USERS GUIDE

LXC-200

IP Controller

Manual Number: 140331

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 interferences received, including interference that may cause undesired operation.

Trademarks

All trademarks in this document are the properties of their respective owners.

TABLE OF CONTENTS

PACKAGE CONTENTS **1**
INTRODUCTION **2**
About 2
Features 2
Front Panel 3
Rear Panel 4
QUICK START **5**
Hardware 5
Software 6
APPENDIX 1 Troubleshooting **8**
APPENDIX 2 Communication Protocol **9**
APPENDIX 3 Technical Specifications **10**
Dimension Drawing 11
APPENDIX 4 Warranty **12**

PACKAGE CONTENTS

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

- LXC-200 x 1
- Power Adapter x 1

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

INTRODUCTION

About

The LXC-200 combines all of the Nugget units in a single POE powered housing for room-based expansion including 3-serial, 2-IR, 2-relay, I/O port, and audio level control for complete room expansion. The internal Flash memory provides the ability for storing and serving up web-control pages for complete autonomous control. In addition, it functions as a multi-port remote expansion for the WACI series of IP-based control systems.

Features

- Fits in most 2 Gang Outlet boxes
- Enough ports to control many devices like projector, DVD, Document Camera, Screen and More
- Volume control
- Three Serial Ports
- Two Relay Ports
- Two IR Ports
- One Input with A/D Port
- Power Over Ethernet
- Integrated Web Server

Front Panel

◆ **Status**

Will blink at a steady pace red / green if the LXC-200 is powered and operating normally.

Rear Panel

①. 12v

Connect the supplied 12V power adapter's output plug here.

②. Audio Left / Right Input and Output

Unbalanced line level audio input and output is connected.

③. LAN 1

RJ-45 connection for 10/100 Ethernet. This port is POE capable as well. If the switch has POE the 12v DC wall supply will not be necessary.

④. RS-232 Port 1 (TX/RX)

RS-232 transmit, receive and ground is connected here.

⑤. RS-232 Port 2 (TX/RX)

RS-232 transmit, receive and ground is connected here.

⑥. RS-232 Port 3 (TX/RX)

RS-232 transmit, receive and ground is connected here.

⑦. IR Output 1 & 2

Connection for external IR emitter.

⑧. I/O A/D 1

This port is for digital or analog input signals. It is protected up to 12v input signals but will clamp it to 3.3v. Common used for current sensing, door alarms and motion sensors.

⑨. Relay 1 & 2

The relays are normally open typology and rated for 24v 2A.

