XORCOM
Business Telephony Solutions

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CXR2000/CXR3000 CompletePBX: Getting Started Guide

Package Contents

- CXR2000/CXR3000 (2U 19" width unit)
- Power cord
- Support hardware for 19" cabinet
- CompletePBX 5 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: Earthing the Unit

1) For safety and performance reasons, it is essential to ground the unit.
   Note: Not properly grounding this device will void your warranty!
2) Use a star washer to securely connect a grounding tab to the grounding screw on the rear panel.
3) Using 12-16 gauge wire, connect the grounding tab to a reliable ground.
4) All Xorcom hardware should be connected to a common grounding point.

Figure 1: Grounding Screw on CXR2000/CXR3000 Rear Panels

Step 2: Powering Up the Unit

1. Connect a keyboard and a VGA/SVGA screen.
2. Connect the unit to the LAN.
3. Connect the power cord to the power input socket on the rear panel
4. Turn on the power supply - the startup process takes about 1 minute. The startup time depends on the number of telephony ports installed in your CXR2000/CXR3000 unit.

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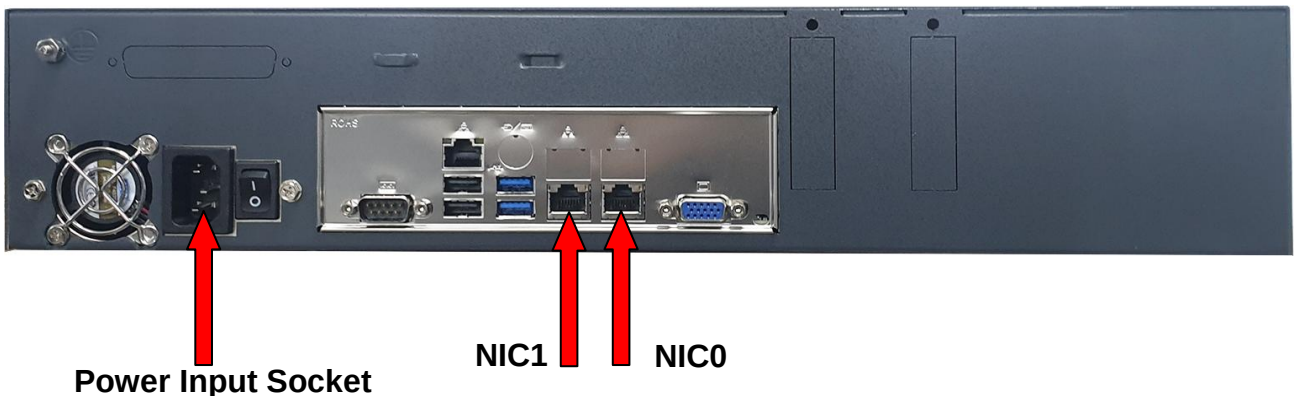

Figure 2: Details of CXR2000/CXR3000 Rear Panel

Step 3: 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 4: 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 5: 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:

a) From a computer's Internet browser enter the CXR2000/CXR3000 IP address (for example http://192.168.0.64)

b) 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**).

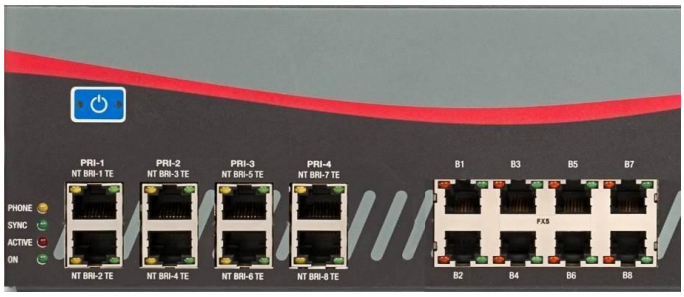

Fig. 3 – BRI/PRI Panel (allows up to additional 24 FXS ports)

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**:

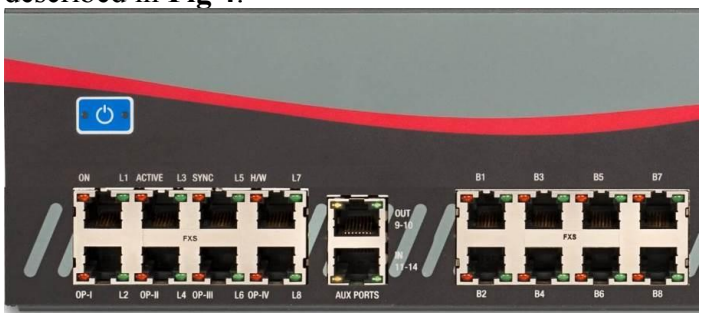

Fig 4. All-Analog Panel

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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.