XR1000 IP-PBX: Getting Started Guide

Package Contents

- XR1000 (1U 19" width unit)
- Power cord
- Desktop power supply

- Support hardware for 19" cabinet
- Cable for second telephony module (allows upgrade to second telephony module – see Appendix for details)

Prerequisites

You need a computer equipped with Internet browser. Firefox is recommended. By default, the XR1000 will get its IP address from the DHCP server. To check the IP address or to set the XR1000 **static IP** address you will need to connect a keyboard and a display to the XR1000.

Step 1: Powering Up the Unit

1. For safety reasons, if the line wiring exits the building, it is essential to ground the unit. **Note: Not connecting this device to grounding will void your warranty!**
   a. Connect a grounding tab to the grounding screw on the rear panel.
   b. Using 12-16 gauge wire, connect the grounding tab to a reliable ground.
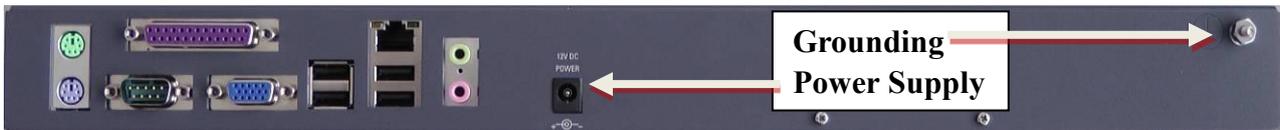

Grounding
Power Supply

Figure 1: Grounding Screw on XR1000 Rear Panel

2. Connect a keyboard and a VGA/SVGA screen.
3. Connect the unit to the LAN.
4. Connect the power cord to the device and turn on the power on the rear panel. The device startup process takes about 2 minutes.

Step 2: Configure or Get the IP Settings for XR1000

Method 1: If you have a DHCP server: The XR1000 will get the IP address from the DHCP server. To get the IP address:

1. Login to the XR1000:

   a. User name: `root`

   b. Password: `akuo-kfo`

   Note: The default Elastix keyboard configuration is U.S. When entering the password the - (dash/hyphen) key is to the right of the 0 (zero) key, no matter which keyboard layout you are using.

2. To get the IP address use the command: `ifconfig eth0` As a result you'll get a block of data like this:

```
eth0    Link encap:Ethernet  HWaddr 00:1C:C0:1F:ED:A0
        inet addr:192.168.0.64  Bcast:192.168.0.255  Mask:255.255.255.0
        inet6 addr: fe80::21c:c0ff:fe1f:eda0/64 Scope:Link
```

```
UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
RX packets:13221 errors:0 dropped:0 overruns:0 frame:0
TX packets:3658 errors:0 dropped:0 overruns:0 carrier:0
collisions:2129 txqueuelen:1000
RX bytes:5031371 (4.7 MiB)  TX bytes:397301 (387.9 KiB)
Interrupt:217 Base address:0x2000
```

In this example the XR1000 IP address is 192.168.0.64.

Method 2: Set up a static IP address:

1. Login into your system as root, just like in Method 1.

2. Insert the required variables into `/etc/sysconfig/network-scripts/ifcfg-eth0` :

```
cat > /etc/sysconfig/network-scripts/ifcfg-eth0 <<EOF
DEVICE=eth0
BOOTPROTO=static
IPADDR=192.168.0.64
NETMASK=255.255.255.0
ONBOOT=yes
TYPE=Ethernet
EOF
```

3. Define the default gateway in the `/etc/sysconfig/network` file:
   `GATEWAY=192.168.0.1`

4. Define the DNS server in the /etc/resolv.conf file:
   `nameserver 192.168.0.1`

Note: Correct network parameters settings are extremely important for normal PBX functionality.

Always make sure that the 'localhost' is defined in the /etc/hosts file:

127.0.0.1   localhost.localdomain localhost

Step 3: Configure the XR1000

Devices equipped with telephony ports are pre-configured as it is described below:

If there are FXS ports then they are configured as the PBX extensions starting from number 201.

If there are FXO ports then:

a) The ports are configured as a trunk and assigned to channel group 0

b) An outbound route is created with dial pattern "9|."

In order to configure the device follow these steps:

a) From another computer's browser enter the XR1000 IP address (for example http://192.168.0.69)

b) User name **admin**, Password **palosanto**

c) Now you are in the XR1000 Elastix setup screen

d) To get the updated user manual for Elastix, go to Elastix Web site http://www.elastix.org/

Step 4: Protect the IP-PBX Against Unauthorized Access

Once you have **fully configured** the IP-PBX we highly recommend that you use the following procedures and applications supported in Elastix to protect your IP-PBX against unauthorized access:

Change the Default Password

a) Login to the server (like for IP configuration)

b) Run `change-passwords`. A wizard for changing MySQL and administrator passwords will start.

Change the Linux Password

The password for the Linux root user can be changed by using the Linux `passwd` command.

Activate the Fail2Ban Service on Boot Up

Run this command:

```
chkconfig fail2ban on
```

Activate the Elastix Firewall

Do this via the Elastix Web interface by accessing `Security-> Firewall`, and clicking the `"Activate FireWall"` button.

Unit Status LED (Light Emitting Diode) Indicators

The XR1000 is equipped with LED indicators on the front panel.

Digital (BRI ISDN) XR1000 Models

Digital XR1000 models (models that have at least one digital ISDN BRI PSTN port) have a vertical array of four status indicators on the left side of the front panel (**Fig 2**).

Fig. 2 – BRI Panel (allows additional 8 FXS or 8 FXO ports)

LED Label	Indication
PHONE	This yellow LED indicates that the XR1000 is supplying the necessary voltage for analog or ISDN telephone sets.
SYNC	This green LED is the synchronization. It blinks once the XR1000 is synchronized with the telephony modules.
ACTIVE	This red LED lights up when at least one PSTN / Analog phone is active.
ON	This green LED lights up when the XR1000 is powered.

Analog (FXS and/or FXO) XR1000 Models

The LED sets on the front panel of an analog XR1000 (**Fig. 3**) include:

- 4 LED indicators that indicate device status
- A green LED for each analog line that indicates port status

Figure 3: XR1000 with 16 analog ports and I/O ports

Note: Analog ports also have a red LED but this LED is never used to show line activity.

Once the unit is active, the status LEDs will indicate the following:

LED	Indication
ON	On – unit is functioning
ACTIVE	On – at least one of the analog ports is currently active
SYNC	Blinking – once ports have been synchronized with the Asterisk server
H/W	Off

For more information about the unit status and port status LED indicators please download the **Astribank** manual at http://www.xorcom.com/product-manuals/product-manuals.html

Scan the QR code on the front panel of the IP-PBX for easy access to all relevant product info *for this specific product*, including detailed technical documentation, "how to" videos, and more.

Appendix

For pre-assembled XR1000 models that contain only one telephony module, the unit is supplied with only the first telephony module cable connected to the main board. For units in which a second telephony module is to be installed, use the second cable supplied in the original packaging and connect it to the right-most slot on the main board, as indicated by the arrow: