

IMPORTANT:
 Go to www.extron.com for the complete user guide, installation instructions, and specifications before connecting the product to the power source.

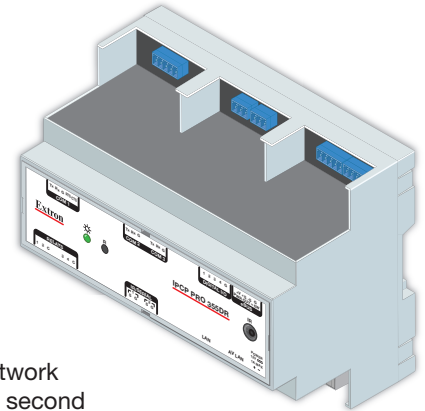
IPCP Pro 350DR, IPCP Pro 355DR • Setup Guide

The IPCP Pro 350DR and IPCP Pro 355DR are DIN rail-mountable Extron IPCP Pro Series IP Link® Pro Control Processors. They integrate Ethernet connection into AV systems to allow users to remotely control, monitor, and troubleshoot AV equipment, including display devices and switchers. These models include an embedded web server, bidirectional serial ports, relays, IR/serial ports, and digital I/O ports for use in applications that require control and monitoring of multiple devices within a large-scale AV system. Both models mount to a standard 35 mm × 7.5 mm DIN rail.

All models include an Extron eBUS port, which allows a variety of eBUS devices to be connected to a single control processor. eBUS devices include an array of button panels as well as power and signal hubs. eBUS devices are automatically recognized by the control processor and can be added or removed at any time.

The IPCP Pro 355DR is a dual-NIC (network interface controller) model that features two network interfaces. One (at the LAN port) is for connection to the corporate or “house” network. The second network interface (at the AV LAN port) is for dedicated control of local AV devices.

Use the Extron Toolbelt software to discover and manage the IPCP Pro control processor and other Extron control products. Configure the control processor using Extron Global Configurator software running in Global Configurator Professional (GC Professional) or Global Configurator Plus (GC Plus) mode, or program the control processor using Extron Global Scriptor (GS). The IPCP Pro integrates seamlessly with Extron GlobalViewer® Enterprise (GVE) software and the GlobalViewer web-based AV resource management for remote control applications. These control processors support multiple TouchLink® Pro touchpanel interfaces over a standard Ethernet network. Global Configurator and other useful software applications are available at www.extron.com.



Setup Checklist: How to Proceed With Installation

Get Ready

- Familiarize yourself with the features of the control processor (see [Front Panel Features](#) on page 5 and [Rear Panel Features](#) on page 5) and of any Touchlink Pro touchpanels that will be part of the system.
- Download and install the latest version of the following:
 - **Toolbelt software** — for discovering the control processor and other control products, for managing core settings, and for upgrading firmware if the need arises.
 - **Global Configurator (GC) software** — for setting up and configuring the control system. GC Professional and GC Plus modes include the **Toolbelt** feature, and **IR Learner Pro** (for creating IR driver files using the remote controls of AV products if drivers are not already available from Extron).
 - **Global Scriptor software** — for setting up and programming the control processor (as an alternative to GC)
 - **GUI Designer software** — for designing layouts for Extron Touchlink Pro touchpanels and third party touch interfaces
 - **IP Link Pro device drivers** — for use with GC, to make control of AV devices possible
 All are available from www.extron.com (see [Locating Software, Firmware, and Driver Files on the Extron Website](#) on page 10).
- Obtain network information for the unit from the network administrator. You will need the following details for each IP Link Pro device:

<input type="checkbox"/> DHCP setting (on or off)	<input type="checkbox"/> Subnet mask	<input type="checkbox"/> User name
<input type="checkbox"/> Device (IPCP Pro, Touchlink Pro, IPL Pro) LAN IP address	<input type="checkbox"/> Gateway IP address	<input type="checkbox"/> Passwords
<input type="checkbox"/> AV LAN IP address (for dual-NIC models)		
- Write down the MAC address of each network interface controller card (NIC) on each IP Link Pro device to be used.
- Obtain model names and setup information for devices the IPCP Pro will control.

Mount and Cable All Devices

- Mount the unit to a DIN rail (see [Mounting the Unit to a DIN Rail](#) on page 1).
- Cable devices to the control processor (see [Cabling and Features](#) on page 6).
- Connect power cords and power on all the devices.

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Set Up the Control Processor and Touchpanels for Network Communication

- Connect the PC that you will use for setup, the control processor, and touchpanels to the same Ethernet subnetwork. For control processor LAN connections, see [Control, Bidirectional – LAN \(Ethernet\) on page 7](#).
- Start Toolbelt or start Global Configurator and use the Toolbelt feature of the software to set the IP address, subnet, gateway IP address, DHCP status, and related settings. See the flowchart in [Network Communication Setup](#) on page 3.

NOTE: When setting up DHCP during network configuration or if using a host name instead of an IP address during project recovery, the user must enter a qualified host name (*Username.HostName.Domain*). For example: `somename.extron.com`.

Configure or Program the Control Processor and Touchpanels

The most basic steps are outlined below in the recommended order.

NOTE: See the *Toolbelt Help* file, *Global Configurator Help* file, *Global Scripter Help* file, and *GUI Designer Help* file as needed for step-by-step instructions and detailed information. The help file for GC includes an introduction to the software and how to start a project and configuration.

- If Touchlink Pro or third party touchpanels are part of the system, start and use GUI Designer to **design, save, and build the graphical user interface (GUI) layout** for the touchpanels.

NOTE: To redeem (activate) a LinkLicense™, go to www.extron.com//llredeem and follow the online instructions.

