

## CXR2000/CXR3000 CompletePBX: Getting Started Guide

### Package Contents

- CXR2000/CXR3000 (2U 19" width unit)
- Power cord
- Support hardware for 19" cabinet
- CompletePBX software preinstalled on the hardware

### Prerequisites

You need a computer equipped with an Internet browser. Firefox is recommended. By default, the CXR2000/CXR3000 will get its IP address from your DHCP server. To check the IP address or to set the CXR2000/CXR3000 **static IP** address you will need to connect a keyboard and a display to the CXR2000/CXR3000.

### 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 properly grounding this device 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.



Figure 1: Grounding Screw on CXR2000 Rear Panel

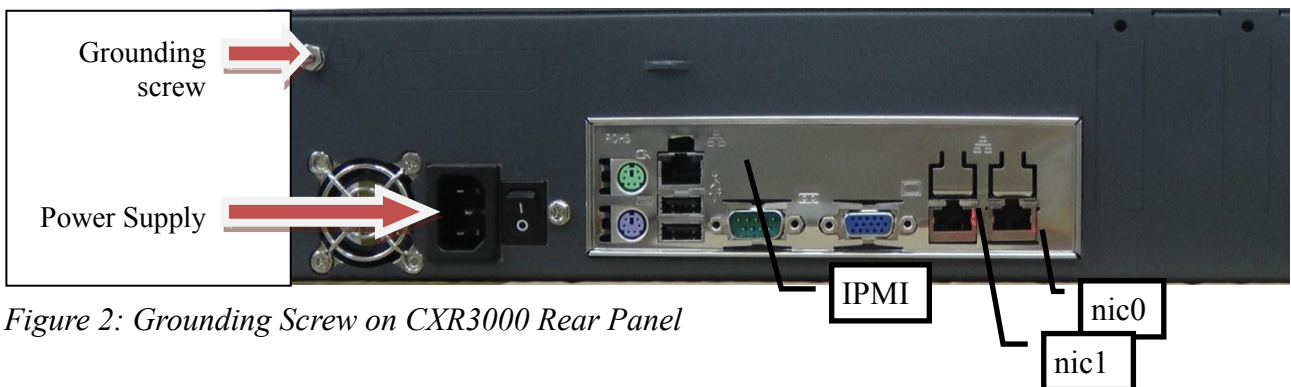


Figure 2: Grounding Screw on CXR3000 Rear Panel

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 using the switch on the rear panel.  
The device startup process takes about 2 minutes. The startup time depends on the number of telephony ports installed in your CXR2000/CXR3000 unit.

### Step 2: Submit Warranty Activation Request

At this point activate the product warranty (a pre-requisite for submitting any request for technical support). Go to <https://xorcom.com/xorcom-product-warranty>, complete and submit the form found there.

### Step 3: Configure or Get the IP Settings for CXR2000/CXR3000

If you have a DHCP server: The CXR2000/CXR3000 will get the IP address from the DHCP server.  
To get the IP address:

1. Login to the CXR2000/CXR3000:
  - a. User name: root
  - b. Password: **!x0rc0m!voip5472#**  
*Note: Note the use of the number zero in the password*
  - c. The default CompletePBX keyboard configuration is US English. When entering the password, the # (hash) key is shift/3 (i.e. uppercase three).

*On UK keyboards, the hash character is located below the backspace, above the right-hand enter key.*



2. To get the IP address use the command: `ip addr show dev nic0` As a result you'll get a block of data like this:

```
3: nic0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast
link/ether 00:22:4d:ab:18:8c brd ff:ff:ff:ff:ff:ff
inet 192.168.0.64/20 brd 192.168.15.255 scope global dynamic nic0
    valid_lft 125725sec preferred_lft 125725sec
inet6 fe80::222:4dff:feab:188c/64 scope link
    valid_lft forever preferred_lft forever
```

In this example the CXR2000/CXR3000 IP address is 192.168.0.64.

Method 1: Set up a static IP address via command line.

1. Login into your system as root, as described above
2. Replace 1.2.3.4/24 and 1.2.3.1 with the required IP address (in CIDR format) and default gateway and then run the following command:

```
nmcli con mod nic0 ipv4.method manual \
ipv4.address 1.2.3.4/24 ipv4.gateway 1.2.3.1
```

3. Define the DNS server in the `/etc/resolv.conf` file. For example:  
`nameserver 5.6.7.8`
4. Run `systemctl restart network` in order to apply the changes

Method 2: Set up a static IP address by using `nmtui` utility.

1. Login into your system as root, as it described above
2. Run the `nmtui` command and define a static IP address and the default gateway
3. Define the DNS server in the `/etc/resolv.conf` file:

```
nameserver 5.6.7.8
```

4. Run `systemctl restart network` in order to apply the changes

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

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

```
127.0.0.1      localhost.localdomain localhost
```

## Step 4: Configure the CXR2000/CXR3000

If the unit is equipped with FXS ports they are configured as CompletePBX extensions starting from number 3001.

