User Guide

TouchLink Pro Touchpanels

TLP Pro 1230WTG
TouchLink Pro Touchpanel Control Systems

Extron

# Safety Instructions

Safety Instructions • English

> ⚠ **WARNING:** This symbol, ⚠, when used on the product, is intended to alert the user of the presence of uninsulated dangerous voltage within the product's enclosure that may present a risk of electric shock.

> **ATTENTION:** This symbol, ⚠, when used on the product, is intended to alert the user of important operating and maintenance (servicing) instructions in the literature provided with the equipment.

For information on safety guidelines, regulatory compliances, EMI/EMF compatibility, accessibility, and related topics, see the Extron Safety and Regulatory Compliance Guide, part number 68-290-01, on the Extron website, **www.extron.com**.

تعليمات السلامة • العربية

> ⚠ **تحذير:** هذا الرمز، ⚠، عند استخدامه على المنتج، مخصص لتنبيه المستخدم فيما يتعلق بوجود جهد كهربائي غير معزول على الغلاف الخارجي للمنتج وهو ما قد ينطوي على مخاطر حدوث صدمة كهربائية.

> **انتبه:** هذا الرمز، ⚠، عند استخدامه على المنتج، مخصص لتنبيه المستخدم بتعليمات التشغيل والصيانة الهامة (الخدمة) في المواد التي يتم توفيرها مع المعدات.

للحصول على المزيد من المعلومات حول إرشادات السلامة، والتوافقات التنظيمية، والتوافق الكهرومغناطيسي/المجال الكهرومغناطيسي، وإمكانية الوصول، والموضوعات ذات الصلة، يُرجى مراجعة دليل السلامة والتوافق التنظيمي الخاص بإكسترون، الجزء رقم 68-290-01، على موقع إكسترون، **www.extron.com**.

Sicherheitsanweisungen • Deutsch

> **WARUNG:** Dieses Symbol ⚠ auf demProdukt soll den Benutzer darauf aufmerksam machen, dass im Inneren des Gehäuses dieses Produktes gefährliche Spannungen herrschen, die nicht isoliert sind und die einen elektrischen Schlag verursachen können.

> **VORSICHT:** Dieses Symbol ⚠ auf dem Produkt soll dem Benutzer in der im Lieferumfang enthaltenen Dokumentation besonders wichtige Hinweise zur Bedienung und Wartung (Instandhaltung) geben.

Weitere Informationen über die Sicherheitsrichtlinien, Produkthandhabung, EMI/EMF-Kompatibilität, Zugänglichkeit und verwandte Themen finden Sie in den Extron-Richtlinien für Sicherheit und Handhabung (Artikelnummer 68-290-01) auf der Extron-Website, **www.extron.com**.

Instrucciones de seguridad • Español

> **ADVERTENCIA:** Este símbolo, ⚠, cuando se utiliza en el producto, avisa al usuario de la presencia de voltaje peligroso sin aislar dentro del producto, lo que puede representar un riesgo de descarga eléctrica.

> **ATENCIÓN:** Este símbolo, ⚠, cuando se utiliza en el producto, avisa al usuario de la presencia de importantes instrucciones de uso y mantenimiento estas estan incluidas en la documentación proporcionada con el equipo.

Para obtener información sobre directrices de seguridad, cumplimiento de normativas, compatibilidad electromagnética, accesibilidad y temas relacionados, consulte la Guía de cumplimiento de normativas y seguridad de Extron, referencia 68-290-01, en el sitio Web de Extron, **www.extron.com**.

Instructions de sécurité • Français

> **AVERTISSEMENT :** Ce pictogramme, ⚠, lorsqu'il est utilisé sur le produit, signale à l'utilisateur la présence à l'intérieur du boîtier du produit d'une tension électrique dangereuse susceptible de provoquer un choc électrique.

> **ATTENTION :** Ce pictogramme, ⚠, lorsqu'il est utilisé sur le produit, signale à l'utilisateur des instructions d'utilisation ou de maintenance importantes qui se trouvent dans la documentation fournie avec l'équipement.

Pour en savoir plus sur les règles de sécurité, la conformité à la réglementation, la compatibilité EMI/EMF, l'accessibilité, et autres sujets connexes, lisez les informations de sécurité et de conformité Extron, réf. 68-290-01, sur le site Extron, **www.extron.com**.

Istruzioni di sicurezza • Italiano

> **AVVERTENZA:** Il simbolo, ⚠, se usato sul prodotto, serve ad avvertire l'utente della presenza di tensione non isolata pericolosa all'interno del contenitore del prodotto che può costituire un rischio di scosse elettriche.

> **ATTENTZIONE:** Il simbolo, ⚠, se usato sul prodotto, serve ad avvertire l'utente della presenza di importanti istruzioni di funzionamento e manutenzione nella documentazione fornita con l'apparecchio.

Per informazioni su parametri di sicurezza, conformità alle normative, compatibilità EMI/EMF, accessibilità e argomenti simili, fare riferimento alla Guida alla conformità normativa e di sicurezza di Extron, cod. articolo 68-290-01, sul sito web di Extron, **www.extron.com**.

Instrukcje bezpieczeństwa • Polska

> **OSTRZEŻENIE:** Ten symbol, ⚠, gdy używany na produkt, ma na celu poinformować użytkownika o obecności izolowanego i niebezpiecznego napięcia wewnątrz obudowy produktu, który może stanowić zagrożenie porażenia prądem elektrycznym.

> **UWAGI:** Ten symbol, ⚠, gdy używany na produkt, jest przeznaczony do ostrzegania użytkownika ważne operacyjne oraz instrukcje konserwacji (obsługi) w literaturze, wyposażone w sprzęt.

Informacji na temat wytycznych w sprawie bezpieczeństwa, regulacji wzajemnej zgodności, zgodność EMI/EMF, dostępności i Tematy pokrewne, zobacz Extron bezpieczeństwa i regulacyjnego zgodności przewodnik, część numer 68-290-01, na stronie internetowej Extron, **www.extron.com**.

Инструкция по технике безопасности • Русский

> **ПРЕДУПРЕЖДЕНИЕ:** Данный символ, ⚠, если указан на продукте, предупреждает пользователя о наличии неизолированного опасного напряжения внутри корпуса продукта, которое может привести к поражению электрическим током.

> **ВНИМАНИЕ:** Данный символ, ⚠, если указан на продукте, предупреждает пользователя о наличии важных инструкций по эксплуатации и обслуживанию в руководстве, прилагаемом к данному оборудованию.

Для получения информации о правилах техники безопасности, соблюдении нормативных требований, электромагнитной совместимости (ЭМП/ЭДС), возможности доступа и других вопросах см. руководство по безопасности и соблюдению нормативных требований Extron на сайте Extron: , **www.extron.com**, номер по каталогу - 68-290-01.

FCC Class A Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. The Class A limits provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference. This interference must be corrected at the expense of the user.

> **NOTES:**
> - This unit was tested with shielded I/O cables on the peripheral devices. Shielded cables must be used to ensure compliance with FCC emissions limits.
> - For more 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.

Battery Notice

This product contains a battery. **Do not open the unit to replace the battery.** If the battery needs replacing, return the entire unit to Extron (for the correct address, see the **Extron Warranty** section on the last page of this guide).

> **CAUTION:** Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
>
> **ATTENTION :** Risque d'explosion. Ne pas remplacer la pile par le mauvais type de pile. Débarrassez-vous des piles utilisées selon le mode d'emploi.

Conventions Used in this Guide

Notifications

In this user guide, the following are used:

> **CAUTION:** Risk of minor personal injury.
>
> **ATTENTION :** Risque de blessure mineure.

> **ATTENTION:**
> - Risk of property damage.
> - Risque de dommages matériels.

> **NOTE:** A note draws attention to important information.

Software Commands

> **NOTE:** For commands and examples of computer or device responses mentioned in this guide, the character "Ø" is used for the number zero and "O" represents the capital letter "o".

Directory paths that do not have variables are written in the font shown here:

```
Reply from 2Ø8.132.18Ø.48: bytes=32 times=2ms TTL=32
C:\Program Files\Extron
```

Variables are written in slanted form as shown here:

```
ping xxx.xxx.xxx.xxx –t
SOH R Data STX Command ETB ETX
```

Selectable items, such as menu names, menu options, buttons, tabs, and field names are written in the font shown here:

From the **File** menu, select **New**.

Click the **OK** button.

Specifications Availability

Product specifications are available on the Extron website, **www.extron.com**.

Extron Glossary of Terms

A glossary of terms is available at **www.extron.com/technology/glossary.aspx**.

Contents

Introduction

This guide describes the function, installation, and operation of the Extron TLP Pro 1230WTG Touchlink Pro Touchpanel.

The touchpanels are ideal for any AV applications requiring large touchpanels with flexible mounting options and fully customizable interfaces.

This section provides information about the TLP Pro 1230WTG:

- **About the TLP Pro 1230WTG**
- **Features**
- **Application Diagram**
- **Requirements**

About the TLP Pro 1230WTG

The TLP Pro 1230WTG is a 12 inch ultra-wide tabletop touchpanel with a capacitive, edge-to-edge glass touchscreen and a resolution of 1920x720. It has a weighted base that allows it to stand on any suitable table or desktop.

A range of mounting options are available for all the models (see **Mounting** on page 24).

The screen layout is designed with the Extron GUI Designer software. The functions are assigned to the screen objects by configuring with the Extron Global Configurator Plus and Professional or programming with Global Scripter software. This provides versatility and adaptability to the configuration and control of an AV system.