- Using GC, **create a new GC Pro or GC Plus project and configure the control processor and other IP Link Pro devices**. The configuration tells the control processor:
 - how its ports function
 - how to control other products
 - which touchpanels to interact with
 - what to monitor
 - when to do things
 - whom to notify, how, and under what circumstances
- Configure ports on the control processor.
 - Select device drivers and link them to each serial, IR/serial, or Ethernet port.
 - Select settings (serial protocol, relay behavior, digital I/O or flex I/O settings) as needed.
- Add eBUS devices and set them up:
 - Ensure that the hardware address (eBUS ID) set on each device is distinct and matches the addresses used in the configuration.
 - Assign button functions as desired.
- Set up monitors, schedules, macros, and local variables.
- Add touchpanels and set them up:
 - Upload the GUI configuration to the touchpanels using Global Configurator.
 - Assign any appropriate functions, monitors, or schedules to the touchpanels and their buttons.
- If not using GC Professional or GC Plus, use Global Scripter** to program the control system as desired.
 - Program ports on the control processor.
 - Program each serial, IR/serial, or Ethernet port.
 - Program relay behavior and flex I/O settings as needed.
 - Add eBUS devices and set them up:
 - Ensure that the hardware address (eBUS ID) set on each device is distinct and matches the addresses programmed for them in the IPCP.
 - Program button functions as desired.
 - Add touchpanels and set them up:
 - Upload the GUI configuration to the touchpanels.
 - Program functions, monitors, or schedules to the touchpanels and their buttons.
- Save and build the project.
- Upload the system configuration to the control processor.

Test and Troubleshoot

- Test the system. See the *IPCP Pro User Guide* for an outline of the system testing procedure.
- Make adjustments to wiring or configuration as needed.

Network Communication Setup

Network setup is essential prior to configuration. Use the following flowchart as a guide to setting up the control processor for network use.

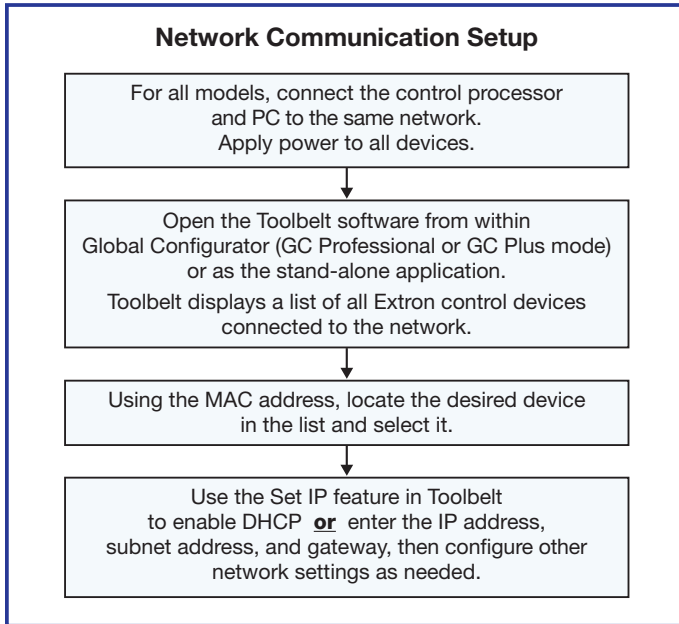


Figure 1. Network Setup

Mounting the Unit to a DIN Rail

To fasten the IPCP Pro 350DR or IPCP Pro 355DR to a DIN rail:

1. Place the unit in front of the rail, with the top rear against the wall or furniture (see figure 2, ①).
2. Slide the IPCP Pro down so that the upper part of the mounting slot seats onto the top of the DIN rail (see ②).
3. Tilt the base of the IPCP Pro toward the rail and press until the IPCP Pro snaps into place on the rail (see ③).

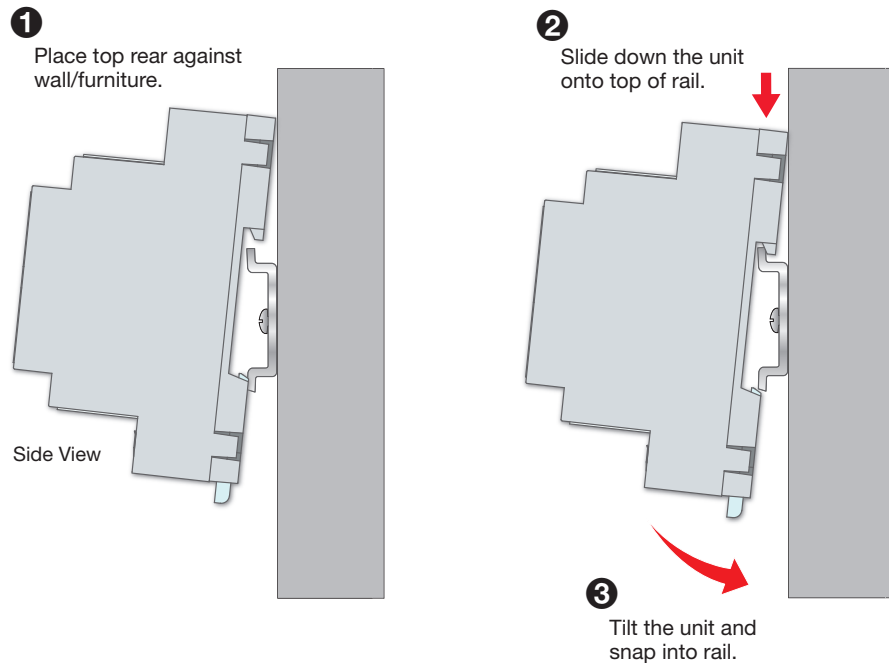


Figure 2. Mounting the IPCP Pro 35x DR to a DIN Rail

Figure 3 shows how the IPCP Pro looks after it is mounted, before cables are connected.