In order to configure the device follow these steps:

- From a computer's Internet browser enter the CXR2000/CXR3000 IP address (for example `http://192.168.0.64` )
- You will be prompted to define a password for "administrator". Once you define a password you will be able to connect to the web interface as user **admin** with password that you defined.

Now you can modify your CXR2000/CXR3000 CompletePBX configuration. See the [CompletePBX Reference Guide](#).

## Step 5: Protect CompletePBX Against Unauthorized Access

Once you have **fully configured** CompletePBX we highly recommend that you use the following procedures and applications supported in CompletePBX to protect it against unauthorized access:

### **Change the Linux Password**

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

### **IP Protection**

CompletePBX must be installed on a protected LAN and must not be directly connected to the public Internet. The LAN must be protected by a Firewall/NAT router.

### **Intrusion Detection (fail2ban) and Firewall**

In order to maximize protection from external threats, the **fail2ban** process is activated, in addition to the internal firewall. Use the Admin|Security|Firewall and Admin|Security|Intrusion Detection dialogs to modify the internal firewall and intrusion detection settings.

## Unit Status LED (Light Emitting Diode) indicators

The CXR2000/CXR3000 is equipped with varying LED indicators on the front panel, depending on the model.

### **Digital CXR2000/CXR3000 Models**

These are models that have at least one digital PSTN port – ISDN BRI or PRI. They have a vertical array of four status indicators on the left side of the front panel (**Fig 3**).

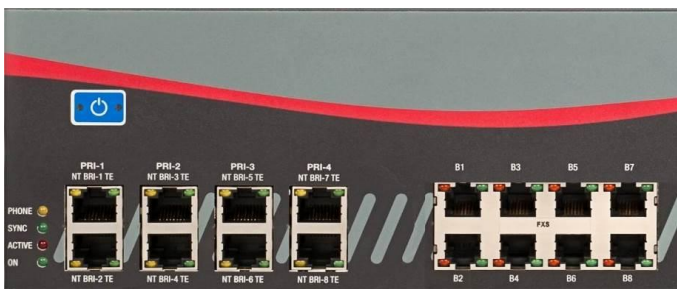


Fig. 3 – BRI/PRI Panel (allows up to additional 24 FXS ports)

LED Label	Indication
PHONE	This yellow LED indicates that the CXR2000/CXR3000 is supplying the necessary voltage for analog or ISDN telephone sets.
SYNC	This green LED is the synchronization. It blinks once the CXR2000/CXR3000 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 CXR2000/CXR3000 is powered.

### Analog (FXS and/or FXO) CXR2000/CXR3000 Models

These models do not have digital modules and therefore have a different set of indicators, as described in Fig 4:

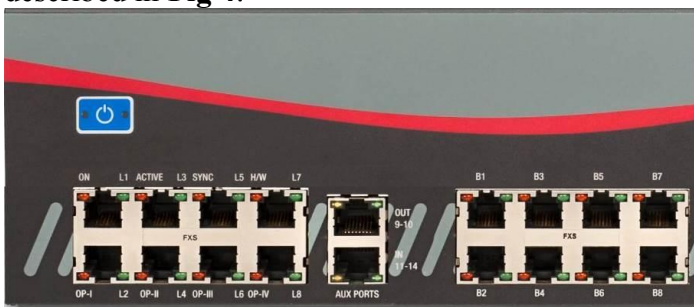


Fig 4. All-Analog Panel

The functionality of the LED indicators is the same, with two exceptions:

1. All the indicators are red.
2. The Phone indicator is replaced with H/W LED, indicating hardware failure (when on).

### Port Status LED (Light Emitting Diode) Indicators

The CXR2000/CXR3000 has a single green LED status indicator for analog ports (Fig. 4). The Red LEDs are NOT USED for line status indication, and there are two LED indicators for digital ports.

- FXS ports: The Green LED is on for off-hook status. It blinks when the phone rings.
- FXO ports: The Green LED is on for off-hook status. It blinks when the line rings.

BRI port (Fig. 3): Solid green indicates that the port is configured as TE. Solid yellow indicates that the port is configured as NT. Two fast green blinks Indicates that ISDN TE layer 1 is active. Two fast yellow blinks Indicates that ISDN NT layer 1 is active. One green blink indicates that ISDN TE layer 2 is active. One yellow blink indicates that ISDN NT layer 2 is active.

PRI port (**Fig. 3**): Solid green indicates that the port is configured as TE. Solid yellow indicates that the port is configured as NT. Two fast green blinks Indicates that ISDN TE layer 1 is active. Two fast yellow blinks Indicates that ISDN NT layer 1 is active. One green blink indicates that ISDN TE layer 2 is active. One yellow blink indicates that ISDN NT layer 2 is active.

For more information about the unit status and port status LED indicators refer to the **Astribank** manual on the Xorcom Web site: <http://www.xorcom.com/astribank-technical-documentation>.

**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.