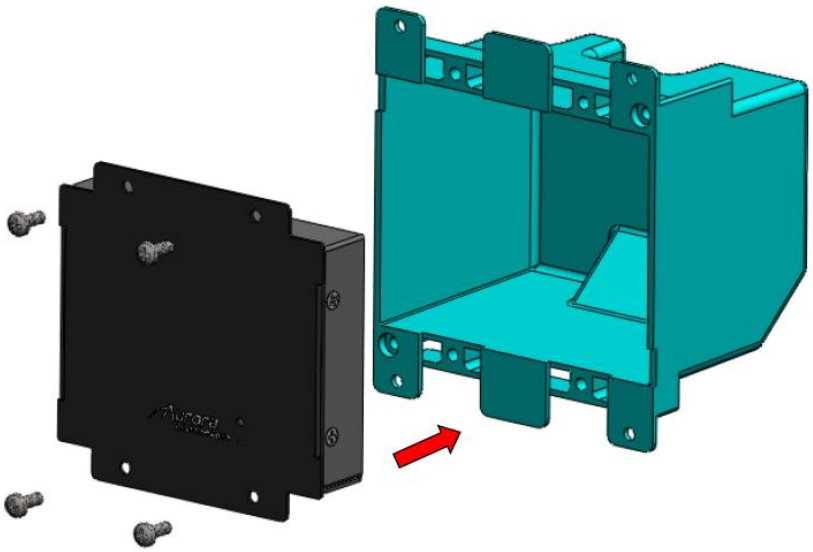
⑩. Blue Setup Button

Press and hold for 5 seconds to restore the IP Address default 192.168.1.10

QUICK START

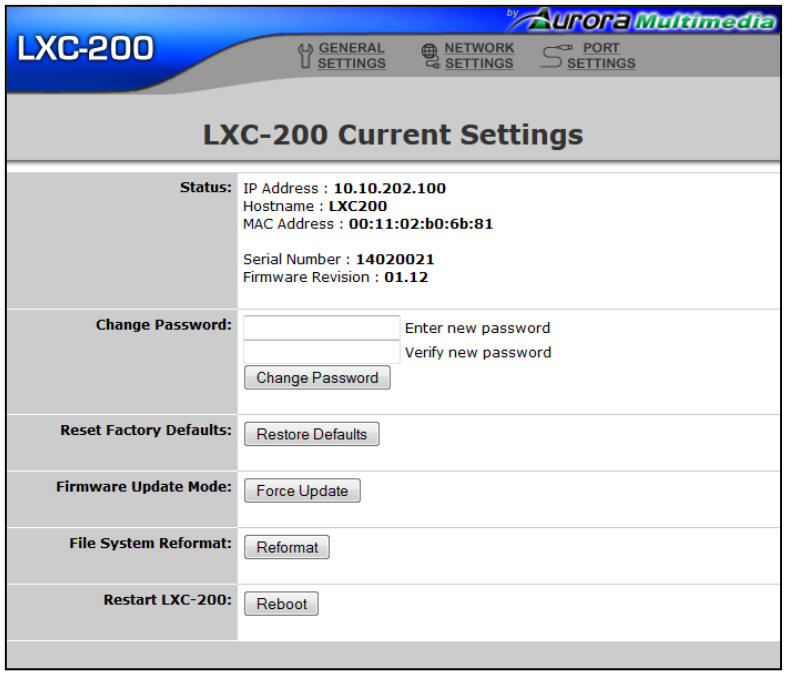
Hardware

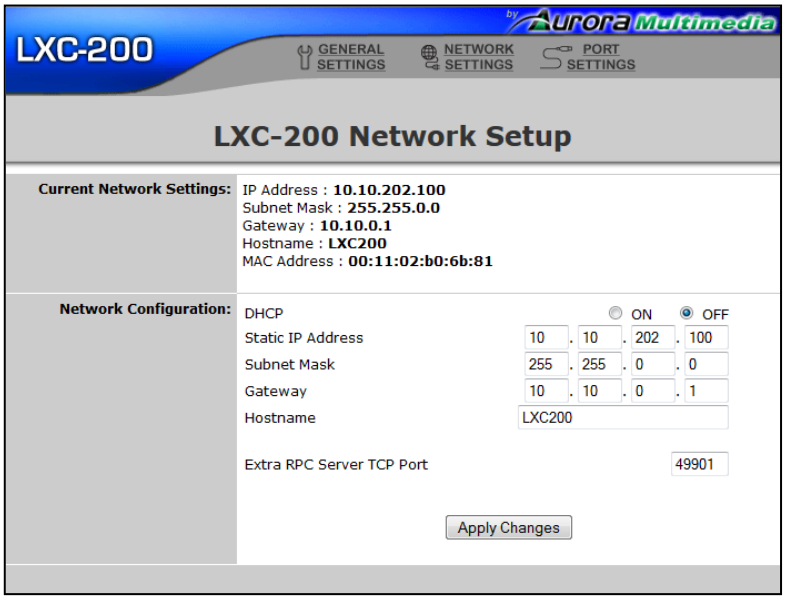
- Unpack the LXC-200 from its carton making certain everything is included.
- The unit can be powered via POE (Power Over Ethernet) or included 12v DC wall supply.
- The LXC-200 is designed for a 2 Gang wall box however it will only fit in the type with full end to end space. Please note the dimensions in the specifications section.
- Connect the LAN port and any other applicable port connections pertaining to the system using the provide screw connector terminal blocks. It is recommended to connect the LAN as it will allow for remote access and firmware updates.
- Connect the 12v power connection unless POE is being used.
- Install the main unit into the 2 gang box and secure with 4 screws.

