

# Com.X5

## Quick Start Guide



<http://www.farsouthnet.com>

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Welcome to the world of Com.X, changing the communications landscape for good!

This leaflet will help you to get started with your new Com.X5 solution. This getting started guide addresses the basics of networking and installation of the Com.X5 unit and **SHOULD** be read in conjunction with the

Com.X Administrator's Guide: <http://www.farsouthnet.com/wp-content/uploads/2011/06/Com.X-administrator-guide-1.3-ver3.0.4.pdf>

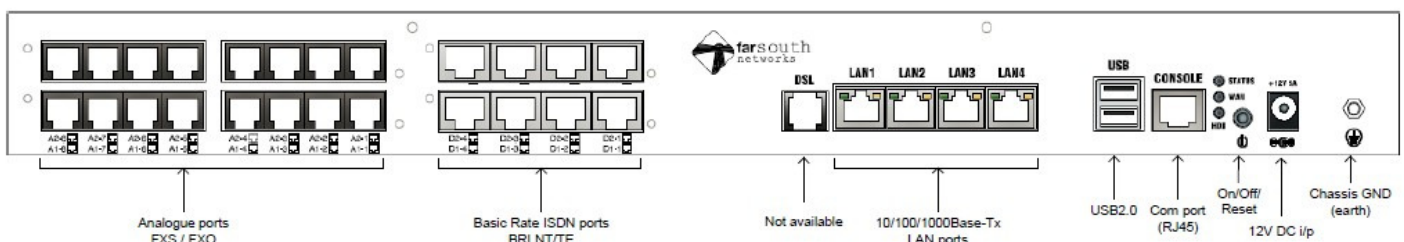
Other Com.X user manuals and user guides are available at: <http://www.farsouthnet.com/support/manuals/>

## Description

The Com.X5 supports two variants of hardware build:

1. Full rack mount: ISDN and/or Analogue support. (part number Com.X5 (W))
2. Half rack mount: ISDN and/or Analogue support. (part number Com.X5)

## Com.X5(W): Full Rack mount format

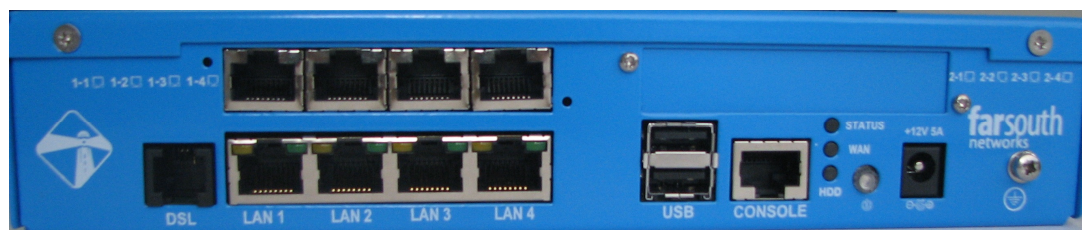


The figures above shows the rear panel view of the Com.X5 full rack mount variant. This layout has a casing that supports 6 x 4-port slots. Slots are numbered 1-1 to 1-4, 2-1 to 2-4, 3-1 to 3-4, 4-1 to 4-4, 5-1 to 5-4, 6-1 to 6-4.

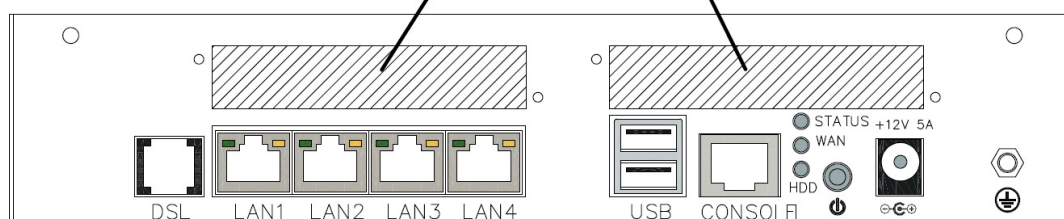
Each slot can accommodate Basic Rate ISDN (4BRI card), 4-port Analogue (2O2S, 4S, 4O) and X.21 line cards. All telephony line card are modular, availability thereof is dependent on the Com.X5 build to order.

All FXO ports are identified by a white background and all FXS by a blue background. In the case of 2O2S cards, when the unit powered down, Port 1(FXO) connects internally to Port 4(FXS) and Port 2(FXO) connects to Port 3(FXS), via bypass circuitry. This provides lifeline service during power failure.

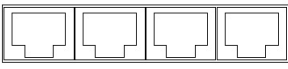
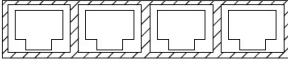

### Com.X5: Half Rack mount format



### Option Slots



### Options

- or  BRI Card
- or  2FXO-2FXS
- or  X.21 Card

The figures above shows the rear panel view of the Com.X5 half rack mount variant. This layout has a casing that supports 2 x 4-port slots. Slots are numbered 1-1 to 1-4, 2-1 to 2-4.