A motion sensor, a light sensor, and a speaker provide sleep mode, auto dimming, and audible feedback.

Features

- **12.3 inch capacitive ultra-wide touchscreen** — With 1920x720 resolution and 24-bit color.
- **Gorilla Glass® screen** — Tough, scratch and smudge-resistant. Optically-bonded Corning® Gorilla Glass is stronger and more scratch-resistant than standard glass, while maintaining touch sensitivity, color saturation, and brightness.
- **Ultra-fast quad-core processor** — Faster processing power enables faster graphics rendering, quicker page loads, and overall runtime performance improvement.
- **2GB RAM** — Allows larger, more complex projects to run on the panel.
- **Full motion video preview** — With an HDMI input. Eliminates the need for a separate preview monitor.
- **Compatible with the full range of Extron IP Link Pro control processors and HC 400 Series systems** — Allows easy integration into existing systems.
- **PoE+ compatible** — The touchpanel is powered directly by a PoE+ switch or injector, eliminating the need for bulky local power supplies.
- **Built-in speakers provide stereo audio** — For video preview and audible feedback from button presses.
- **Auto Brightness** — Adjusts screen brightness as the ambient room lighting changes.
- **Configurable red and green status lights** —Indicate the availability or call status of a room.

- **System connection status indicator** —Provides visual feedback if the touchpanel is not communicating with a control processor.
- **USB 2.0 port** — For future expansion.
- **Automatic clock synchronization** — Allows touchpanel to display the accurate time and date.
- **Energy-saving features** —
    - Adjustable sleep timer puts touchpanel into sleep mode.
    - Motion detector wakes touchpanel.
- **Mounting options:**
    - Sit on a tabletop — threaded holes in baseplate allow for secure mounting to a table.
    - Supports the optional SMA-1 Swivel Mount Adapter to provide access to multiple users from a single location while securing the panel to the table.
- **Fully customizable using Extron control system software** — GUI Designer combined with Global Configurator Plus and Professional or Global Scripter.
- **Supports the Extron Control App.**
- **Manage, monitor, and control this device remotely** — Using GVE - GlobalViewer Enterprise Resource Management software.

Application Diagram
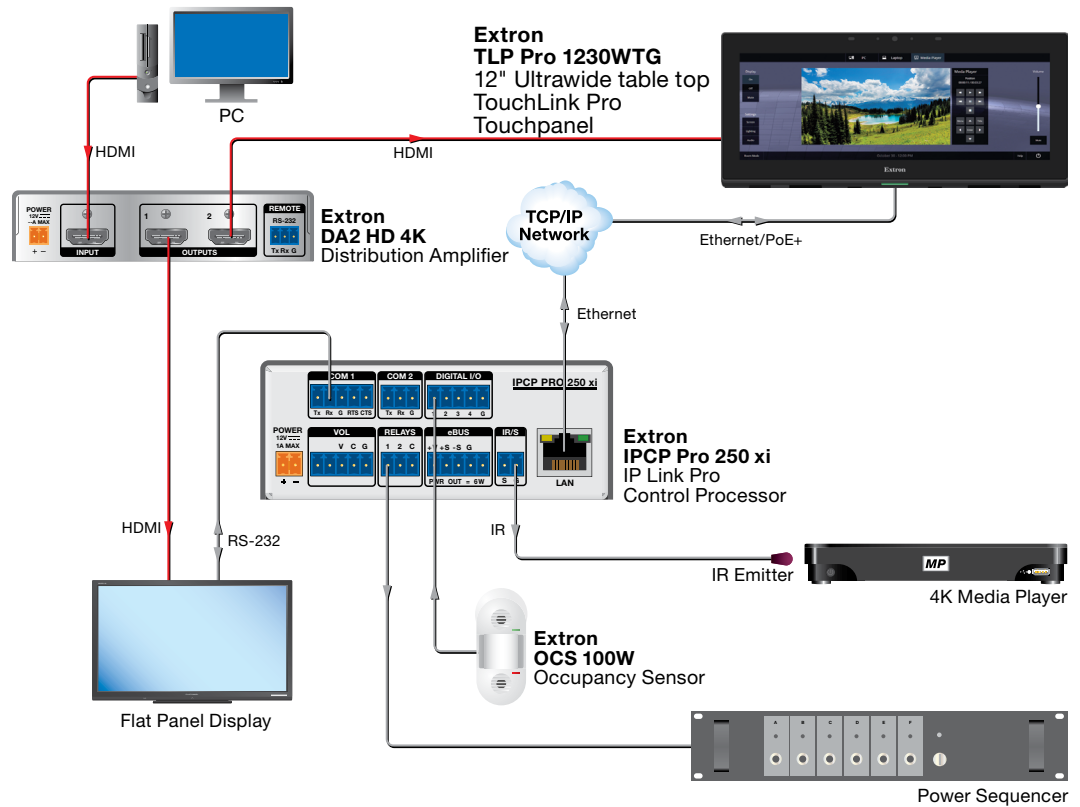
Figure 1. **Application Diagram**

Requirements

Software

For a complete list of the requirements for running GUI Designer, Global Configurator Plus and Professional, Global Scripter, and Toolbelt, see the Extron web page for that software.

> **NOTE:**   These touchpanels are not compatible with Global Configurator 3 or GUI Configurator.

Hardware

An Extron IP Link Pro control interface must also be connected to the same network domain as the TouchLink panel. See **www.extron.com** for a list of suitable controllers.

> **NOTE:**   These touchpanels are not compatible with Extron IP Link (non-Pro) controllers.

Installation Overview

This section contains an overview of the installation process. Follow the links for a more detailed explanation of each step.

1. Before starting, download and install the latest versions of the following software:

   ☐ **GUI Designer** — For designing layouts for Extron TouchLink Pro touchpanels and third party touch interfaces.

   ☐ **Global Configurator Plus and Professional** — For setting up and configuring the control processor and touchpanel.

   ☐ **Global Scripter** — Provides an integrated development environment for Extron control systems programming.

   ☐ **Toolbelt** — Provides device discovery, device information, firmware updates, and configuration of network settings, system utilities, and user management for TouchLink Pro devices.

   For more information, see **Using the Software** on page 20 or see the Extron web page for the software.

2. Obtain the following network information from your network administrator:

   ☐ **Dynamic Host Configuration Protocol** (DHCP) status (on or off). If DHCP is off, you also require:

      ☐ **IP address**

      ☐ **Subnet mask**

      ☐ **Gateway**

   ☐ **Username** — This can be either `admin` or `user`.

   ☐ **Password** — The factory configured passwords for all accounts on this device have been set to the device serial number. Passwords can be changed during configuration. Passwords are case sensitive.

   > **NOTE:** If the device is reset to default settings, the password is the default password configuration. The default password is `extron` (for either `admin` or `user` accounts).

   ☐ **MAC address** — Make a note of the touchpanel MAC address, which can be found on a label on the product base.

   ☐ **SSL security certificates and IEEE 802.1X authentication** — Extron touchpanels come with a factory-installed Secure Sockets Layer (SSL) security certificate. IEEE 802.1X authentication is also supported once enabled. See **Secure Sockets Layer (SSL) Certificates** on page 28 or **IEEE 802.1X Certificates** on page 28 for more information.

3. Mount and cable the units:

> **ATTENTION:**
> - Do not power on the touchpanels or control processors until you have read the Attention notice on **page 9**.
> - Ne branchez pas les écrans tactiles ou les contrôleurs avant d'avoir lu les mises en garde **page 9**.

☐ Mount the units. There are several mounting options for TouchLink Pro touchpanels (see **Mounting** on page 24).

☐ Connect cables to the touchpanels (see **TLP Pro 1230WTG Rear Panel and Base Features** on page 7).

☐ Connect the PoE injector to the LAN/PoE input (see **figure 3**, **F**, on page 7).

> **NOTE:** The TLP Pro 1230WTG must be powered by Power over Ethernet.

4. Set up the touchpanels for network communication:

☐ Connect the PC that you are using for setup, the control processor, and the touchpanel to the same Ethernet subnetwork.

☐ Use the **Setup Menu** (see page 10) or Toolbelt to set the DHCP status and, if necessary, the IP address, subnet mask, gateway, and related settings for the touchpanel.

5. Configure or program the Touchpanels — the *GUI Designer Help File,* the *Global Configurator Plus and Professional Help File*, the *Global Scripter Help File*, and the *Toolbelt Help File* provide step-by-step instructions and detailed information.

The *Global Configurator Help File* also includes an introduction to that software and sections on how to start a project and configuration.

Global Scripter provides an Extron-exclusive Python library (ControlScript) and Global Scripter modules to get you started. See the *GlobalScripter Help File* for more information.

> **NOTE:** Frequently touched devices, such as touchscreens, require regular cleaning to ensure their surfaces remain sanitary. Plastic surfaces and cosmetic finishes can be damaged by long term exposure to chemicals. For **Best Practices for Cleaning Your Extron Products**, see page 25.