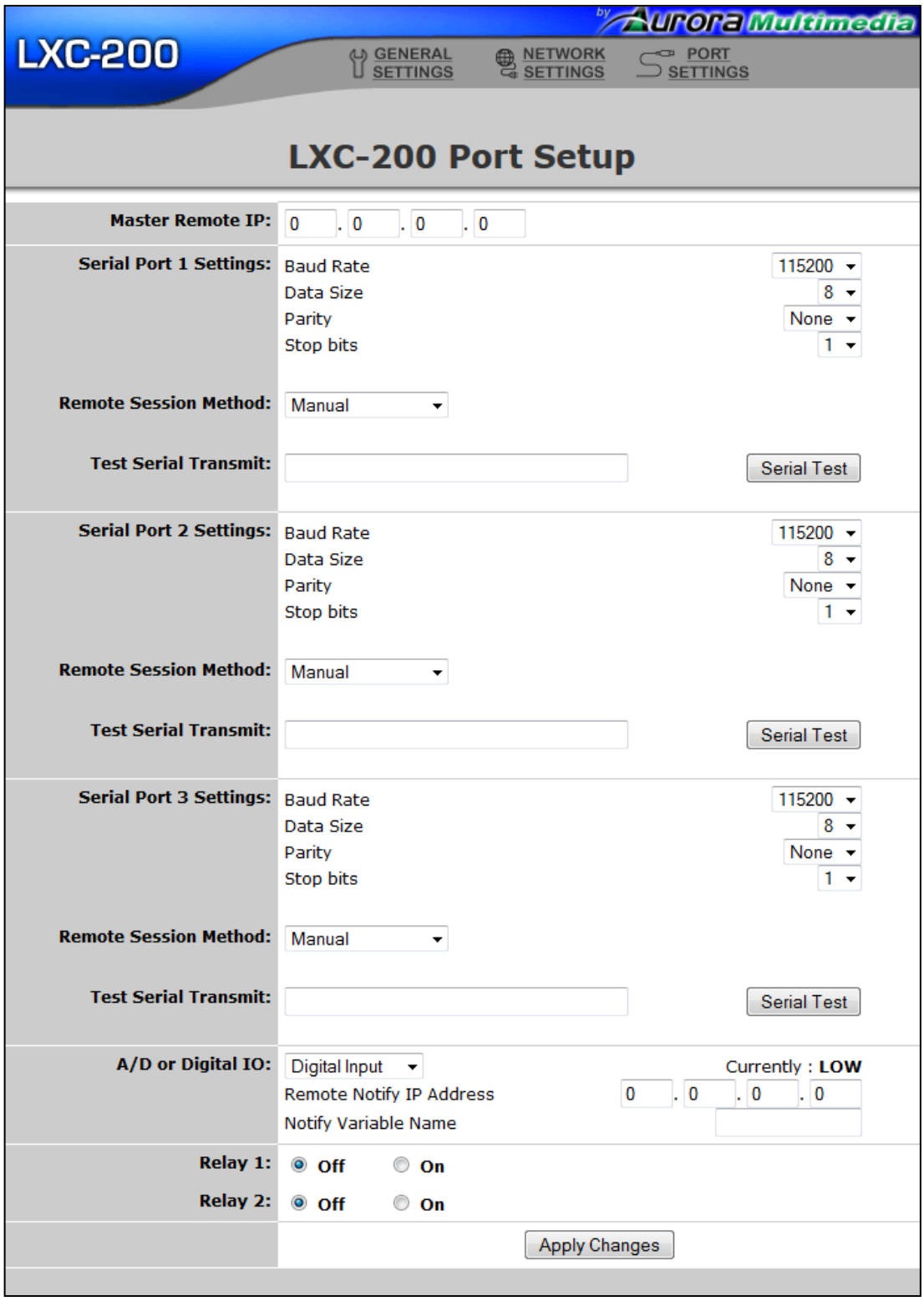


Software

- Using a PC connected to the same network launch a browser.
- The LXC-200 is defaulted to static mode from factory so make certain to connect one unit at a time to the network while changing the required IP address or you will have network conflicts.
- In the search bar type in the IP for the LXC-200 192.168.1.10/setup
- The default user name is admin and default password is admin.
- Click on network at the top and change the settings accordingly to match your system.
- Make certain to also change the password under general settings for security reasons.






LXC-200
by Aurora Multimedia
GENERAL SETTINGS
NETWORK SETTINGS
PORT SETTINGS
LXC-200 Port Setup
Master Remote IP: 0 . 0 . 0 . 0
Serial Port 1 Settings:
Baud Rate 115200
Data Size 8
Parity None
Stop bits 1
Remote Session Method: Manual
Test Serial Transmit:
Serial Test
Serial Port 2 Settings:
Baud Rate 115200
Data Size 8
Parity None
Stop bits 1
Remote Session Method: Manual
Test Serial Transmit:
Serial Test
Serial Port 3 Settings:
Baud Rate 115200
Data Size 8
Parity None
Stop bits 1
Remote Session Method: Manual
Test Serial Transmit:
Serial Test
A/D or Digital IO: Digital Input
Currently : LOW
Remote Notify IP Address 0 . 0 . 0 . 0
Notify Variable Name
Relay 1: Off On
Relay 2: Off On
Apply Changes

APPENDIX 1 Troubleshooting

Problem	Solution
1. RS-232 does not have control	a. Check baud rate settings for the port b. Try swapping RX and TX. c. Make certain protocol used is correct.
2. IR Output does not work	a. Check position of IR emitter so that it is over the IR receiver window of device. b. Verify IR file used is correct. c. Make certain signal and GND is not reversed
3. LAN Control does not work	a. Check to see if unit is plugged in or if relying on POE, make certain LAN switch is POE capable. b. Check LAN LEDs and see if lit. If not then check cabling to the switch. c. Check IP settings on LXC-200 to make certain it matches the type of network requirement. Example: Static vs DHCP.