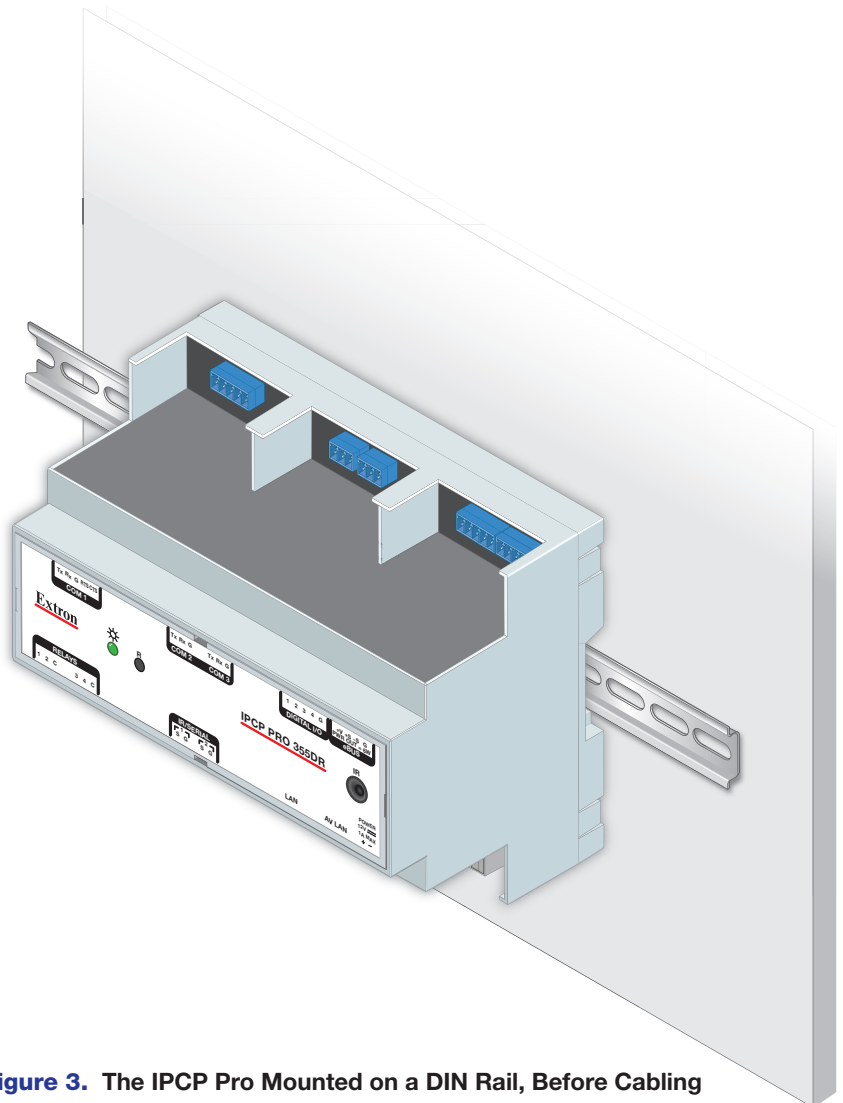


Figure 3. The IPCP Pro Mounted on a DIN Rail, Before Cabling

Panels and Locations of Features

Front Panel Features

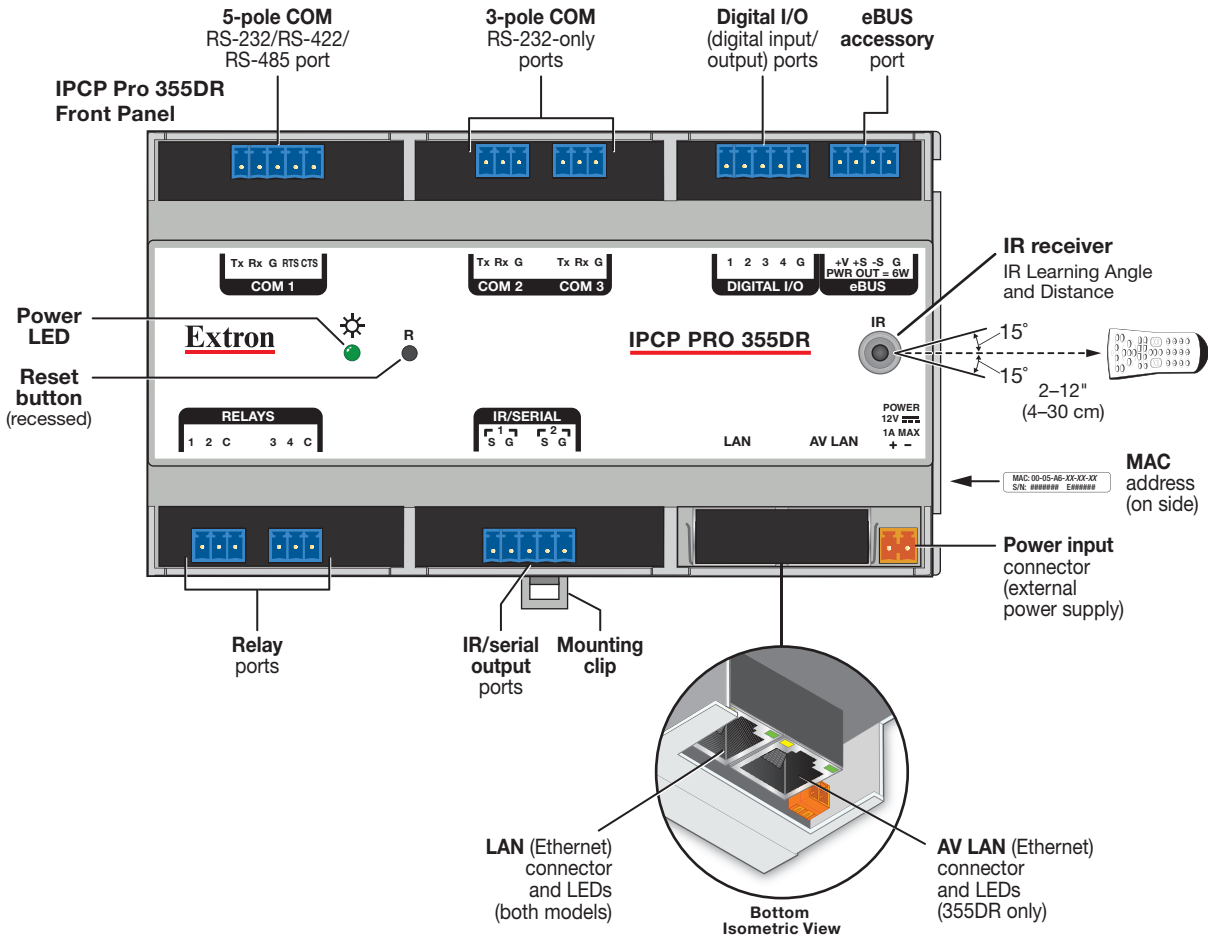


Figure 4. IPCP Pro DIN Rail Series Front Panel Features

NOTE: For reset mode information, see the *IPCP Pro Series User Guide*.