Panel Features

This section describes:

- **TLP Pro 1230WTG Front Panel Features**
- **TLP Pro 1230WTG Rear Panel and Base Features**
- **Connecting Power**

TLP Pro 1230WTG Front Panel Features
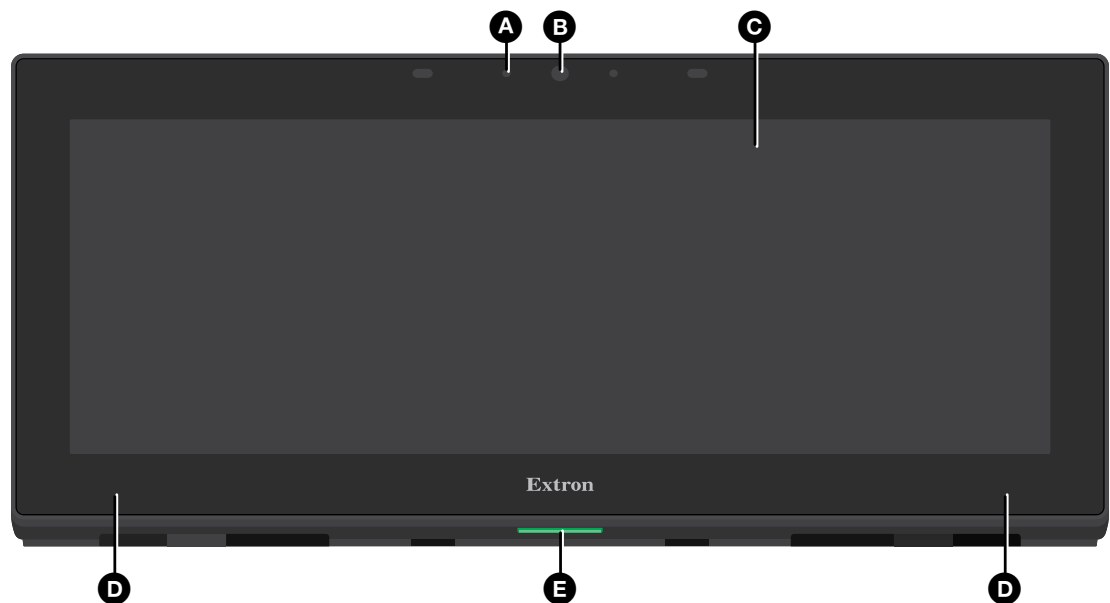
Figure 2. **TLP Pro 1230WTG Front Panel**

Ⓐ **Ambient light sensor** — Monitors ambient light level and adjusts screen brightness, based on the settings configured using the **Setup Menu** (see page 10).

Ⓑ **Motion sensor** — Detects motion between three to five feet from the touchpanel, and at least 15° from the center axis.

- If the Sleep Timer has been set (see **Setup Menu**), and no motion has been detected for a user-defined period of time, the touchpanel enters sleep mode.
- If Wake on Motion has been set (see **Setup Menu**), and motion is detected by the sensor while the screen is in sleep mode, the screen display is restored and active.

Ⓒ **Capacitive touch screen** — With a touch overlay. The touchpanel has a 12.3 inch screen with 1920x720 resolution.

Ⓓ **Speakers** (2) — Located below the screen, one on each side of the panel, provide stereo audio for video preview and audible feedback from button presses.

Ⓔ **Status light** — One LED light bar, below the screen, which can be programmed to provide system feedback. For information about programming this light, see the *Global Configurator Plus and Professional Help File* or the *Global Scripter Help File*.

TLP Pro 1230WTG Rear Panel and Base Features

Figure 3 shows the TLP Pro 1230WTG rear panel and base.
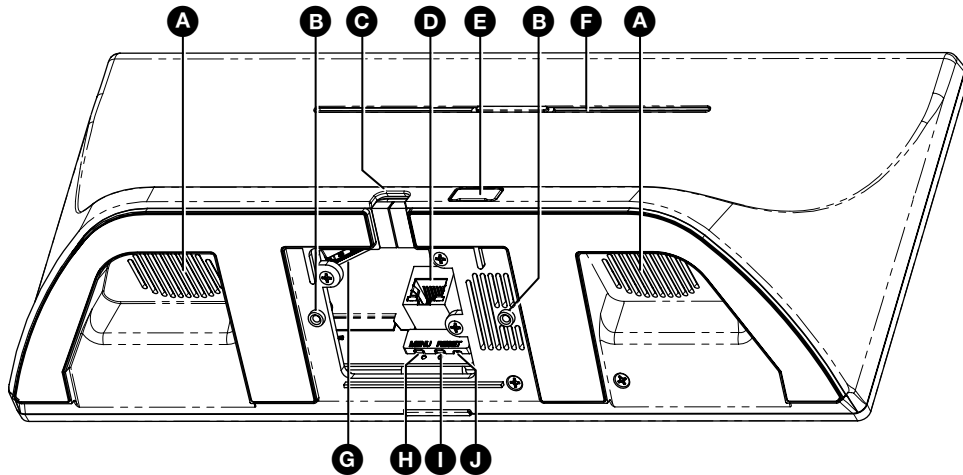
Figure 3.   **TLP Pro 1230WTG Rear Panel**

Ⓐ **Speakers** (2) — For video preview and audible feedback for the user.

Ⓑ **Mounting Holes** — Used to secure the touchpanel to a desktop or other flat surface (see **Desktop Mounting** on page 24).

Ⓒ **Cable Guide** — The LAN/PoE and HDMI cables are inserted through this hole at the back of the base.

Ⓓ **LAN/PoE Connector** — These touchpanels must be powered by Power over Ethernet (PoE; see **Connecting Power** on page 8).

> **ATTENTION:**
> - Do not power on the touchpanels until you have read the Attention notice on **page 9**.
> - Ne branchez pas les écrans tactiles avant d'avoir lu la mise en garde **page 9**.

> **NOTE:**   The touchpanels ship without a power injector. The power injector must be purchased separately.

Ⓔ **USB connector** — Compatible with USB 2.0. The port is concealed behind a plastic cover, which can be removed with a small, flat-bladed screw driver.

Ⓕ **Rear status light** — One LED light bar that can be configured or programmed to provide system feedback. For information about configuring or programming this light, see the *Global Configurator Plus and Professional Help File* or the *Global Scripter Help File*.

Ⓖ **HDMI connector** — A recessed connector for HDMI input.

Ⓗ **MENU button** — Activates the **Setup Menu** (see page 10).

Ⓘ **RESET button** — Pressing the **RESET** button allows the unit to be reset in any of three different modes and can also be used to toggle between enabling and disabling the DHCP client (see **Reset Modes** on page 26).

Ⓙ **RESET LED** — Provides feedback about the reset status when the user presses the **RESET** button (see **Reset Modes**).

Routing Cables

Connect the LAN/PoE and HDMI cables as required.

- If the touchpanel is standing on a flat surface, the cables can be routed via the cable guide (see figure 3, Ⓒ, above).
- If the touchpanel is mounted with a kit, follow the instructions provided with that kit.

Connecting Power

The TLP Pro 1230WTG must be powered by a PoE power source.

> **ATTENTION:**
> - Do not power on the touchpanels until you have read the Attention notice on **page 9**.
> - Ne branchez pas les écrans tactiles avant d'avoir lu la mise en garde **page 9**.

Power over Ethernet

Figure 4 shows the Extron PI 140. Your power injector may look different.

1. Connect a straight-through Ethernet cable from the power injector to a switch or router (❶). This cable carries network information from the switch or router to the power supply input.

2. Connect a second straight-through cable from the power injector to the **PoE/LAN** connector of the touchpanel (❷). This cable carries the network information and 48 VDC from the power injector to the touchpanel.

Figure 4.   Connecting the Power Injector

3. Connect the IEC power cord to a convenient 100 VAC to 240 VAC, 50-60 Hz power source (❸).

Alternatively, use an Ethernet cable to connect the LAN/PoE+ port of the interface to a PoE+ switch.

ATTENTION:

- The installation must always be in accordance with the applicable provisions of National Electrical Code ANSI/NFPA 70, article 725 and the Canadian Electrical Code part 1, section 16.
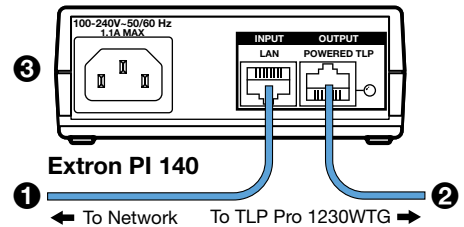- Cette installation doit toujours être conforme aux dispositions applicables du Code américain de l'électricité (National Electrical Code) ANSI/NFPA 70, article 725, et du Code canadien de l'électricité, partie 1, section 16.

- The power supply shall not be permanently fixed to building structure or similar structure.
- La source d'alimentation ne devra pas être fixée de façon permanente à une structure de bâtiment ou à d'autres structures similaires.

- Power over Ethernet (PoE) is intended for indoor use only. It is to be connected only to networks or circuits that are not routed to the outside plant or building.
- L'alimentation via Ethernet (PoE) est destinée à une utilisation en intérieur uniquement. Elle doit être connectée seulement à des réseaux ou des circuits qui ne sont pas routés au réseau ou au bâtiment extérieur.

- Unless otherwise stated, the AC/DC adapters are not suitable for use in air handling spaces or in wall cavities. The power supply is to be located within the same vicinity as the Extron AV processing equipment in an ordinary location, Pollution Degree 2, secured to the equipment rack within the dedicated closet, podium, or desk.
- Sauf mention contraire, les adaptateurs AC/DC ne sont pas appropriés pour une utilisation dans les espaces d'aération ou dans les cavités murales. La source d'alimentation doit être située à proximité de l'équipement de traitement audiovisuel dans un endroit ordinaire, avec un degré 2 de pollution, fixé à un équipement de rack à l'intérieur d'un placard, d'une estrade, ou d'un bureau.

