QXP-2-IPX

IPX Series Control Server
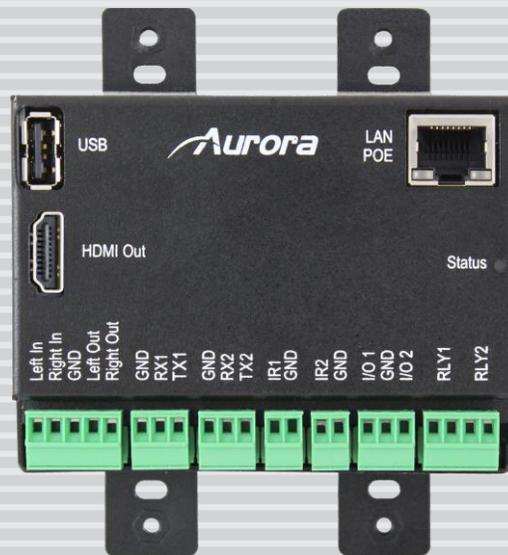
SAFETY INSTRUCTIONS

Please review the following safety precautions. If this is the first time using this model, then read this manual before installing or using the product. If the product is not functioning properly, please contact your local dealer or Aurora for further instructions.

The lightning symbol in the triangle is used to alert you to the presence of dangerous voltage inside the product that may be sufficient to constitute a risk of electric shock to anyone opening the case. It is also used to indicate improper installation or handling of the product that could damage the electrical system in the product or in other equipment attached to the product.

The exclamation point in the triangle is used to alert you to important operating and maintenance instructions. Failure to follow these instructions could result in injury to you or damage to the product.

Be careful with electricity:

- **Power outlet**: To prevent electric shock, be sure the electrical plug used on the product power cord matches the electrical outlet used to supply power to the Aurora product. Use only the power adapter and power connection cables designed for this unit.
- **Power cord**: Be sure the power cord is routed so that it will not be stepped on or pinched by heavy items.
- **Lightning**: For protection from lightning or when the product is left unattended for a long period, disconnect it from the power source.
  .

Also follow these precautions:

- **Ventilation**: Do not block the ventilation slots if applicable on the product or place any heavy object on top of it.
  Blocking the air flow could cause damage. Arrange components so that air can flow freely. Ensure that there is adequate ventilation if the product is placed in a stand or cabinet. Put the product in a properly ventilated area, away from direct sunlight or any source of heat.
- **Overheating**: Avoid stacking the Aurora product on top of a hot component such as a power amplifier.
- **Risk of Fire**: Do not place unit on top of any easily combustible material, such as carpet or fabric.
- **Proper Connections**: Be sure all cables and equipment are connected to the unit as described in this manual.
- **Object Entry**: To avoid electric shock, never stick anything in the slots on the case or remove the cover.
- **Water Exposure**: To reduce the risk of fire or electric shock, do not expose to rain or moisture.
- **Cleaning**: Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.
- **ESD**: Handle this unit with proper ESD care. Failure to do so can result in failure.

FCC
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

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Trademarks
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PACKAGE CONTENTS

Please make sure the following items are included within your package. Contact your dealer if any items are missing or damaged.

- ◆ 1 x QXP-2-IPX

Power supplies are sold separately.

Note: Go to www.auroramm.com for latest manual and firmware

OPTIONAL ACCESSORIES

- • PS0081-1 (48V 24 Watt PoE Injector) Available in -US, -AU, - EU, and -UK worldwide models.

INTRODUCTION

About

The QXP-2-IPX is an embedded Linux Control Server to be used with the IPX Series 10G 4K streaming transceivers. The QXP-2-IPX simplifies control of the IPX-TC1 and IPX-TCW3 by centralizing all commands to a single device. By utilizing Telnet, all IPX devices on the network can be controlled from a single access point. Since the QXP-2-IPX is embedded there is no configuration for the device other than setting its IP Address and you are ready to go. Connect an HDMI monitor, keyboard, and mouse to access the desktop and use a simple Linux PC interface.