Rear Panel Features

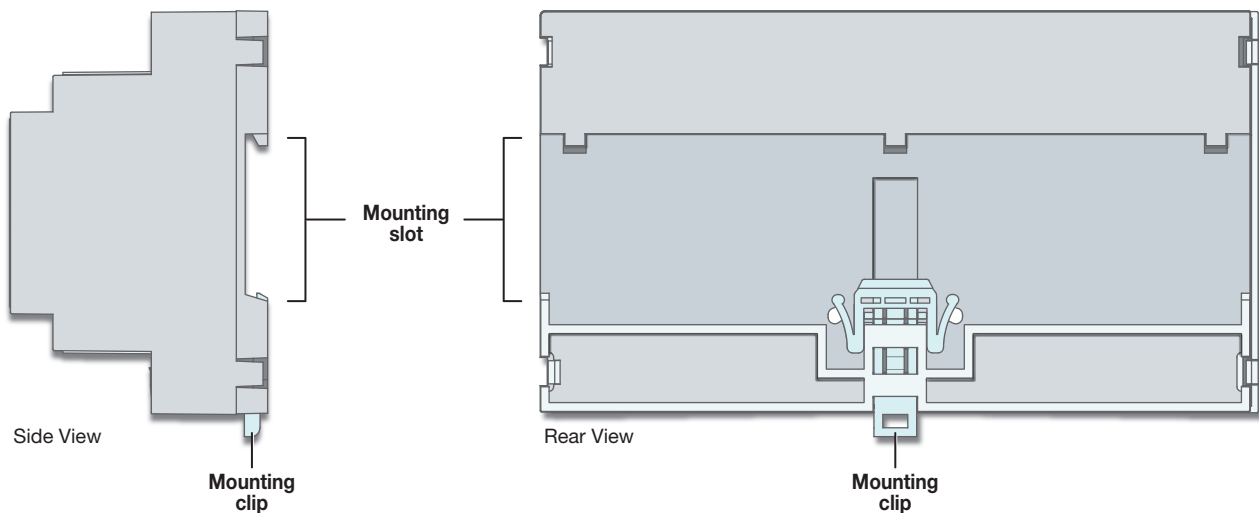


Figure 5. IPCP Pro DIN Rail Series Rear Panel Features

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Cabling and Features

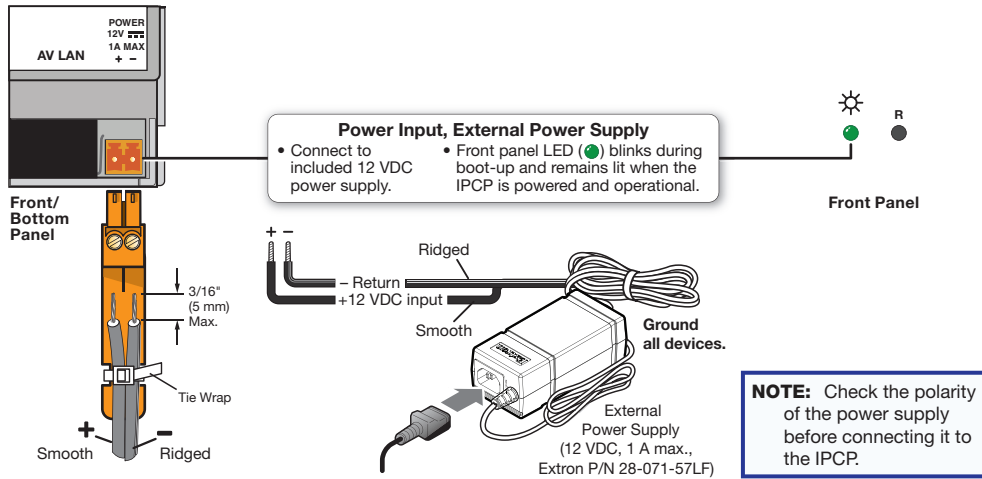
Attach cables using the following wiring diagrams as a guide. Full details are available in the *IPCP Pro Series User Guide*.

ATTENTION: Installation and service must be performed by experienced personnel.

ATTENTION : L'installation et l'entretien doivent être effectués par du personnel expérimenté.

NOTE: This section shows the IPCP Pro 355DR. The IPCP Pro 350DR is identical except that it does not have a second NIC (AV LAN). The LAN port of the IPCP Pro 350DR is located where the AV LAN port is located on the IPCP Pro 355DR.

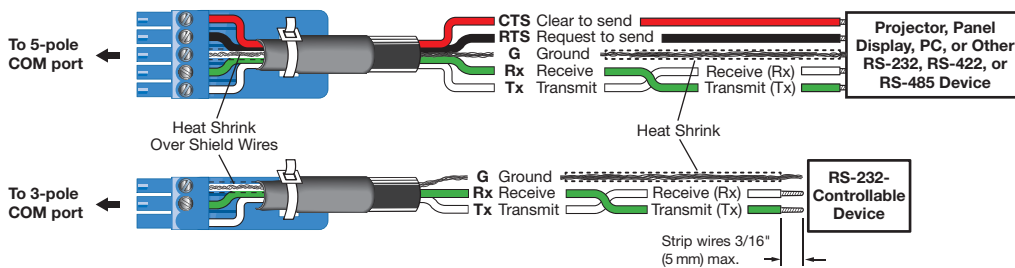
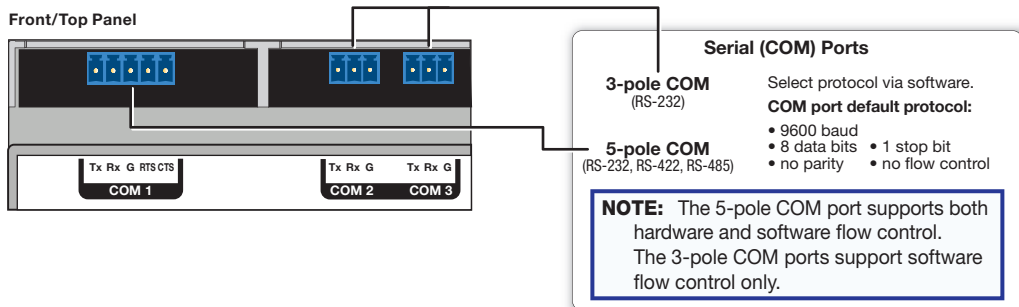
Power Input



ATTENTION:

- Always use a power supply supplied or specified by Extron. Use of an unauthorized power supply voids all regulatory compliance certification and may cause damage to the supply and the unit.
- Utilisez toujours une source d'alimentation fournie par Extron. L'utilisation d'une source d'alimentation non autorisée annule toute conformité réglementaire et peut endommager la source d'alimentation ainsi que l'unité.