APPENDIX 2 Communication Protocol

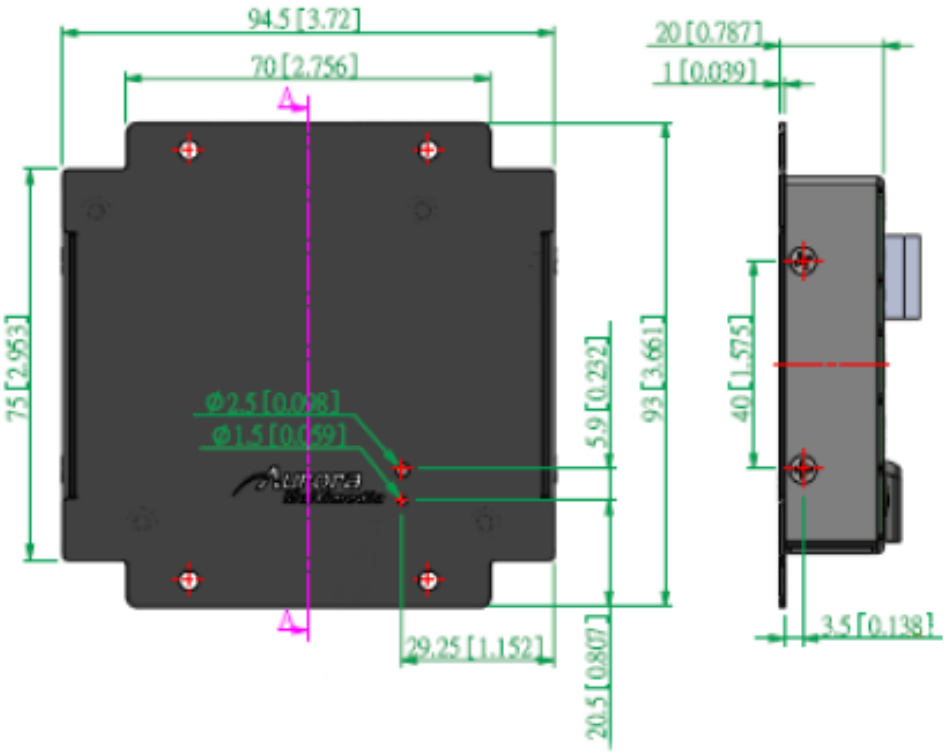
	Note: The Method Command Name is CASE SENSITIVE!
Method (parameters)	**Sample usage**
AD_DigitalToVoltage (Port, Digital)	
AD_GetPortCount ( )	
AD_MaxDigital (Port)	
AD_MaxVoltage (Port)	
AD_MinDigital (Port)	
AD_MinVoltage (Port)	
AD_ReadDigital (Port)	
AD_ReadVoltage (Port)	
DIO_GetPortCount ( )	
DIO_IsOutput (Port)	
DIO_OutputMode_Close (Port)	
DIO_OutputMode_Open (Port)	
DIO_Read (Port)	
GetFirmwareVersion ( )	
GetIRFileNames ( )	
GetMachineType ( )	
IR_ListAllGroups ( )	
IR_SendCommand (Port, Group, Command)	method=IR_SendCommand&param1=1&param2=DVD&param3=PLAY
Net_GetIPAddress ( )	
Net_GetNetCardCount ( )	
Net_GetSubnetMask ( )	
Relay_GetPortCount ( )	
Relay_GetState (Port)	
Relay_Off (Port)	method=Relay_Off&param1=1
Relay_On (Port)	method=Relay_On&param1=1
Serial_ClearReadBuffer (Port)	
Serial_GetPortCount ( )	
Serial_GetSettings (Port)	
Serial_Read (Port)	
Serial_ReadBufferCount (Port)	

APPENDIX 3 Technical Specifications

Front Panel	
Status LED	Red/ Green Bi-Color
Rear Panel	
LAN	RJ-45 10/100 POE
Power	3.81mm Phoenix Style 2 Pin Connector (12v, Gnd)
RS-232	3.81mm Phoenix Style 3 Pin Connector (Rx, Tx, Gnd) 3 Ports 1200 – 115k Baud Rate
IR	3.81mm Phoenix Style 2 Pin Connector (Signal, Gnd) 2 Ports 30kHz-1MHz
I/O	3.81mm Phoenix Style 2 Pin Connector (Signal, Gnd) 1 Port Digital Input and A/D tolerant to 12v DC
Relay	3.81mm Phoenix Style 2 Pin Connector (N.O., Common) 2 Ports 24V DC 2A
Audio	3.81mm Phoenix Style 5 Pin Connector (Left In, Right In, Gnd, Left Out, Right Out) Unbalanced Stereo Audio for Input and Output
Processing	
MCU	32 bit ARM Processor 8MB DRAM 8MB FLASH Real Time Clock
Physical	
Dimension	3.72” W x 3.66” H (94.5mm x 93mm)
Mounting	2 Gang Wall Electrical Wall Box Mounting
Power	12 to 48v DC Input Connector 1.5 Watts Power Over Ethernet (POE)

Specifications subject to change without notice.

Dimension Drawing



APPENDIX 4 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.

Aurora Multimedia Corp.

205 Commercial Court

Morganville, NJ 07751

Phone: 732-591-5800 Fax: 732-591-6801