Each slot can accommodate Basic Rate ISDN (4BRI card), 4-port Analogue (2O2S, 4S, 4O) and X.21 line cards. All telephony line card are modular, availability thereof is dependent on the Com.X5 build to order.

All FXO ports are identified by a white background and all FXS by a blue background. In the case of 2O2S cards, when the unit powered down, Port 1(FXO) connects internally to Port 4(FXS) and Port 2(FXO) connects to Port 3(FXS), via bypass circuitry. This provides lifeline service during power failure.

Four 10/100/1000Base-Tx LAN interfaces are provided, designated LAN1 (Eth0), LAN2 (Eth1), LAN3 (Eth2) and LAN4 (Eth3). The remaining connectors are Chassis GND, 12V DC input, USB0 & USB1, Com port (UART), On/Off button.

The front panel LED (not shown) displays unit "status" information as follows:

Code	Description
Red	Unit fault
Solid yellow	Boot state
Flashing yellow	Waiting for PSTN connectivity
Solid green	OK (unit operational)

Three rear panel LED display the following basic diagnostic information as follows:

LED label	Code	Description
Status	See front panel	As per above
WAN	Flashing	Indicates DSL activity (where fitted)
HDD	Flashing	Indicates SATAII drive access (where fitted)

## Hardware Installation

**Important:** Refer to the Com.X5 Installation Guide for important safety instructions, installation guidelines, wiring and surge protection mechanisms and recommendations.

Available for download at: <http://www.farsouthnet.com/wp-content/uploads/2013/08/Com.X5-installation-guide.pdf>

1. Ensure adequate Com.X5 chassis ground (zero impedance to earth bar) and surge protection mechanisms are suitably installed.
2. The Com.X5 is powered using the 12VDC power adapter included with your unit. Connect the power adapter to the server and to mains supply and turn the server on.
3. Connect any Comma iTA units to any available LAN ports using Cat5e cables.
4. Connect the Com.X5 server to a LAN switch using LAN1 port (Eth0) and a Cat5e cable.
5. Connect FXS ports to telephones, fax machines etc. using standard Cat3, twisted pair cables.
6. Connect FXO ports to telco lines, PBXs, etc. using standard Cat3, twisted pair cables.
7. Connect BRI ports to telco NT equipment or PBXs using standard S/T RJ-45 cables.

## Accessing the Com.X5 server

1. Default access details for the Com.X5's are:

```
user: comma  
password: farsouth
```

2. The Com.X5 server GUI can be accessed using the url `http://<ip>`, where `<ip>` is the IP address assigned to the unit via DHCP, or one of the statically configured IP's. All administrative tasks elaborated on below can be performed from the GUI. Please refer to the Administrator's guide for more detail.

3. The Com.X5 server can also be accessed via its serial port using a null-modem cable with the following settings:

```
baud rate: 115200  
data bits: 8  
stop bits: 1  
parity: none
```

4. The Com.X5 server requests its IP address from the LAN / WAN via physical Ethernet port LAN1, (labelled the eth0 interface in the Operating System). This interface can be re-configured with a static IP in

`/etc/network/interfaces` as follows:

```
auto eth0  
iface eth0 inet static  
address xxx.xxx.xxx.xxx  
netmask 255.255.255.0
```

Note that the Operating System networking will need to be restarted after this configuration change:

```
sudo /etc/init.d/networking restart
```

## Networking

The Com.X5 server comes pre-installed with Ethernet interfaces configured as follows:

Interface	DHCP client	IP	Netmask
eth0	Yes	-	-
eth1	No	192.168.101.1	255.255.255.0
eth2	No	192.168.102.1	255.255.255.0
eth3	No	192.168.103.1	255.255.255.0

1. The Com.X5 server comes pre-installed with the following software:
  - a. DAHDI with Dynamic span patches for PRI and analog

- b. mISDN with Comma patches for BRI
- c. Asterisk
- d. Comma-GUI

2. The Com.X5 server is pre-configured with fixed IP addresses on the Ethernet ports that iTAs are connected to.

## Logging and Diagnostics

1. From the Comma-GUI, select the Monitoring menu for an extensive monitoring suite
2. A log is maintained while the Comma Manager is running, typically found at `/var/log/comma.log`.  
`less /var/log/comma.log`
3. The Com.X5 server system log keeps a record of system warnings and errors and can be viewed as follows:  
`less /var/log/syslog`
4. The Asterisk PBX server command line can be accessed from the server as follows:  
`sudo asterisk -vvvr`
5. If the Com.X5 is supporting an external iTA device, the command line interface of the Comma iTA may be accessed from the Comma Manager directory by typing:  
`comma-console <IP ADDRESS>`

As the Com.X5 features no internal iTA, this suite is only available when the Com.X5 is supporting an external iTA.