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

- If not provided with a power supply, this product is intended to be supplied by a UL Listed power source marked "Class 2" or "LPS" rated output 48 VDC or 56 VDC (PoE) minimum 0.8 A.
- Si le produit n'est pas fourni avec une source d'alimentation, il doit être utilisé avec une source d'alimentation certifiée UL de classe 2 ou LPS avec une tension nominale 48 Vcc our 56 Vcc (PoE), 0,8 A minimum.

- The touchpanels are intended for connection to a Power over Ethernet circuit for intra-building use only and are considered to be part of a Network Environment 0 per IEC TR62101. Power over Ethernet (PoE) is to be connected only to networks or circuits that are not routed to the outside plant or building.
- Les écrans tactiles sont conçus pour une connexion à un circuit PoE pour une utilisation intérieure uniquement et sont considérés comme faisant partie d'un environnement réseau 0 selon la norme IEC TR62101. L'alimentation via Ethernet (PoE) doit être connectée seulement à des réseaux ou des circuits qui ne sont pas routés au réseau ou au bâtiment extérieur.

- Extron power supplies are certified to UL/CSA 60950-1 and are classified as LPS (Limited Power Source). Use of a non-LPS or unlisted power supply will void all regulatory compliance certification.
- Les sources d'alimentation Extron sont qualifiées UL/CSA 60950-1 et sont classées LPS (Limited Power Source). L'utilisation d'une source d'alimentation non-listée ou non-listée LPS annulera toute certification de conformité réglementaire.

Setup Menu

The on-screen setup menu allows initial configuration of the TLP Pro 1230WTG touchpanel. This section provides information about accessing the **Setup Menu** and the five sub-menus.

Setup Menu

To open the setup menu, press the recessed **Menu** button, using a small screwdriver. The button is on the rear panel.

The menus open at the **Status** screen. There are six different buttons in the navigation panel at the top of the screen. These open the following screens:

- **Status Screen** (see page 11)
- **Network Screen** (see page 11)
- **Display Screen** (see page 13)
- **Audio Screen** (see page 14)
- **Input Screen** (see page 14)
- **Advanced Screen** (see page 17)

These can be selected by pressing the appropriate button in the navigation panel at the top of the screen. The button for the selected screen is yellow. The buttons for the remaining screens are black.

There is also a red **Exit** button in the top right corner of the screen. Pressing this button applies and saves any changes and closes the menu screens.

Status Screen

Press the **Status** button in the navigation panel at the top of any screen to open the **Status** screen.
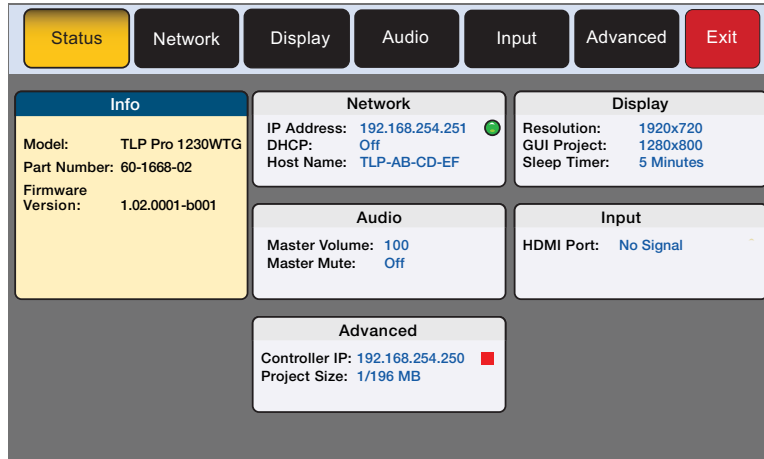
Figure 5. Status Screen

The **Status** screen is read-only. The **Info** panel provides basic information about the touchpanel. Each of the other five panels shows a summary of the information on the other screens. No values can be changed from this screen.

Pressing any of those five panels opens the corresponding screen in exactly the same way as pressing the buttons in the top navigation bar.

A green bubble in the **Network** panel lights when there is a network connection or a red square appears if there is no connection. The green bubble in the **Advanced** panel lights when a control processor is connected or a red square appears if none is connected.

Network Screen

Press the **Network** button in the navigation panel at the top of the screen to open the **Network** screen.

The **Network** screen allows you to set the **DHCP** status and, if DHCP is set to **Off**, the network addresses for the touchpanel. Verify with your network administrator whether the IP address for the touchpanel is assigned by DHCP or set manually. If it is set manually, you need to obtain an IP address, a subnet mask, a gateway address, and a Domain Name Server (DNS) IP address from the network administrator.
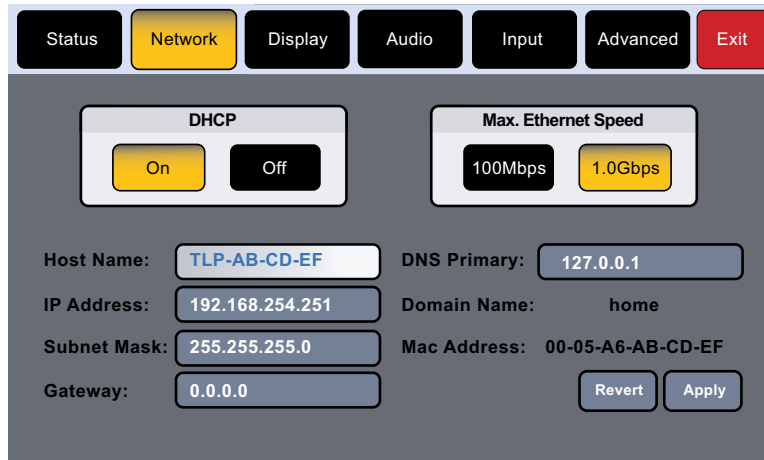
Figure 6. Network Screen

1. If IP addresses are assigned by DHCP, press **On**. If the IP address is to be assigned manually, press **Off**.
   - When DHCP is off, the `Host Name` is grayed out and cannot be edited. All addresses can be edited.
   - When DHCP is on, the `Host Name` can be edited. The addresses are grayed out and cannot be edited because they are set by the DHCP server.
2. If DHCP is on, press the `Host Name` button to edit the host name. The `Host Name` dialog box opens:
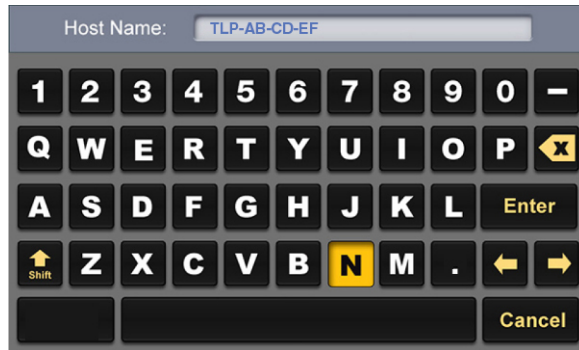
Figure 7. **Host Name Dialog Box**

Use the keypad to enter a new name, which appears in the `Host Name` text box.

3. If DHCP is disabled, set the unit IP address, subnet mask, gateway address, and DNS server address.

   a. Press the button for the address to be edited. A screen opens, showing the address and a numerical keypad.
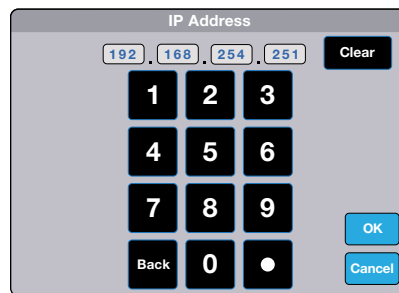
Figure 8. **Numeric Pad for Setting IP Addresses**

   b. Select an octet and enter the 3-digit value (leading zeroes in the octet are ignored).

   > **NOTES:**
   > - Octets can have any value between `0` and `255`.
   > - If you attempt to enter an invalid number, for example `892`, you are able to enter the `89` but the `2` cannot be entered.
   > - When a valid 3-digit value is entered, the next octet is automatically selected.

   c. Press **OK** to save the changes and return to the `Network` screen or press `Cancel` to return to the `Network` screen without saving the changes.

4. If you have changed any of the values in the `Network` screen, the background color of the button changes to blue. Press **Apply** to apply the new values or press **Revert** to return to the previous values without saving the changes. The button returns to gray.

   If you have not made any changes, the **Apply** and **Revert** buttons are grayed out.

Unsaved

Saved

Figure 9. **IP Address, unsaved (top) and saved (bottom).**

Display Screen

Press the **Display** button in the navigation panel at the top of the screen to open the `Display` screen.
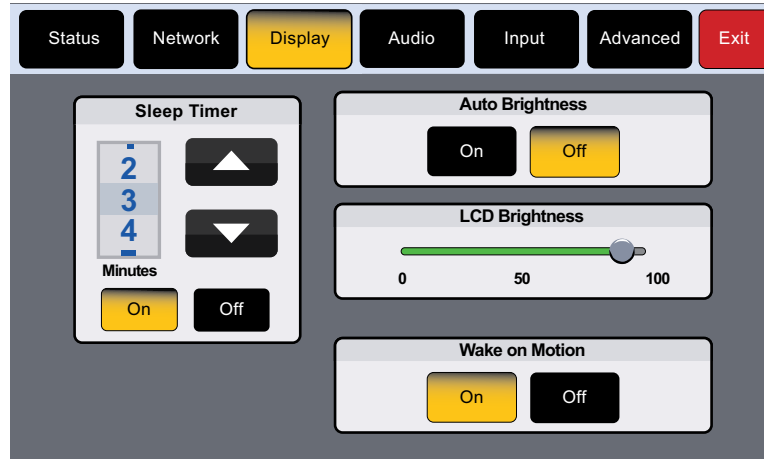
Figure 10. **Display Screen**

The `Display` screen allows you to set the `Sleep Timer`, `Auto Brightness`, `LCD Brightness`, and `Wake on Motion`.