Control, Bidirectional – Serial (COM)



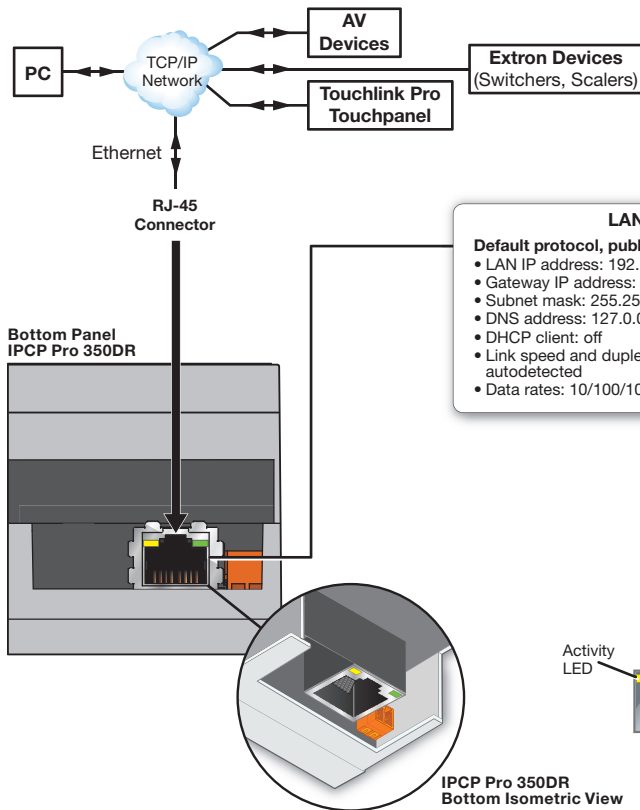
RTS = Request to Send
CTS = Clear to Send
Tx = Transmitting Data
Rx = Receiving Data

5-pole COM Pin Configurations			
Pin	RS-232	RS-422	RS-485
1 (Tx)	Tx	Tx-	Data- (pins 1 & 2 tied together)
2 (Rx)	Rx	Rx-	
3 (G)	Ground	Ground	Ground
4 (RTS)	RTS	Tx+	Data+ (pins 4 & 5 tied together)
5 (CTS)	CTS	Rx+	

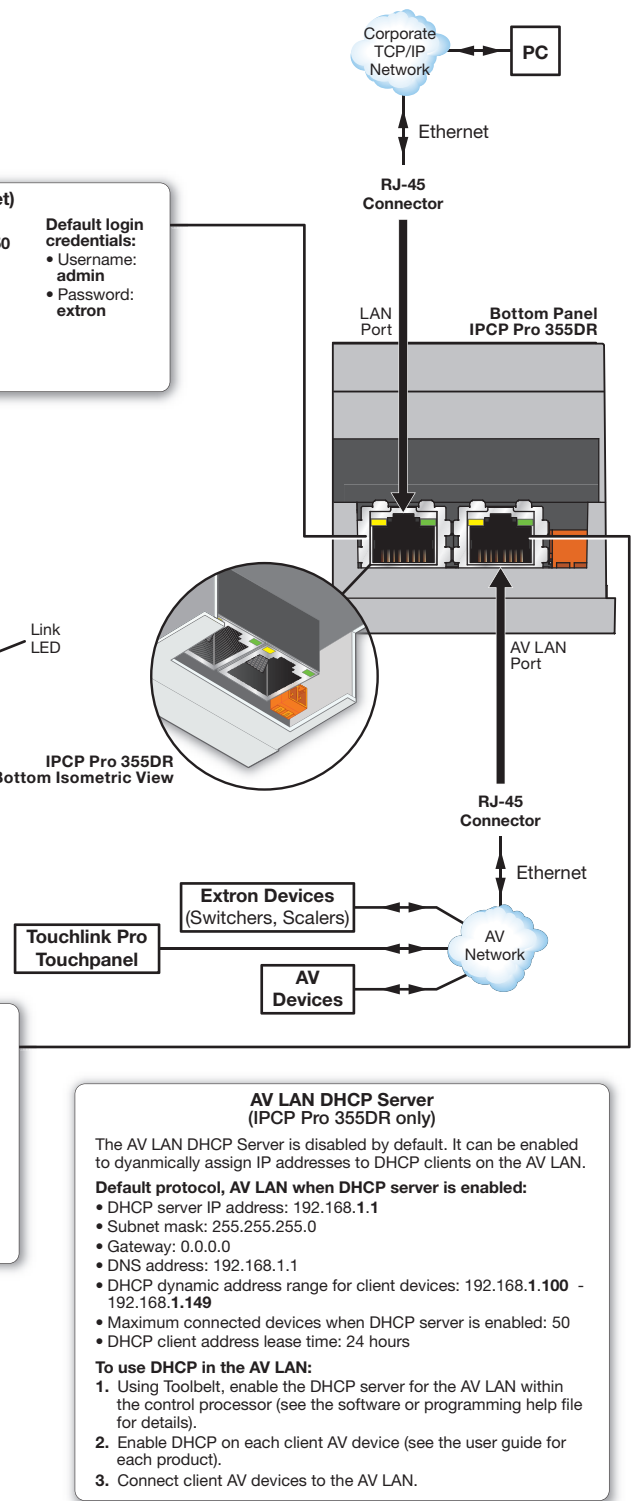
NOTE: If you use cable that has a drain wire, tie the drain wire to ground at both ends.

