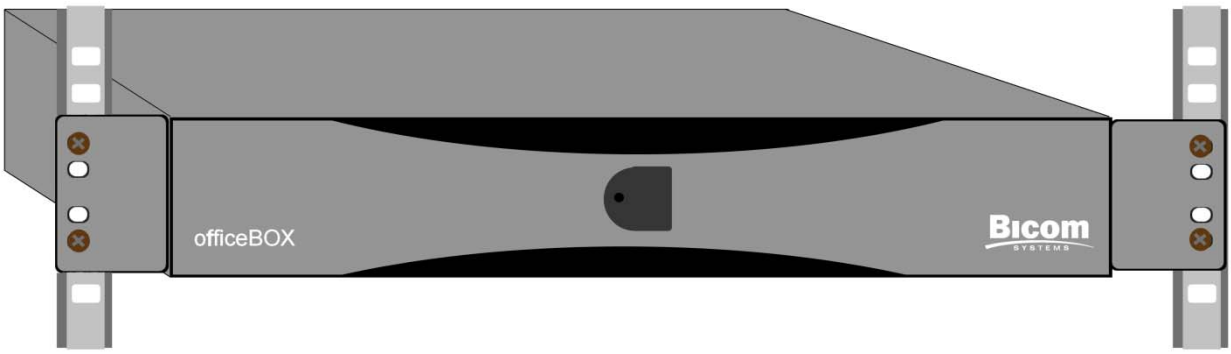


Figure 18. Rack mounts: Front and Side view



Next is to attach the officeBOX to the rack cabinet. This is done by using two larger screws, that are also provided with the rack mounts, and attaching the appliance using two of the four larger holes on the rack mounts which can be seen on Figure 18 – Front view.

Figure 19. officeBOX mounted in a rack cabinet



When mounting officeBOX inside a rack cabinet, be sure to follow all the instructions specified under Important Safeguards. If you plan to install additional cards, it is very important to put the top cover back on the appliance, before you mount it inside a rack.

Wall mounting option

The four rubber feet that come attached to the appliance need to be removed in order to attach the wall mount.

Figure 20. officeBOX without rubber feet

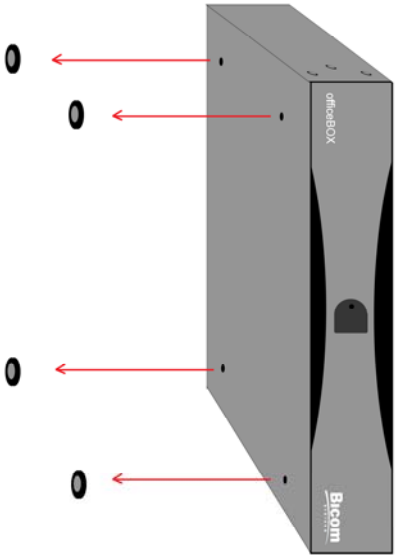
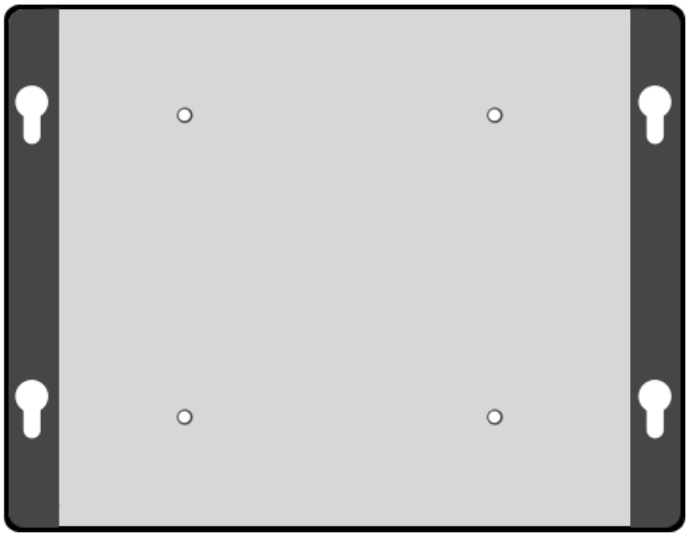