- **Sleep Timer** — Toggle between **On** and **Off** (see "Configuring the Motion Sensor", below).
  - If the `Sleep Timer` is on, after a period of inactivity, the screen goes dark to save power (`Sleep Mode`). Use the up and down arrows to set how long the period of inactivity should be. The value can be between 1 and 120 minutes.
  - If the `Sleep Timer` is off, the panel does not enter sleep mode.
- **Auto Brightness** — Toggle between **On** and **Off**.
  - If `Auto Brightness` is on, the light sensor (see **figure 2**, Ⓐ on page 6) monitors the amount of ambient light detected and automatically provides a suitable amount of screen backlighting for the situation.
  - If `Auto Brightness` is off, the screen brightness is not affected by changes in the ambient light.
- **LCD Brightness** — Use the slider control to adjust the screen brightness between **0** and **100**.
- **Wake on Motion** — Toggle between **On** and **Off**. For this to work, the touchpanel must be in `Sleep Mode` (see "Configuring the Motion Sensor", below).

Configuring the Motion Sensor

The Motion Sensor (**figure 2**, Ⓑ) detects motion between three to five feet from the touchpanel, and at least 15° from the center axis.

- If the `Sleep Timer` has been set and no motion has been detected for a user-defined period of time, the touchpanel enters sleep mode.
- If the `Sleep Timer` has not been set, the touchpanel does not enter sleep mode.
- If `Wake on Motion` has been set and motion is detected by the sensor while the screen is in sleep mode, the screen display is restored and active.
- If `Wake on Motion` has not been set and the screen is in sleep mode, touch the screen to restore it to an active state.

Audio Screen

Press the **Audio** button in the navigation panel at the top of the screen to open the `Audio` screen.
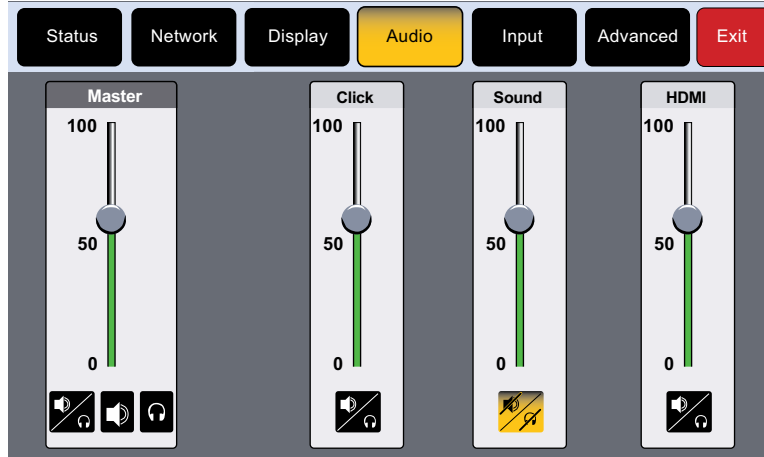
Figure 11. Audio Screen

On the `Audio` screen, use the slider controls to adjust the **Master**, **Click**, **Sound**, and **HDMI** volume settings.

- The **Master** panel allows you to click on the appropriate icon to set whether the audio is heard through the speakers, headphones, or both.

  It also sets the maximum volume threshold for all the other sound volume settings. For example, if the master volume is set to `80` (80 percent of maximum), when the HDMI volume is set to `50`, it is equivalent to only 40 percent of maximum (50 percent of 80 percent).

- **Click** sets the volume for audible feedback that accompanies events such as a screen button being pressed.

- **Sound** sets the volume of audio from any audio file playback.

- **HDMI** sets the volume of the HDMI input.

Click on the speaker and headphones icon at the bottom of each panel to toggle between audio on (black button) and audio mute (yellow button). The **Sound** audio is muted in figure 11.

Input Screen

Press the **Input** button in the navigation panel at the top of the screen to open the `Input` screen.
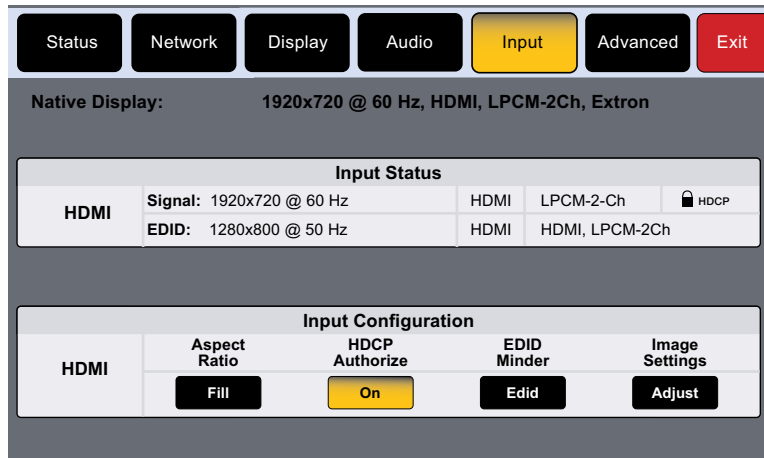
Figure 12. Input Screen

The `Input` screen provides information about the video input signal status and allows configuration of the input signal.

At the top of the screen the native display EDID information is shown. **figure 12** (see page 14) shows this is `1280x800 @ 50 Hz, HDMI, LPCM-2Ch`. for the TLP Pro 1230WTG.

The upper panel shows read-only information about the input signal status.

The lower panel allows adjustments to the input configuration.

- **Aspect Ratio:** Press this button to toggle between **Fill**, which stretches the image so that it fills the entire screen, and **Follow**, which maintains the aspect ratio of the input signal.

- **HDCP Authorization:** Press the button to toggle between **On** (default) and **Off**. When HDCP Authorize is **On**, HDCP-encrypted input signals pass to the screen.

- **EDID Minder:** Press the **EDID** button to toggle between using the EDID of the touchpanel (`1920x720 @ 60Hz` for the TLP Pro 1230WTG) or setting a resolution and refresh rate. The button is black if the native display is used and turns yellow if you are setting the EDID manually.

  Pressing the button opens the `EDID Minder` window. When setting the EDID manually, only the `Resolution` panel is initially populated. Once the resolution is selected, the available refresh rates for that resolution are displayed. When both the resolution and refresh rate are selected, press **Apply**.
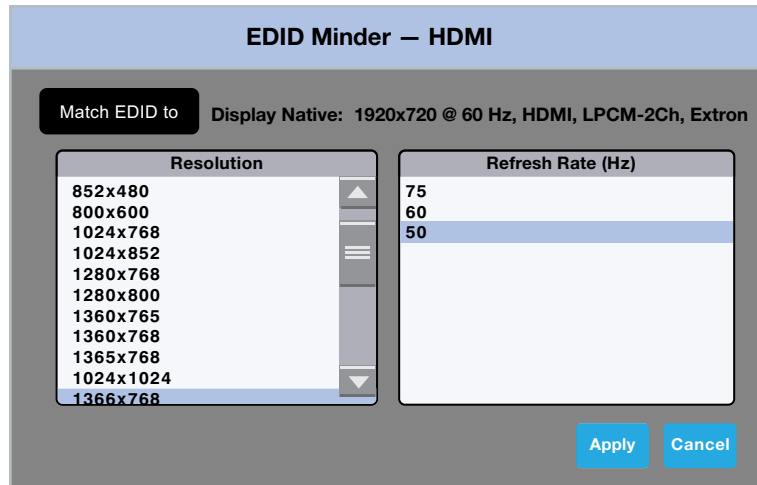
Figure 13. EDID Minder

- **Image Settings:** Press the **Adjust** button to open the `Image Settings` window. Adjust **Brightness**, **Contrast**, **Detail**, and **Overscan**.
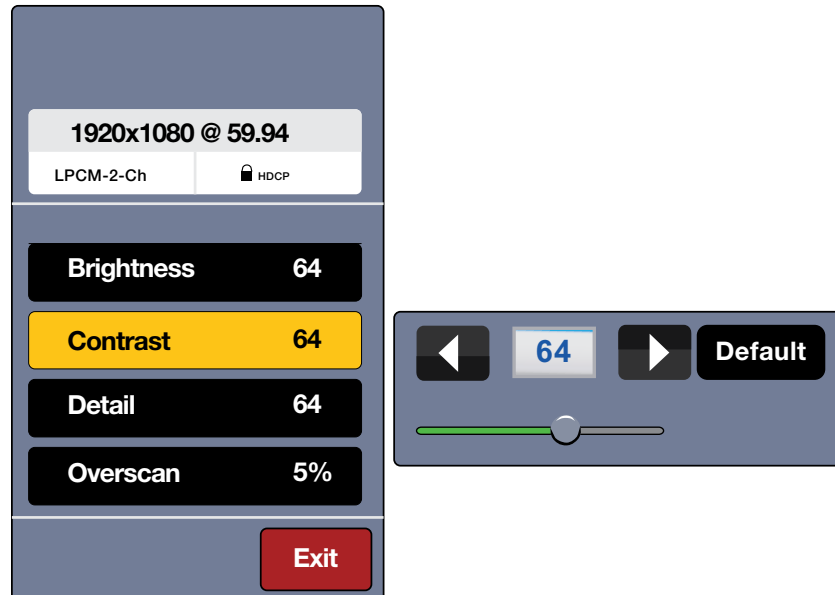
Figure 14. **Image Settings**

1. The EDID information is shown in a read-only panel.

2. To adjust **Brightness**, **Contrast**, **Detail**, or **Overscan**, press the appropriate button. A small window opens to the right of the screen. For `Brightness`, `Contrast`, and `Detail`, the window shows the current value with right and left arrows to increment or decrement the value. To change the value more quickly, use the slider underneath.