Control, Bidirectional – LAN (Ethernet, Both Models) and AV LAN (Ethernet, IPCP Pro 355DR Only)

IPCP Pro 350DR – Single NIC

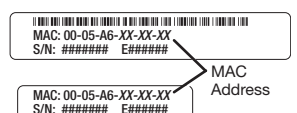


IPCP Pro 355DR – Dual NIC



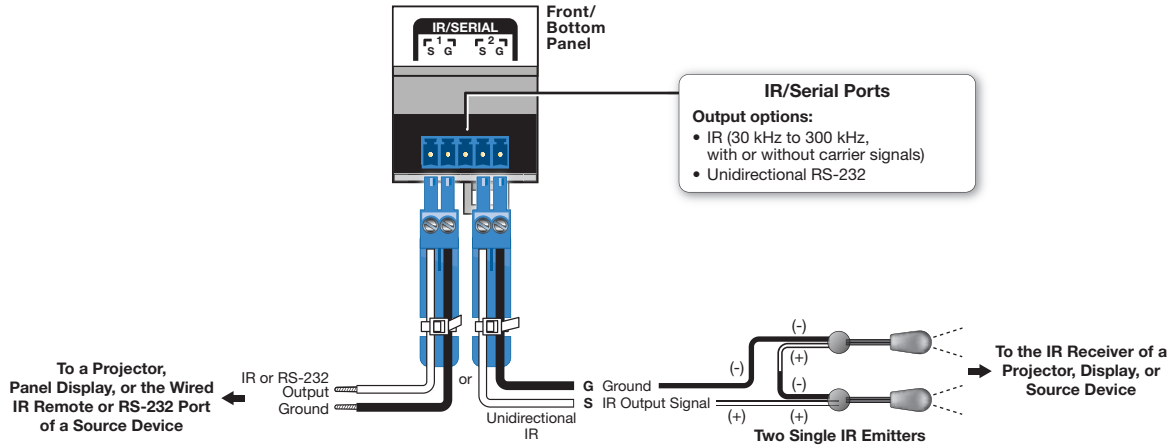
MAC Address

Each NIC in the control processor is assigned a unique hardware ID number (Media Access Control [MAC] address) (for example, 00-05-A6-05-1C-A0). You may need this address or both addresses (for the LAN and AV LAN connections) during configuration or programming of the control system. A label that indicates each MAC address is located on the right side of the unit.

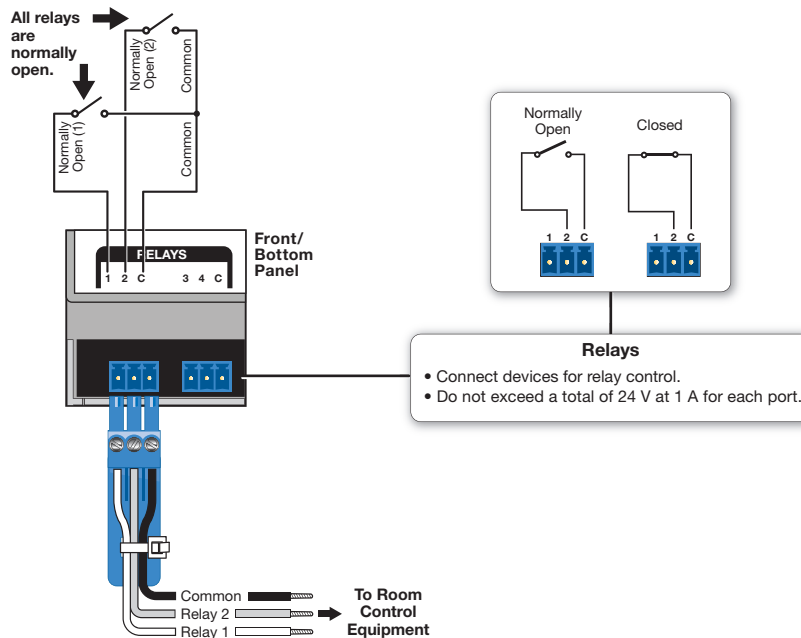


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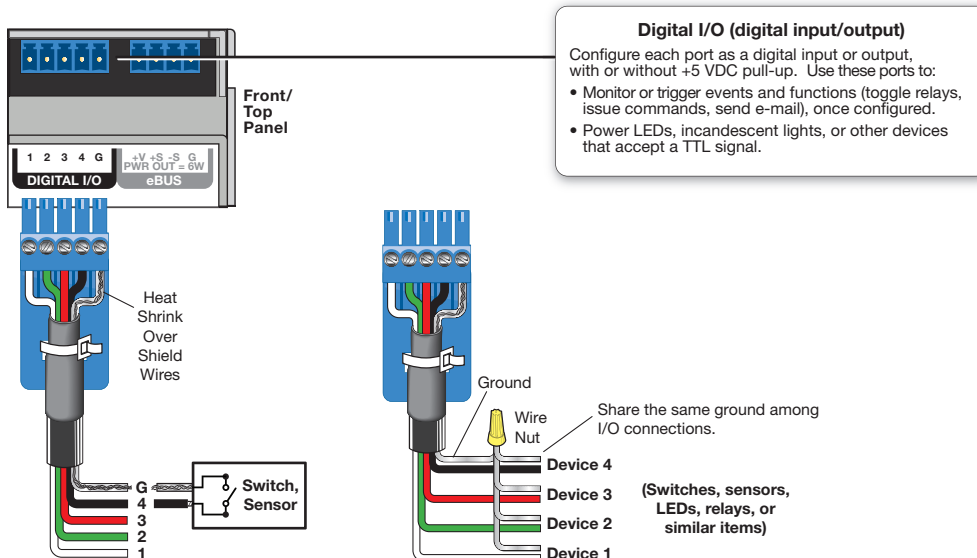
Control, Unidirectional – IR/Serial



Control, Unidirectional – Relays

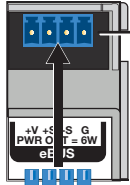


Control, Unidirectional – Digital I/O



Control – eBUS

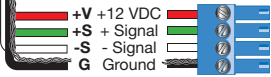
Front/Top Panel



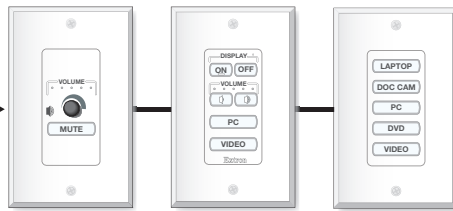
eBUS Accessory Port

- Connect the first eBUS device to this port, then connect other eBUS devices and accessories to that device in the desired topology (daisy chain, star, or combination).
- Wire the connectors the same at both ends for every eBUS device.
 - See the *eBUS Technology Reference Guide* for the recommended distance from the control processor to the last eBUS device.
 - The IPCP Pro can provide power to the button panel devices.

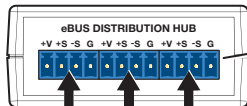
Drain Wires



eBUS port on an eBUS device (button panel or similar device)



EBDB MINI Rear Panel (or use an EBDB 10-port hub)



eBUS Connections

- Connect up to four (4) eBUS devices to the eBUS distribution hub (EBDB MINI).
- Wire the connectors the same at both ends.