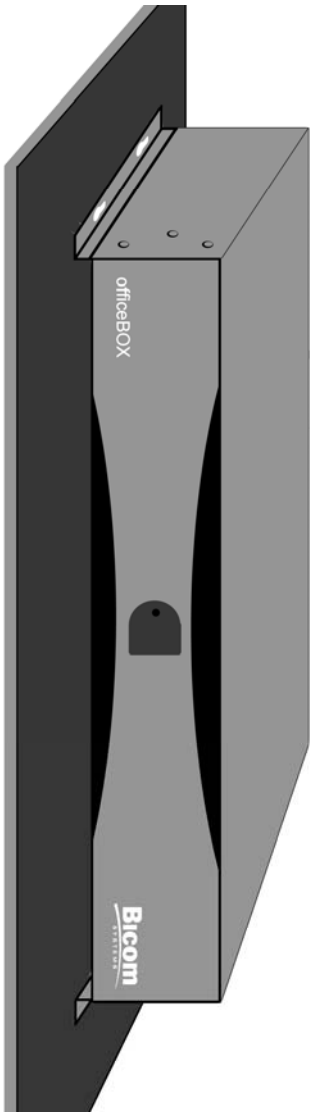
Figure 21. Wall mount



After the rubber feet are removed, attach the wall mount to the machine using the four screws provided. On Figure 21 you will see four smaller holes which are designed for attaching the wall mount to appliance.
The four larger holes on the sides are meant for attaching the appliance to the wall.
Before attaching the appliance to the wall, you must drill four holes with dimensions between them corresponding to the wall mounts holes. After drilling, insert wall plugs inside the holes and then use screws to attach the appliance.
The equipment (wall plugs and screws) shiped with the wall mount are:

- 4x No.8 x 1.5 Black pozi screws
- 4x Wall Plug

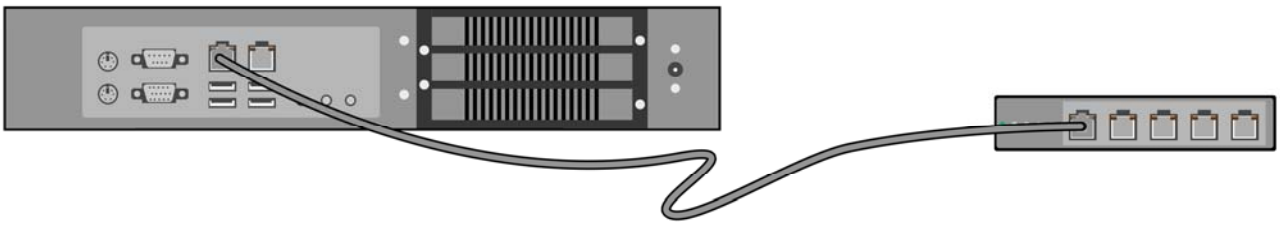
Figure 22. officeBOX mounted on a wall



Connecting to the network

Connect the appliance to the network by plugging one end of the Cat 5 ethernet cable to the LAN connector on officeBOX. Plug the other end of the cable to an existing network socket.
WAN connector currently is not supported, but is available for custom modifications.

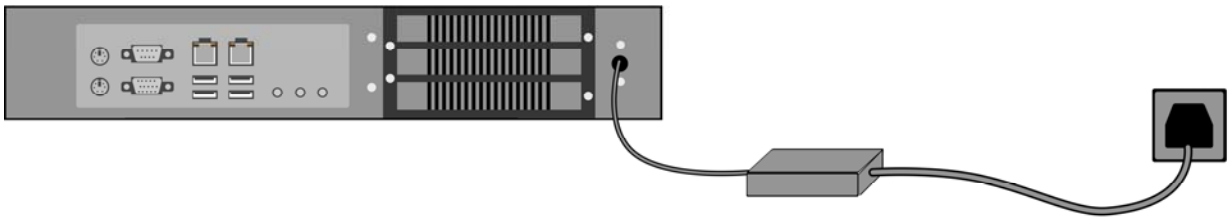
Figure 23. Connecting officeBOX to an example switcher



Connecting electric power

Connect the power cord to the power outlet (110-240 V; 50-60Hz), and the other end to the power adapter. The cable from the power adapter then goes to the officeBOX power supply connector.

Figure 24. Connecting officeBOX to electric power



After you have connected the appliance to the electricity you can turn it on by pressing the On/Off button which can be seen on Figure 1. Also, if you press the On/Off button when the appliance is working it will shut down immediately.