The QXP-2-IPX is to be used with 3rd party control and/or the IPX Manager Software for complete control of the IPX Series streaming solutions.

Features

- ♦ Embedded Linux IPX Control Server

- ♦ Works with IPX Manager Software

- ♦ 3rd Party Control via Telnet Commands

- ♦ HDMI Output (Monitor Connection)

- ♦ USB 2.0 (Keyboard/Mouse)

- ♦ 10/100/1000Mbps LAN with PoE

- ♦ Status LED

- ♦ 1GB 1066 DDR3 RAM / 8GB Flash

- ♦ 2D / 3D Graphic Accelerators

- ♦ Two Bidirectional RS-232

- ♦ Two IR, Relays, I/O for future use

- ♦ Stereo Line In / Out

- ♦ Fits in 2 Gang Electrical Box or mounts under tables, behind displays, and in cabinets.

- ♦ Low Power Consumption

DESCRIPTION

Front

1	**HDMI**	HDMI Video Output
2	**USB**	USB 2.0 for Keyboard/Mouse (Simultaneous requires hub)
3	**LAN POE**	10/100/1000Gbps LAN PD PoE
4	**Status**	Status LED for normal operation and update status.
5	**Audio**	Future Use
6	**RS-232 1 & 2**	RS-232 1 is defaulted to 115200 Baud Rate for setup and debug. RS-232 2 Future Use
7	**IR 1&2**	Future Use
8	**I/O 1&2**	Future Use
9	**Relay 1&2**	Future Use

Rear

1	Setup	Utilized for various functions like firmware updating.
2	Status	Status LED for normal operation and firmware update status. Normally it is green.

GETTING STARTED

QXP-2-IPX Control Server Quick Setup

1. Connect the QXP-2-IPX USB to a USB Hub for keyboard and mouse use. Plug the HDMI into a monitor capable of 720p or higher.
2. Connect the LAN to a PoE switch or PoE injector with LAN connection.
3. Unit will boot in about 45 seconds.
4. Double Click on Network Connections on the desktop to change the network settings.
5. Under the IPV4 tab add a fixed IP unless you are using the MAC address from the switch to control the IP Address through DHCP. It is highly recommended to have an IP Address that won't change. If a static IP is added, delete the Auto or boot time will be very long as it searches.
6. Upon completion in the lower right corner left click on the Network Settings in the task bar to select the new IP Connection that has been created.

IP Address Detailed Configuration

IP Address for QXP-2-IPX can be changed by opening the "*Network Connections*" icon from "Desktop". The Network Connections window will be opened as shown below. "ipaddress" is the Network Connection already created.
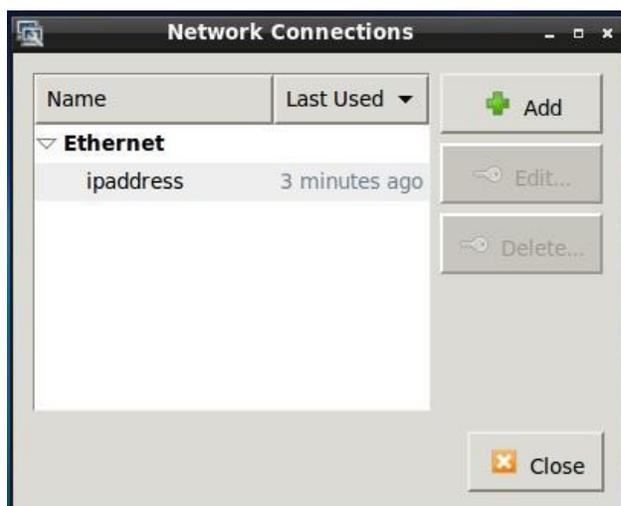
For changing the ip related parameters, edit the "ipaddress" network connection item after selecting it and clicking edit button.

This will display the Editing ipaddress window as shown below.

Now select the "IPV4 Settings" Tab and click the "Method" drop-down item to select between static ip and dhcp. For static ip setting "Manual" method should be selected as shown below. For dhcp setting, the method should be chosen as "Automatic (DHCP)".

Now the desired static ip parameters can be given by clicking the "Add" button and entering the parameters as shown below.

The updated "ipaddress" connection item should be saved by clicking the "Save" button.

The user needs to update the IP of the system with the updated "ipaddress" settings. For this the user should left-click "Network settings" button on the "Taskbar" and then click the "ipaddress" item as shown below. This will update the ip address of QXP-2-IPX with new values.

To view the current IP address of the system, user can "Right click" the "Network Settings" item on the taskbar and click on "Connection Information" as shown below.
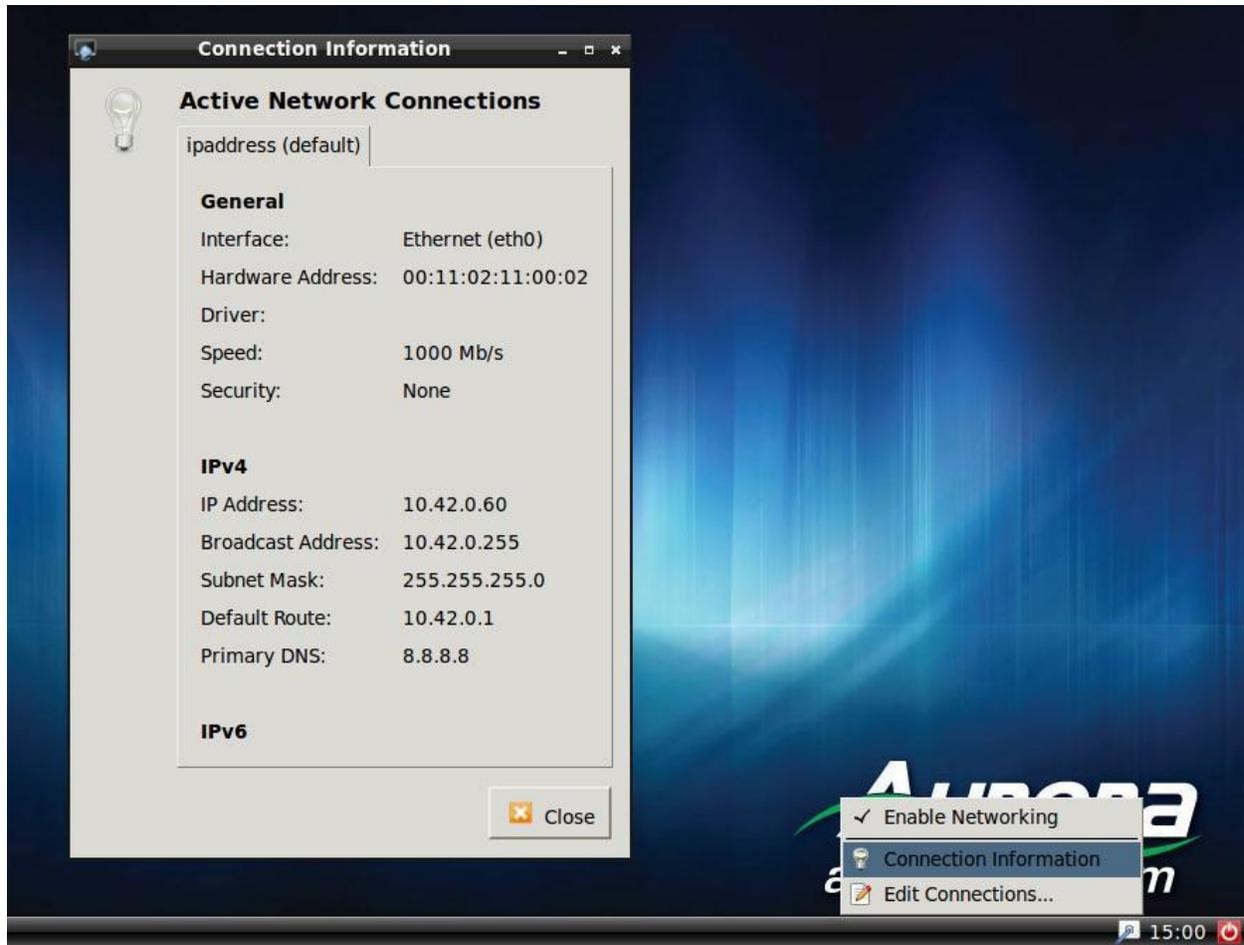
System Example

The IPX Series is perfect for multi-room applications with its flexibility. A nearly unlimited number of rooms can share video, audio, data, and control in real-time. The scalability is only limited by the size of the network switch and infrastructure. Notice the QXP-IPX-2 is required to be located on the network for communications.
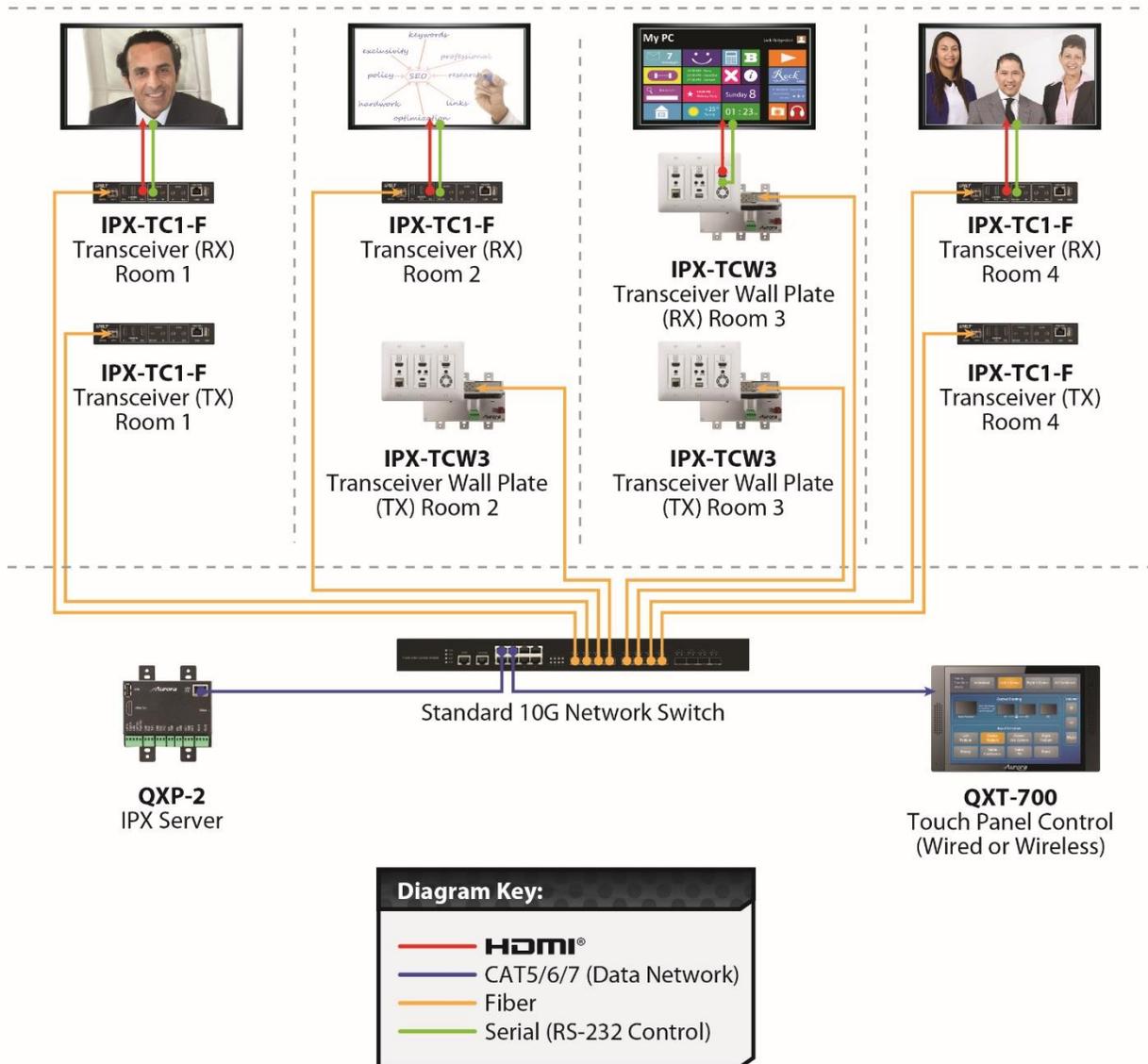
OPERATION

Single Server Operation

The QXP-2-IPX is an embedded Linux server, which mitigates all communications to all the IPX units (devices and wall plates). The QXP-2-IPX can be controlled via Telnet with Aurora's IPX Manager, a Microsoft Windows® software. It can also be controlled from other Aurora control products or 3rd party control systems with the available API. In order to obtain the IPX Server API commands you must be dealer status otherwise an NDA is required and is at the discretion of Aurora.

Multiple Servers for Redundancy

Multiple QXP-2-IPX servers can run on the same network for redundancy. It is important only one communicates at any given time or incomplete commands may occur between units communicating simultaneously. IPX manager will only connect to one server at a time but it is important for every PC running IPX Manager they all point to the same server at the same time. If a server losses communication, then all clients should reconnect to the same backup server.

When using 3rd party control systems, this can be done automatically. Have the control system send a query to the QXP-2-IPX to receive a response through the telnet connection. If no response is received have the 3rd party control device target the backup server until the main server starts to communicate again. Do not use ping for this operation as it only confirms a network connection but does not confirm actual IPX API Server operation. Pinging will be effective for diagnostics to determine if the network connection to the server is lost or if there are significant delays in the network.

Customer Access Credentials

When password is required the default is listed below. It is always recommended for security to change from the default.

Login name: user
Password: user123

SOFTWARE

IPX Manager PC Control Tool

The IPX Manager is a Windows® based software available at the Aurora customer portal on www.auroramm.com

IPX Manager allows a user to control the various capabilities of IPX series products on a network. While the IPX manager is a client software, the IPX Server (QXP-2-IPX Server Version) handles all the communication handling and is the target for all communication. This allows for centralized communications and the ability to run many clients on a network seamlessly.

Features

- Matrix Switching
- Seamless Matrix Switching (as of version 2.8.7 Seamless will only work with RGB/YCrCb 4:4:4)
- Video Wall Setup and Control
- Audio Break-away Routing
- RS-232 Routing & Control
- IR (Infrared) Remote Control Routing
- USB Routing

- Horizontal and Vertical Viewing

- Preset Store and Recall

- Connection Manager

- Advanced Debug Logging

- Touch Screen Friendly Layout

- Configuration File for Cloning Presets and Connections on Other PCs

- Multi-Server connections

For full detail of the IPX Manager software tool and setup, the manual can be found at the Aurora website

www.auroramm.com

APPENDIX 1   Troubleshooting

For best results always make certain you have the latest firmware.

Problem	Solution
1. LED is not lit	a. Check to see if PoE wall supply is plugged into wall outlet. b. Make certain Ethernet Switch is PoE capable c. Some PoE switch need to enable PoE. Checking settings.
2. IPX Manager cannot find QXP-2-IPX	a. Check LAN setup for IGMP Snooping b. Check IP Address matches target.
3. No Keyboard or Mouse	a. Make certain USB hub has power
4. No Output Image	a. Check HDMI cable connection. b. Monitor must support 720p or higher.

APPENDIX 2   Technical Specifications

Model Name	QXP-2-IPX
HDMI Outputs	1
USB 2.0	1
LAN	10/100/1000Mbps PoE
Audio Input/Output	1 Stereo 5 pin 3.81mm Euro
Audio Bandwidth	20Hz – 20KHz
RS-232 Ports	2 (115200 Baud Max)
IR Ports	2
I/O Ports	2
Relays	2 Normally Open
IR Frequency Range	20KHz – 60KHz
RS-232 Connector	Euro Style 3.81mm
IR Connector	3.5mm TRS
HDMI Connector	Type A 19 pin
Mechanical	
Housing	Black Aluminum Enclosure
Dimensions [L x D x H]	3.728"x4.331"x1.2"
Weight	1.1lbs
Mounting	2 Gang or Ear Mount
Power supply	PoE 48v
Operation temperature	0~40°C [32~104°F]
Package Contents	1x QXP-2-IPX
Options	PS0081-1 PoE Supply

Specifications subject to change without notice.

APPENDIX 3   Firmware Update

For the latest firmware updates please go www.auroramm.com

You must be signed up to the Customer Portal in order to download firmware.

Firmware Updating

New firmware is posted on the Aurora customer portal. Copy the qxp2 folder in the .zip to a USB memory stick at least 8GB or larger that is FAT32 formatted. Now follow the instructions below.

1. Plug USB memory stick into USB port while power is disconnected.
2. Press and hold setup button using a paperclip while applying power and the LED will turn solid. Release the button.
3. The update will start to occur and the LED will begin toggling between Amber and Green. This will last for about 15-20 minutes.
4. When firmware update is complete the LED will turn solid green. If the update should fail for any reason the LED will turn Amber.
5. Recycle the power and the new firmware will be present.

APPENDIX 4   Protocol

For the latest protocol please go www.auroramm.com

You must be signed up to the Customer Portal in order to download IPX protocol. The protocol is only available to authorized Aurora dealers.

APPENDIX 5   Warranty

Limited 3 Year Warranty

Aurora Multimedia Corp. ("Manufacturer") warrants that this product is free of defects in both materials and workmanship for a period of 3 years as defined herein for parts and labor from date of purchase. This Limited Warranty covers products purchased in the year of 2009 and after. Motorized mechanical parts (Hard Drives, DVD, etc), mechanical parts (buttons, doors, etc), remotes and cables are covered for a period of 1 year. Touch screen displays are covered for 1 year; touch screen overlay components are covered for 90 days. Supplied batteries are not covered by this warranty. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with same or similar model) at our option without charge for parts or labor for the specified product lifetime warranty period.

This warranty shall not apply if any of the following:

A. The product has been damaged by negligence, accident, lightning, water, act-of-God or mishandling; or,

B. The product has not been operated in accordance with procedures specified in operating instructions: or,

C. The product has been repaired and or altered by other than manufacturer or authorized service center; or,

D. The product's original serial number has been modified or removed: or,

E. External equipment other than supplied by manufacturer, in determination of manufacturer, shall have affected the performance, safety or reliability of the product.

F. Part(s) are no longer available for product.

In the event that the product needs repair or replacement during the specified warranty period, product should be shipped back to Manufacturer at Purchaser's expense. Repaired or replaced product shall be returned to Purchaser by standard shipping methods at Manufacturer's discretion. Express shipping will be at the expense of the Purchaser. If Purchaser resides outside the contiguous US, return shipping shall be at Purchaser's expense.

No other warranty, express or implied other than Manufacturer's shall apply.

Manufacturer does not assume any responsibility for consequential damages, expenses or loss of revenue or property, inconvenience or interruption in operation experienced by the customer due to a malfunction of the purchased equipment. No warranty service performed on any product shall extend the applicable warranty period. This warranty does not cover damage to the equipment during shipping and Manufacturer assumes no responsibility for such damage.

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