   To reset the value to default, press the **Default** button. The default value for `Brightness`, `Contrast`, and `Detail` is `64`. All three parameters can be adjusted to any value between `1` and `127`.

3. Press **Overscan**. A small window opens offering the options `0%`, `2.5%`, and `5%`. The default setting is `5%`.

4. Press **Exit** to save the changes and return to the `Input` screen.

Advanced Screen

Press the **Advanced** button in the navigation panel at the top of the screen to open the `Advanced` screen.
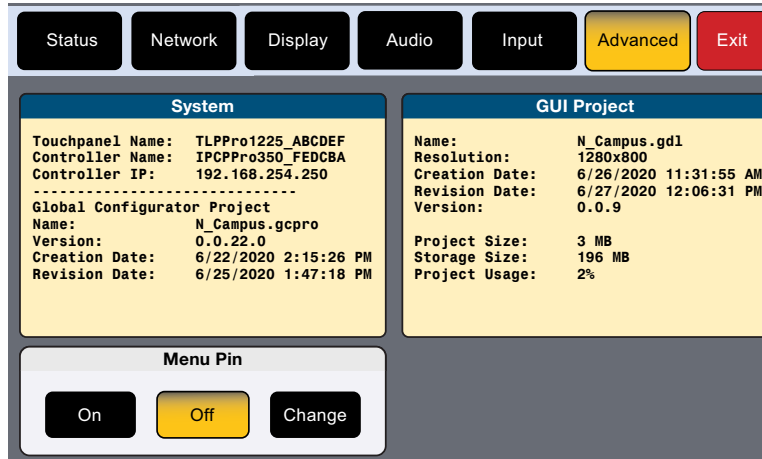
Figure 15. **Advanced Screen**

The `System` and `GUI Project` panels are read only, providing information about the system.

Menu PIN

Press **Change** to open the `PIN Setup` window. The PIN setup options allow you to enable, disable, or change the setup menu PIN. The PIN is a 4-digit number. Each digit can have any value from `0` through `9`.

1. Press a number on the keypad. A blue circle appears in the first box.
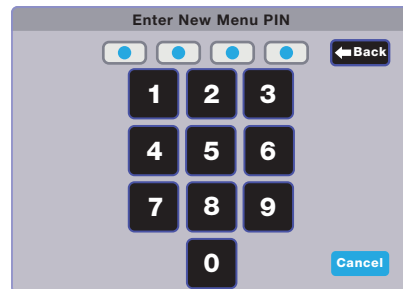
Figure 16. **Numeric Keypad for Setting PIN**

2. Select the other three digits for the PINs. The fourth circle appears momentarily and then the screen changes to `Confirm New Menu Pin`.

3. Enter the PIN a second time. When the PIN entered on the second occasion matches the PIN entered on the first occasion, the PIN is set and the dialog closes.

Configuration Software

This section of the user guide provides information about:

- **Configuration Software**
- **Install Software**
- **Using the Software**
- **TLP Pro 1230WTG Web Page**
- **Updating the Firmware**

Configuration Software

Use Toolbelt to provide device information, firmware updates, and configuration of network settings, system utilities (reset, reboot), and user management (username and password) for TouchLink Pro devices.

GUI Designer, Global Configurator Plus and Professional, and Global Scripter are used to design the touchpanel screen and assign functions to the screen elements.

Install Software

The TLP Pro 1230WTG touchpanels are compatible with GUI Designer, Global Configurator Plus and Professional, Global Scripter, and Toolbelt.

All four software products can be downloaded from **www.extron.com**

> **NOTE:** Ensure you are downloading the correct software. These touchpanels are not compatible with Global Configurator 3 or GUI Configurator.

1. Select the `Download` tab (see figure 17, ❶).
2. Click the `Software` (❷) option at the bottom of the page.
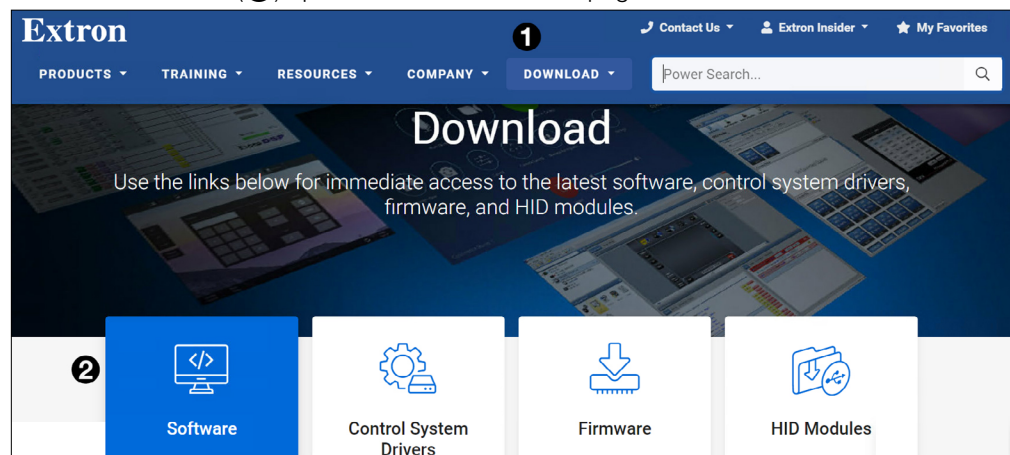
Figure 17. Software Downloads from the Extron Website

3. You may see the product immediately, for example Global Configurator Plus and Professional (see figure 18, ❶). Use the left and right arrows (❷) to scroll through all the highlighted products. If the software is not shown, click the initial letter of the product in the alphabet menu (❸).
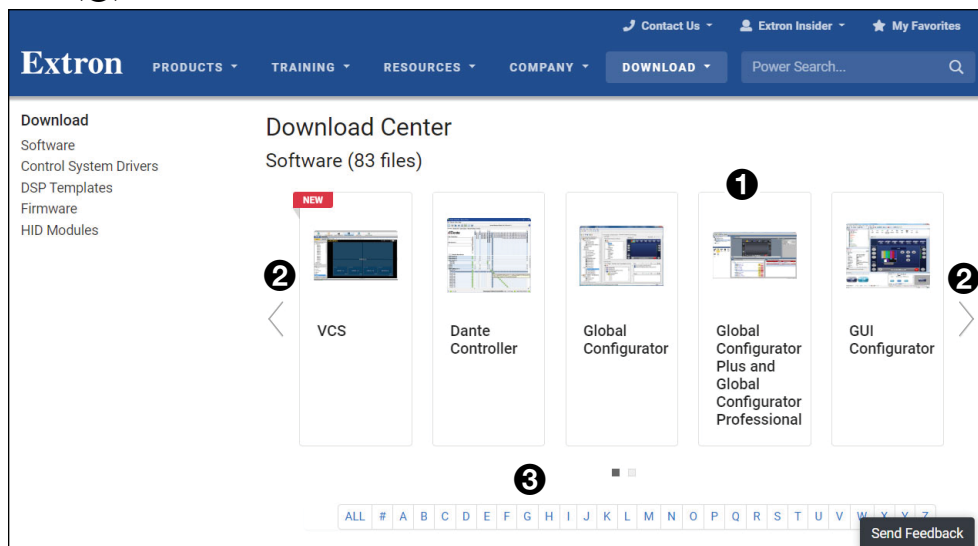
Figure 18. **Software Download Center**

4. Clicking directly on the product name takes you to the product page, which provides more information about the software. Click **Download** and, on the new page, provide the information requested. An executable file (.exe) is placed in your default `Downloads` folder.

Clicking on a letter from the alphabet menu generates a list of software products with that initial letter. Scroll through the search results until you find the desired product. Click **Download** and, on the new page, provide the information requested. An executable file (.exe) is placed in your default `Downloads` folder.

> **NOTES:**
> - If you select Global Configurator Plus and Professional, there is a check box that allows you to download Toolbelt at the same time.
> - You need an Extron Insider account to run Global Configurator Plus and Professional or Toolbelt. To obtain one, contact the Extron Sales Department.
> - Ensure you are downloading Global Configurator Plus and Professional.

5. Run the executable file to install the software. By default, your computer creates a new folder at `C:\Program Files\Extron` or `C:\Program Files (x86)\Extron`.

Using the Software

Use GUI Designer and Global Configurator Plus and Professional to design and configure a graphical user interface (GUI) for the TouchLink Pro touchpanel.

1. Design the layout of the screen text and graphics using GUI Designer, which is a Windows-based application. You can either customize an existing template or create an entirely new interface. GUI Designer offers several templates.