Software Setup

After officeBOX has been placed, it is time to set it up using the web-based setup wizard. The manual on how to do this and other related information can be obtained at:

http://www.bicomsystems.com/support/

Appendix:

PBXware image flashing procedure

This step by step guide will help you install PBXware on the appliance. To complete it, you need to have a Windows PC and a USB memory stick. Also, you must connect a monitor and a keyboard to the appliance.

Part 1: Writing image to USB stick

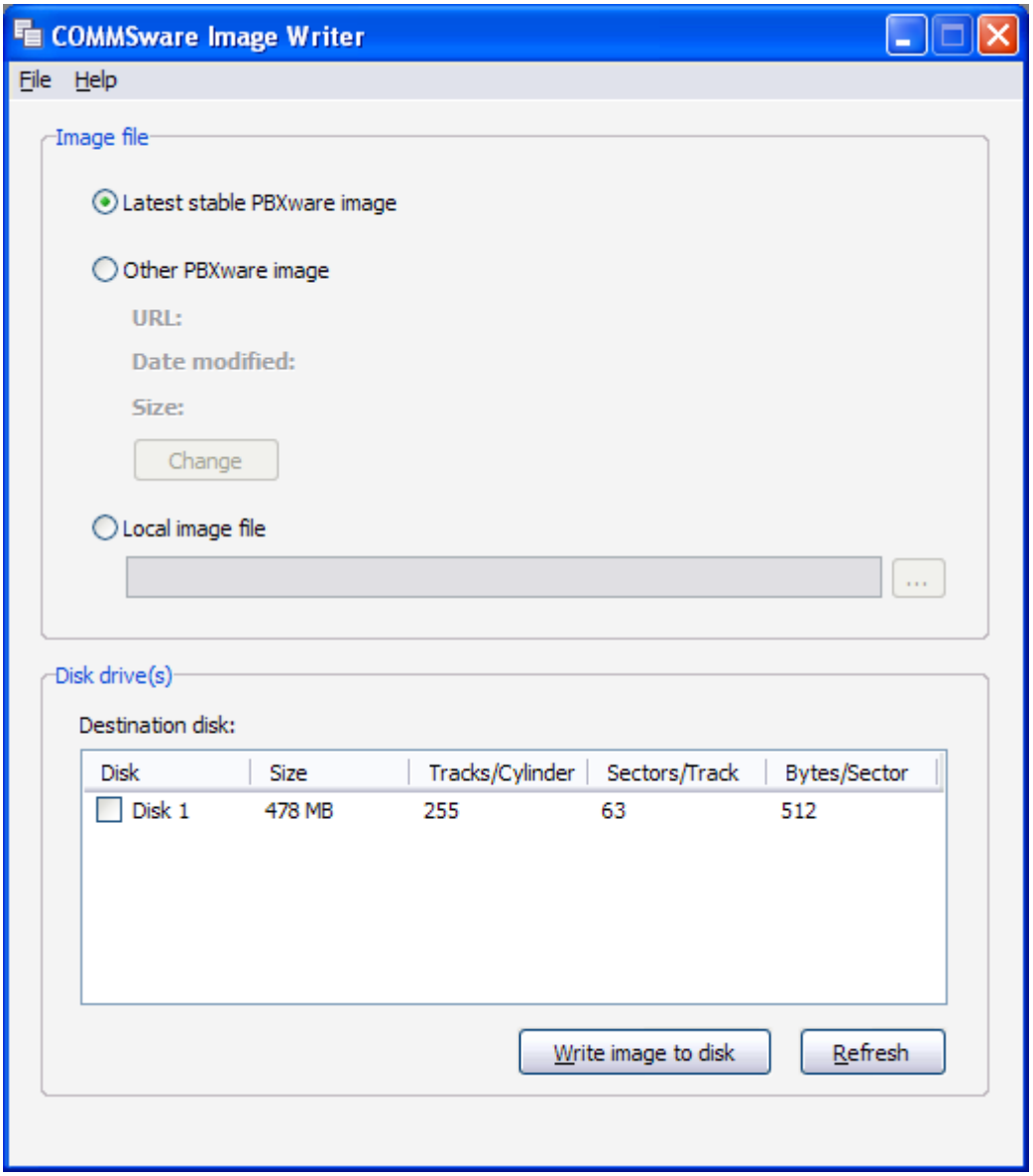
Step 1. Download PBXware image from
http://downloads.bicomsystems.com/officebox/pbxware.img

Step 2. Download COMMsware Image Writer from
http://downloads.bicomsystems.com/cw/

Step 3. Install the COMMsware Image Writer

Step 4. Insert your USB stick in your PC

Step 5. Run the COMMsware Image Writer and you will get following



Step 6. Select **Local image file** option button and choose the image you downloaded earlier. Click the checkbox by your USB stick and click on the **Write image to disk** button

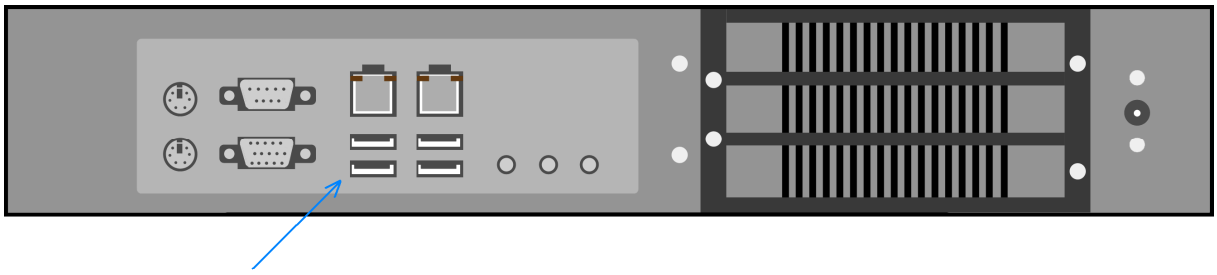
Step 7. This operation might take some time to finish, but when it's done you will be ready to continue installing PBXware onto the appliance

WARNING: Since downloaded image is 1 GB in size, your USB stick must also be 1 GB or larger

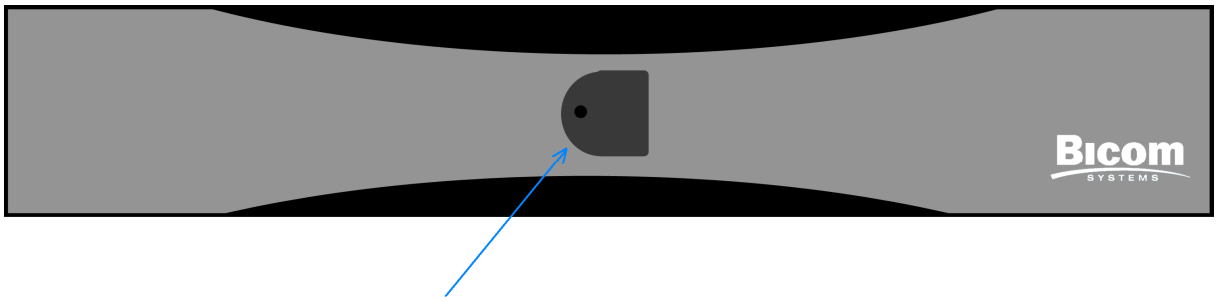
Part 2: Copying PBXware from USB stick to appliance

Now that the USB preparation is done you are ready to continue with the steps.

Step 8. Insert the stick in appliance and turn it on



USB Ports



Power ON/OFF Button

Step 9. When the appliance starts booting press DEL button on your keyboard to enter BIOS

Step 10. In BIOS go to **Advanced BIOS Features** and under **First Boot Device** choose **USB-ZIP**. For **Second Boot Device** choose **Hard Disk**. Go to **Save & Exit** on previous screen. Appliance will now boot from USB

Step 11. When the booting is finished enter **root** for login and **pbxware** for password

Step 12. Enter **dd if=/dev/sda of=/dev/hda** to transfer PBXware to the appliance

Step 13. When **dd** is finished, you must reboot appliance by issuing **reboot** command.

Step 14. When appliance starts booting take out the USB stick so the appliance boots from the Hard Drive. If the bootup procedure went without any problems, system is ready for **Setup Wizard** and licensing by the end user.

TIP: If for some reason step 12 didn't finish properly, you should find out how the system sees USB stick and Hard Drive. That is done by issuing the **cat /proc/partitions** command. Disk is usually recognised as **/dev/hda** and USB stick as **/dev/sda**, but if they are recognised differently, put those in the step 12 acordingly.