ATTENTION: Do NOT connect the power pin to any device that is already powered by the IPCP Pro control processor or by an additional power supply.



Powered eBUS device(s)



3/16" (5 mm) Max.



Tie drain wires to ground.

eBUS port on an EBP or other eBUS device

IPCP Pro Rear Panel



Tie drain wires to ground.

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Reset Modes: a Brief Summary

The IP Link Pro control processors offer the following reset modes:

- **Use Factory Firmware:** Press and hold the front panel **Reset** button while applying power to the unit. Hold the button down until the Power LED flashes twice, or for 6 seconds, then release the button. The control processor enters factory firmware mode. For units with firmware prior to version 2.x, the LED flashes quickly. Use this mode to revert to factory firmware in the event of a firmware failure.
- **Project Recovery:** See the *IPCP Pro Series User Guide* for instructions. Use this mode to recover the project in the event of a lost user name and password.
- **Reset All IP Settings:** Press and hold the front panel **Reset** button for 6 seconds. After the Power LED flashes twice, release and momentarily press the **Reset** button. Use this mode to reset all network settings to factory default values without affecting user-loaded files.
- **Reset to Factory Defaults:** Press and hold the front panel **Reset** button for 9 seconds. After the Power LED flashes three times, release and momentarily press the **Reset** button. Use this mode to return the control processor to factory default settings.

For detailed information on each mode and its use, see the *IPCP Pro Series User Guide* at www.extron.com.

About Global Configurator (with GC Professional and GC Plus Modes)

What The Software Does

Global Configurator is the software tool for network setup and configuration of an IPCP Pro control processor. Global Configurator:

- Loads device drivers for monitoring the status of and controlling devices within the AV system.
- Uploads GUI Designer layouts to touchpanels and third party touch interfaces.
- Creates the configuration containing all the settings for the control processor and the products with which it interacts in the AV system.
- Generates a graphical user interface called GlobalViewer that is uploaded to the control processor (a GlobalViewer host device) along with the completed configuration and can be accessed as a web page.

Using GlobalViewer, users can monitor and control Extron and third-party equipment such as projectors, displays, computer monitors, VCRs, and DVD players.

Resources

Obtaining Control Drivers

Extron provides an extensive selection of device drivers available on the Extron website. If the system requires a control driver that is not already available, you have additional options:

- Request a new serial (RS-232) or Ethernet driver from Extron.
- Create your own custom IR device driver using IR Learner software. Follow the directions in the *IR Learner Help* file to create a driver by using the remote control for that device and the IR receiver port on the front panel of the IPCP Pro.

Obtaining Instructions, Information, and Assistance

A checklist of basic setup steps is provided at the beginning of this guide. For additional information see the help files and the *IPCP Pro Series User Guide*, available at www.extron.com.

If you have questions during installation and setup, call the [Extron S3 Sales & Technical Support Hotline](tel:1-800-633-9877) or the [Extron S3 Control Systems Support Hotline](tel:1-800-633-9877) (1.800.633.9877).

Locating Software, Firmware, and Driver Files on the Extron Website

There are three main ways to find software, firmware, and device drivers within www.extron.com:

- Via links from the web page for the specific product
- Via the [Download Center](#) page (Click on the **Download** tab at the top of any page within www.extron.com.)
- Via links from search results

NOTES:

- For some software you have the option to click the **Download Now** button to begin downloading the software file. For other software there is a link for contacting an Extron support representative who can provide you access to the latest version. To obtain Global Configurator (GC Professional, GC Plus) software, you must have an Extron Insider account and contact an Extron support representative. Extron provides training to our customers on how to use the software. Access to Global Configurator Professional is available to users who successfully complete Extron Control Professional Certification.
- **New RS-232 and Ethernet drivers are required.** You must use serial and Ethernet drivers developed specifically for the IP Link Pro platform. With the exception of IR device drivers, drivers used for the previous generation IP Link (non-Pro) control processors are not compatible.

Unmounting

If the need arises, the IPCP Pro 350DR or IPCP Pro 355DR can be removed from the DIN rail, whether or not cables are still attached. Remove or unmount the unit as follows:

1. Pull the mounting clip down to release the unit from the bottom of the rail (see **1** in figure 6). If you cannot grasp and pull the clip by hand, insert a small, flat-bladed screwdriver (such as an Extron Tweaker) through the slot in the clip and pull it downward.
2. While the clip is pulled down, tilt the IPCP Pro away from the DIN rail and lift it off the rail (see **2** in figure 6).

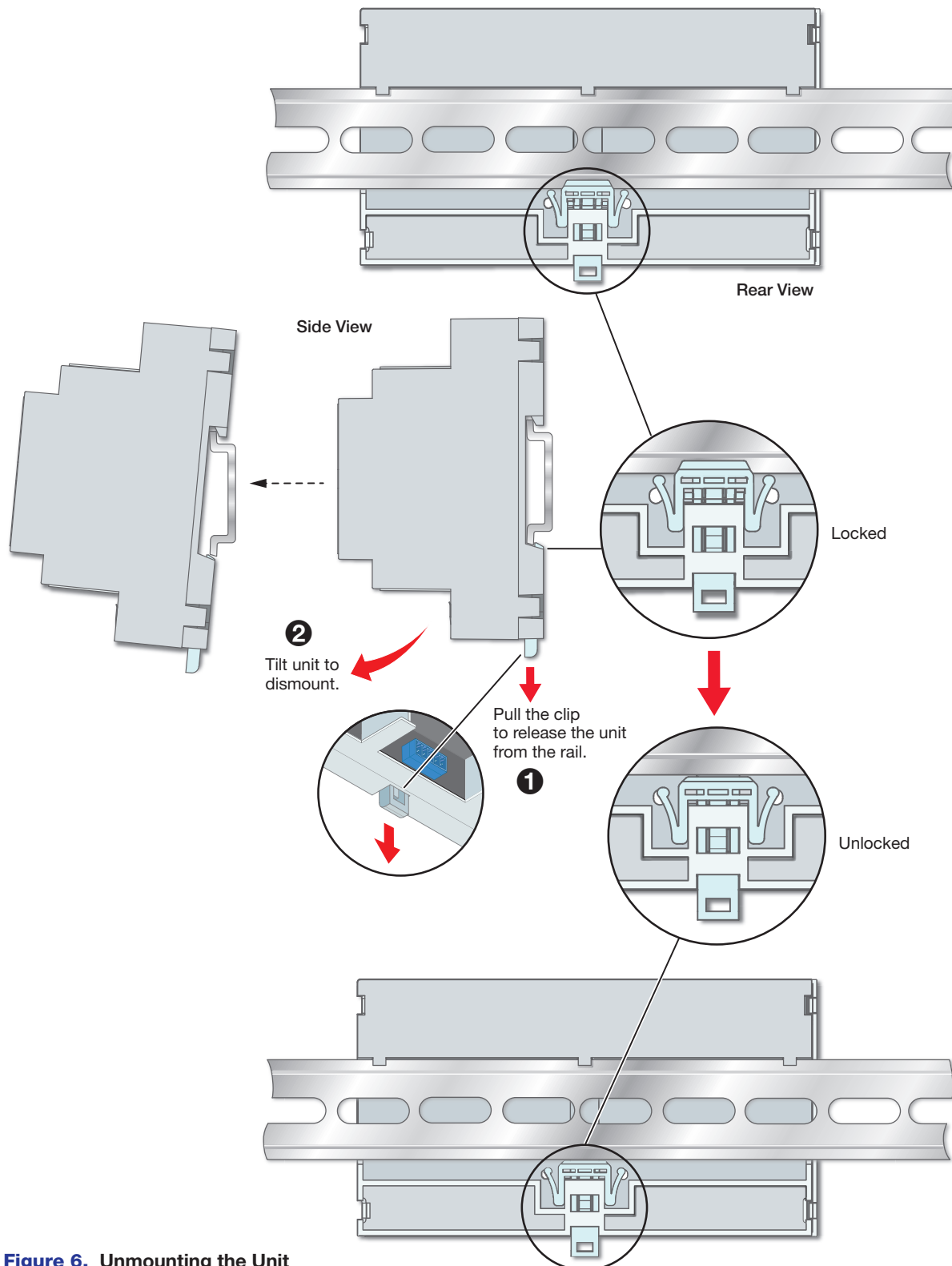


Figure 6. Unmounting the Unit

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Overall Configuration Procedure for the Control Processor

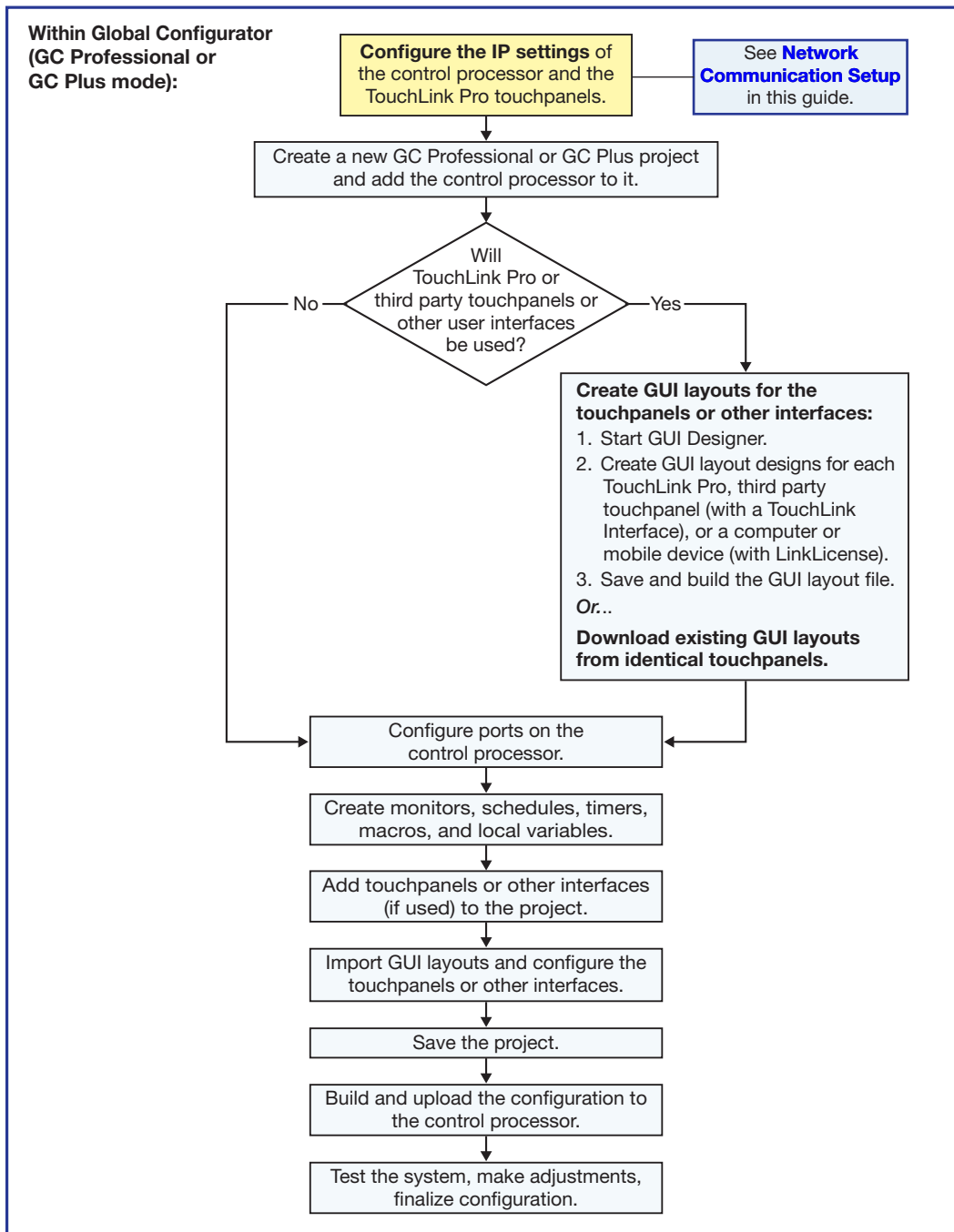


Figure 7. Overall Configuration Steps

If you have questions during installation and setup, you can call the [Extron S3 Sales & Technical Support Hotline](#) or the [Extron S3 Control Systems Support Hotline](#) (1.800.633.9877).

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