Extron





The Extron IPL Pro Series IP Link[®] Pro Control Processors integrate Ethernet connection into AV systems to allow users to remotely control, monitor, and troubleshoot AV equipment, including display

devices and switchers. These control processors include an embedded web

server and support for power over Ethernet (PoE). Depending on the model, an IPL Pro control processor can include multiple bidirectional serial ports, relays, IR/serial ports, or contact input ports for use in applications that require control and monitoring of multiple devices within a large-scale AV system.



This guide provides instructions for an experienced installer to install an IPL Pro Series control processor and to create a basic configuration. Use Extron Toolbelt software to discover and manage the IPL 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 Scripter[®] (GS). The IPL integrates seamlessly with Extron GlobalViewer[®] Enterprise (GVE) software and Extron Control apps 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 4 and Rear Panel Features) 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 on the network, for managing core settings, and for upgrading firmware when needed.
 - Global Configurator (GC) software for configuring the control system.
 - Global Scripter software for 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
 - IR Learner Pro software for use with models (IPL Pro IRS8) that have IR receiver ports. Use this to create your own IR drivers using the remote control of an AV device, if drivers are not already available from Extron

All are available from **www.extron.com** (see **Locating Software, Firmware, and Driver Files on the Extron Website** on page 9).

- Obtain network information for the unit from the network administrator. You will need the following details for each IP Link Pro device:
 - DHCP setting (on or off)

- Subnet mask
- UsernamePasswords
- Device (IPL Pro, Touchlink Pro, IPCP Pro) IP address Gateway IP address
- Write down the MAC address of each IP Link Pro device to be used.
- Obtain model names and setup information for devices the IPL will control.
- Each control processor comes with a factory-installed Secure Sockets Layer (SSL) security certificate. If you intend to install a different SSL certificate, contact your IT department to obtain the certificate or for instructions on how to obtain one. See "Secure Sockets Layer (SSL) Certificates" in the *IPL Pro Series User Guide* for requirements and guidelines regarding SSL certificates.

IPL Pro Series • Setup Guide (Continued)

Mount and Cable All Devices

- Mount the unit to a rack or furniture (see **Mounting** on page 3).
- Cable devices to the control processor (see **Cabling and Features** on page 5).
- Connect power cords and power on all the devices.

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 LAN (Ethernet)** on page 6.
- Start Toolbelt and use it to set the IP address, subnet, gateway IP address, DHCP status, and related settings (see the flowchart in **Network Communication Setup** on the next page).

NOTE: When setting up DHCP during network configuration or if using a host name instead of an IP address, 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 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.
- Using GC, create a new GC Plus or GC Professional project and configure the control processor and other IP Link Pro devices. The configuration tells the control processor:
 - how its ports function

- what to monitor
- how to control other products
 - which touchpanels to interact with
- 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, contact input behavior) as needed.
- Set up monitors, schedules, macros, and local variables.
- Add touchpanels and set them up:
 - Upload the GUI configuration for each touchpanel to the GC project 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 or contact input settings as needed.
 - Add touchpanels and set them up:
 - Upload the GUI configuration for the touchpanels.
 - Program the touchpanel buttons.
- □ Save and build the project.
- Upload the system configuration to the control processor.

Test and Troubleshoot

- Test the system (see the IPL 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

Securely mount the control processor and other devices and attach cables using the wiring section (Cabling and Features on page 5) as a wiring guide. Optional 1U rack shelves and furniture mounting bracket kits are available for use with the control processor. Read and follow the instructions and UL guidelines that come with the rack shelf or mounting kit for installation procedures.

See the product-specific page at www.extron.com for a list of compatible accessories for mounting your control processor.

Panels and Locations of Features

Location and quantity of LEDs and corresponding connectors vary by model, but the functions and port wiring are identical across models for each port type.

Front Panel Features



Figure 2. IPL Pro Series Front Panel Features

Rear Panel Features



Figure 3. IPL Pro Series Rear Panel Features

Cabling and Features

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

ATTENTION:

- Installation and service must be performed by experienced personnel.
- L'installation et l'entretien doivent être effectués par du personnel expérimenté.

Power



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 certification de conformité réglementaire et peut endommager la source d'alimentation que l'unité.

IPL Pro Series • Setup Guide (Continued)

Control – Serial (COM)



Control – LAN (Ethernet)



The control processor is assigned a unique user hardware ID number (MAC address) (for example, 00-05-A6-05-1C-A0). You may need this address during configuration of the control processor. A label that indicates the MAC address is located on the rear panel of the unit.





Control – Input (Contact Closure Input)





IPL Pro Series • Setup Guide (Continued)

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. Keep holding the button down until the Power LED blinks 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 blinks quickly. Use this mode to revert to factory firmware in the event of a firmware failure. Do not continue to operate the control processor using the factory firmware version. If you want to use the factory default firmware version, you must upload that version again.
- **Project Recovery**: See the *IPL Pro Series User Guide* for instructions. Use this mode to recover the project in the event of a lost user name and password.
- Run/Stop Program: Hold down the Reset button for about 3 seconds, until the Power LED blinks once. Release and press the Reset button momentarily (for <1 second) within 1 second. (Nothing happens if the momentary press does not occur within 1 second.) The LED blinks 2 times if the program is starting. The LED blinks 3 times if the program is stopping. This mode allows you to restart any programs stopped by an IP settings reset.
- Toggle DHCP Client: Press the Reset button five times (consecutively). Release the button. Do not press the button within 3 seconds following the fifth press. Use this mode to enable or disable the DHCP client for the LAN port.
 - The Reset LED blinks 6 times if the DHCP client is enabled.
 - The Reset LED blinks 3 times if the DHCP client is disabled.

NOTES:

- DHCP toggle mode is supported on firmware version 3.0 or higher.
- By default DHCP is off and the unit uses a static IP address.
- When you disable the DHCP client, the unit reverts to using the previously-set static IP address.
- Reset All IP Settings: Press and hold the front panel Reset button for 6 seconds. After the Power LED blinks 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. This reset mode also stops any running programs.
- **Reset to Factory Defaults**: Press and hold the front panel **Reset** button for 9 seconds. After the Power LED blinks three times, release and momentarily press the **Reset** button. Use this mode to return the control processor to factory default settings. This mode also deletes all user-loaded files and configurations.

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

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 the following options:

- You can request a new serial (RS-232) or Ethernet driver from Extron.
- Create your own custom IR device driver using Extron IR Learner Pro software. Follow the directions in the *IR Learner Pro 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 IPL Pro IRS8.

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 *IPL 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** or the Extron S3 Control Systems Support Hotline (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** 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 Extron control product software, you must have an Extron Insider account. Extron provides training to our customers on how to use the software. Access to the full features of 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.

Overall Configuration Procedure for the Control Processor



Figure 4. Overall Configuration Steps

For information on safety guidelines, regulatory compliances, EMI/EMF compatibility, accessibility, and related topics, see the **Extron Safety and Regulatory Compliance Guide** on the Extron website.