2. After the user interface has been designed, the project is saved, built, and imported into Global Configurator Plus and Professional.

3. Use Global Configurator Plus and Professional to assign functions to the text and graphics of the interface.

4. After assigning the control functions, the project is rebuilt and uploaded to the control processor and touchpanel.

   Alternatively, instead of using Global Configurator Plus and Professional, use Global Scripter to program control functions for the text and graphic items of the interface.

The GUI Designer, Global Configurator Plus and Professional, and Global Scripter software provide versatility and adaptability for control of an AV system as it grows and evolves.

GUI Designer — Use the GUI Designer software to design the screen layout for the touchpanel. See the *GUI Designer Help File* for step-by-step instructions and more detailed information.

Global Configurator Plus and Professional — Use the Global Configurator Plus and Professional software to assign functions to the text and graphics of the interface. See the *Global Configurator Plus and Professional Help File* for step-by-step instructions and more detailed information. The *Global Configurator Plus and Professional Help File* also includes an introduction to the software and sections on how to start and configure a project.

Global Scripter — As an alternative to Global Configurator Plus and Professional, use the Global Scripter software to program the touchpanel, using Python™ 3.5 with an Extron-exclusive Python library (ControlScript) and Global Scripter modules (see the *Global Scripter Help File* for more detailed information).

Toolbelt — The touchpanel can use the Toolbelt software for device discovery, device information, firmware updates, and configuration of network settings (see the *Toolbelt Help File* for more detailed information).

TLP Pro 1230WTG Web Page

To access the touchpanel default web page, enter the IP address of the unit into the web browser of a PC connected to the same subnet. A log-in page opens.

Figure 19. **TLP Pro 1230WTG Login Page**

1. Enter the `Username` and `Password`. The factory configured passwords for all accounts on this device have been set to the device serial number. Passwords can be changed during configuration. Passwords are case sensitive.

> **NOTE:** If the device is reset to default settings, the passwords are reset to the default password, which is `extron` (for either `admin` or `user`).

2. The touchpanel web page opens:
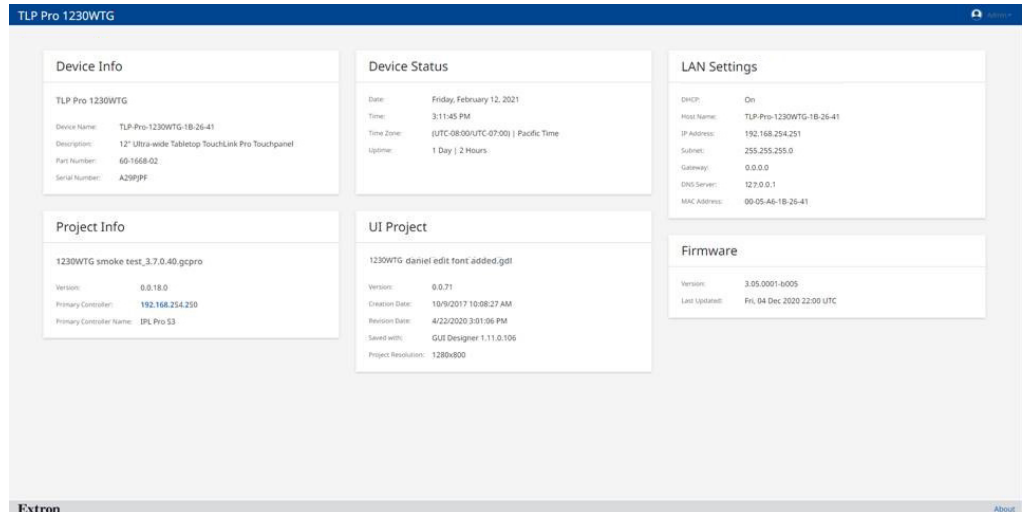
Figure 20. **TLP Pro 1230WTG Web Page**

There is a single, read-only page, providing general and network information about the unit. Use the **Setup Menu** (see page 10) or Toolbelt to configure the touchpanel network settings.

Updating the Firmware

Firmware for all the touchpanels can be upgraded using Toolbelt. Before starting, consult your IT team and ensure that the touchpanel has a unique IP address.

Downloading Firmware

1. Open the **Extron website** and select the **Download** tab (see figure 21, ❶).
2. Click the **Firmware** (❷) option at the bottom of the page.
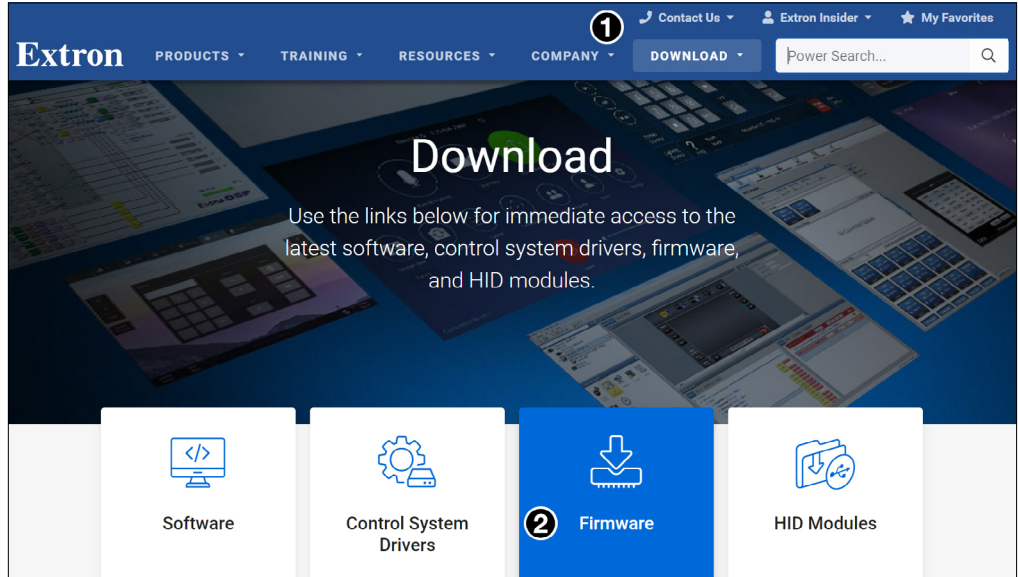
Figure 21. **Firmware Download Center**

The **Firmware Download Center** page opens:
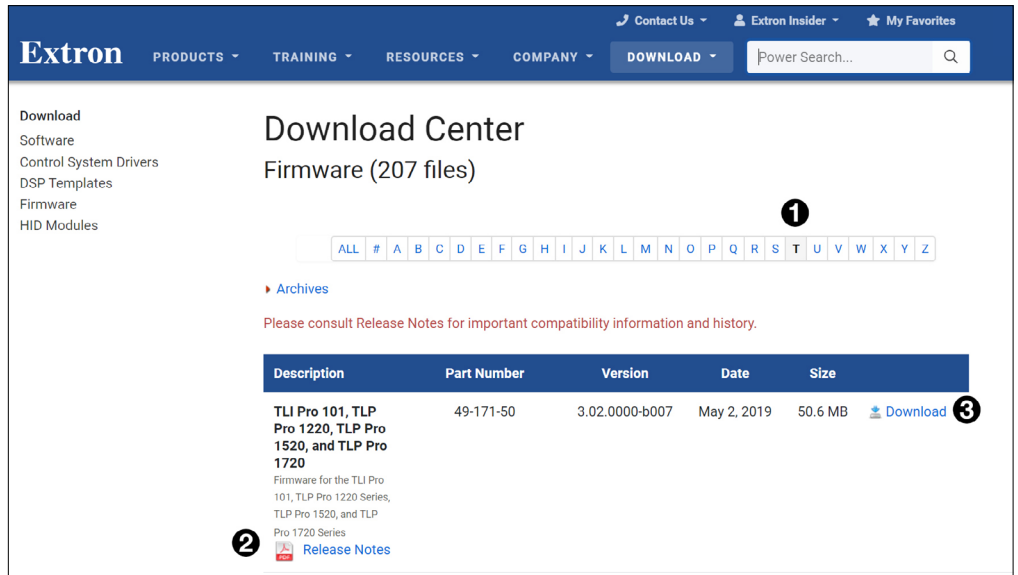
Figure 22. **Selecting Firmware to Download.**

3. Click the letter **T** from the list of letters (see figure 22, ❶).
4. Scroll down the page until you find the firmware for your touchpanel model.

> **NOTE:** Your product appears in this list only if a new version of the firmware has been released since the product was first introduced.

5. (Optional) Click **Release Notes** (see **figure 22**, ❷, for more information about the firmware.

6. Click **Download** (❸).

7. Follow the on-screen instructions to download the program. An executable file is downloaded to the PC.

8. Go to the Downloads folder and click on the file to install the firmware on the PC. By default, it is stored at `C:\\Program Files (x86)\Extron\Firmware\`*`<product name>\<firmware version>`*.

9. Upload this file to the touchpanel using Toolbelt. For complete information about using Toolbelt to update the touchpanel firmware, see the *Toolbelt Help File*.

Mounting

This section outlines the various options for mounting the TLP Pro 1230WTG.

Desktop Mounting

The TLP Pro 1230WTG has a stand that allows it to be placed on any suitable flat surface (for example, a desk, table, or lectern).

Placement without a Mounting Kit

Place The TLP Pro 1230WTG. on any suitable flat surface. For additional security, the touchpanel can be attached to the surface using two #10 flat-head screws. Figure 23 shows the position of the mounting holes in the base of the TLP Pro 1230WTG.
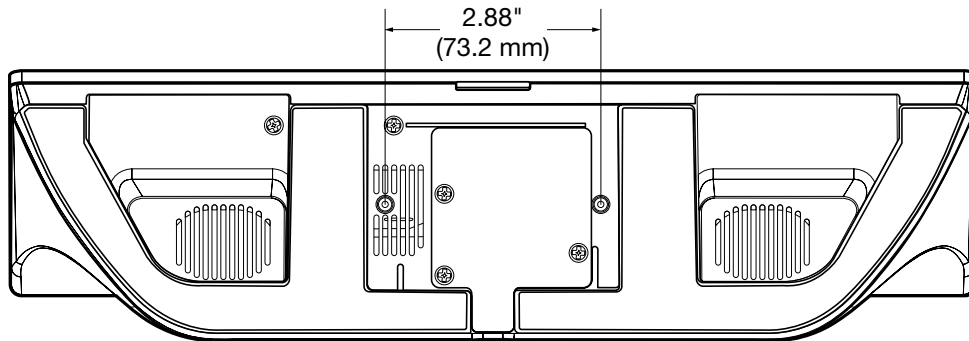
Figure 23. **TLP Pro 1230WTG Base, Showing Mounting Holes**

1. Mark the location of two mounting holes, 2.88" (73.2 mm) apart.
2. Drill two pilot holes through the desktop.
3. Insert two #10 flat-head wood screws (not provided) through the table and align them with the two mounting holes on the touchpanel.
4. Secure the touchpanel to the tabletop.

Placement with a SMA-2 swivel mount adapter

The TLP Pro 1230WTG can also be mounted with the optional Extron SMA-2 swivel mount adapter, which allows them to be mounted permanently and swivel up to 180° in either direction. See the *SMA-2 Swivel Mount Adapter Kit User Guide*, at **www.extron.com** for complete installation instructions.

Reference Material

This section describes:

- **Best Practices for Cleaning Your Extron Products**
- **Network Port Requirements and Licensed Third-Party Software Used by the Touchpanels**
- **Reset Modes**
- **Secure Sockets Layer (SSL) Certificates**
- **IEEE 802.1X Certificates**

Best Practices for Cleaning Your Extron Products

Depending on the device, application, and location, there may be times when it becomes necessary to clean your Extron product. Frequently touched devices, such as touchscreens and button panels, require regular cleaning to ensure their surfaces remain sanitary. Plastic surfaces and cosmetic finishes can be damaged by long term exposure to chemicals. Therefore, Extron recommends the following guidelines when cleaning our products.

All Extron products can be safely cleaned with:

1. 70% concentration or higher Isopropyl Alcohol
2. Disinfectant cleaners that:
   - Are non-ammonium based (for example, contains no ammonium chloride)
   - Contain 2% or less sodium hypochlorite (for example, 2% bleach, 98% water)

Regardless of the device, it is important to follow these general guidelines when cleaning:

1. If possible, unplug the device.
2. Spray the cleaner on a lint-free cloth until the cloth is damp.
3. Do not spray the cleaner directly onto the product.
4. Gently clean the product surface using the cloth.

Your health and safety are our top priority. Keeping devices clean, especially those in high-traffic environments and high-use applications, is a crucial step in minimizing the spread of infections. Please contact us if you have any questions about the guidelines outlined in this section or if you have a question about cleaning a specific Extron product.

Network Port Requirements and Licensed Third-Party Software Used by the Touchpanels

For information about network port requirements and licensed third-party software for the TLP Pro 1230WTG touchpanels, see the *Pro Series Control Product Network Ports and Licenses Guide*, which is available at **www.extron.com**.

Reset Modes

These touchpanels have four reset modes that are initiated by pressing the **Reset** button:

- **Use Factory Firmware**
- **Reset All IP Settings**
- **Reset to Factory Defaults**
- **Enable or Disable the DHCP Client**

The **Reset** button is found on the base (see **figure 3**, **C**, on page 7).

Use Factory Firmware

This mode is used to boot up the unit with factory-installed firmware for a single power cycle in the event of a firmware update that failed or incompatibility issues arising with user-loaded firmware.

Activation

1. On the touchpanel, hold down the recessed **RESET** button while applying power to the unit. When power is restored, the RESET LED lights. Hold the **RESET** button for a further two seconds before releasing it. The touchpanel enters factory firmware mode.
2. Upload new firmware to the unit as desired (see **Updating the Firmware** on page 22).

> **NOTE:** Do not continue to operate the touchpanel using the factory firmware version. If you want to use the factory default firmware, you must upload that version again (see **Updating the Firmware**).

Result

The unit reverts to factory-installed firmware. Event scripting does not start if the unit is powered on in this mode. All user files and settings such as drivers, adjustments, and IP settings are maintained.

> **NOTE:** To return the unit to the firmware version that was running prior to the reset, cycle power to the unit.

Reset All IP Settings

This mode resets all IP settings to factory defaults.

Activation

To reset all IP settings:

1. Hold down the **RESET** button until the RESET LED blinks twice (once at 3 seconds and again at 6 seconds).
2. Release and press **RESET** momentarily (for <1 second) within 1 second. Nothing happens if the momentary press does not occur within 1 second.

Result

`Reset All IP Settings` mode:

- Sets the IP address back to factory default (`192.168.254.251`).
- Sets the subnet back to factory default (`255.255.255.0`).
- Sets the default gateway address to the factory default (`0.0.0.0`).
- Sets all other IP settings, addresses, and domain and host names back to factory default.
- Turns DHCP off.

Reset to Factory Defaults

This mode resets all IP settings and touchpanel settings, including passwords, to factory defaults and removes all configurations. It allows you to start over with configuration and uploading.

> **NOTES:**
> - The factory configured passwords for all accounts on this device have been set to the device serial number. Passwords can be changed during configuration. Passwords are case sensitive.
> - If the device is reset to default settings, the password changes to the default password. The default password is `extron` (for either `admin` or `user` accounts).

Activation

To reset the unit to all factory default settings:

1. Hold down the **RESET** button until the RESET LED blinks three times (once at 3 seconds, again at 6 seconds, and again at 9 seconds).
2. Release and press **RESET** momentarily (for <1 second) within 1 second. Nothing happens if the momentary press does not occur within 1 second.

Result

This mode performs a complete reset to factory defaults (except the firmware).

- Does everything `Reset All IP Settings` mode does.
- Removes touchpanel user interface layout and configurations.
- Resets all touchpanel settings, including passwords, to factory default.

Enable or Disable the DHCP Client

This mode toggles between DHCP enabled and DHCP disabled. This can also be carried out from the **Network Screen** of the Setup Menu (see page 11).

Activation

To enable or disable the DHCP client for the LAN port:

1. Press the **RESET** button five times (consecutively).
2. Release the button. Do not press the button within 3 seconds, following the fifth press.

Result

If DHCP was enabled, it is now disabled. The **RESET** LED blinks three times.

If DHCP was disabled, it is now enabled. The **RESET** LED blinks six times.

> **NOTES:**
> - By default DHCP is off and the unit uses a static IP address.
> - When you disable DHCP, the unit reverts to using the previously-set static IP address.

Secure Sockets Layer (SSL) Certificates

Extron TouchLink Pro products ship with factory-installed SSL certificates created by Extron. If you want or are required to use a different SSL certificate at your installation site, then you can use system utilities in the Toolbelt software to change the SSL certificate at any time. The *Toolbelt Help File* provides instructions on how to apply an SSL certificate.

> **NOTES:**
> - You must run Toolbelt as an administrator.
> - Some certificates require a passphrase that is created when the certificate is created. If a passphrase is required, you must enter that passphrase before uploading and applying the certificate.

These devices support standard OpenSSL certificate encodings such as .pem (Privacy-enhanced Electronic Mail) and .der (Distinguished Encoding Rules) file types. PEM file types are ASCII encoded and are the required format for uploading to the Extron control product. DER file types are binary encoded and can typically have several file extension variations, such as .crt and .cer. There are many standard tools that can convert from DER to PEM file encodings if needed.

> **NOTE:** A DER format file must be converted to PEM encoding before uploading it to the button panel, control processor, touchpanel, or collaboration receiver.

To properly create the certificate for uploading to Extron control devices, ensure that the certificate file meets the following requirements:

- Contains X.509 certificate information
- Contains public and private keys
- Uses PEM encoding

> **NOTE:** ITU-T standard X.509 covers aspects of public key encryption, digital cryptography, certificates, and validation.

Contact your IT administrator for more information on what tools and policies are required to obtain or create the SSL certificate and, if necessary, the corresponding passphrase.

IEEE 802.1X Certificates

IEEE 802.1X is a standard that enables port-based network access control via an authentication server. The protocol requires that all devices must be authenticated before gaining privileges to access the secure part of the network.

The Extron implementation of 802.1X supports PEAP - MSCHAPV2 and EAP - TLS methods of authentication. This section of the guide details the Certificate File Requirements and the Private Key File Requirements to be used in the system.

Extron provides resources for learning about 802.1X implementation:

- The *Extron 802.1X Technology Reference Guide*, available from **www.extron.com**, is the primary resource for background information, system planning, topology, and how to set up these systems.
- The *Toolbelt Help File* provides detailed step-by-step information on using the software to set up 802.1X for IP Link Pro control systems and on troubleshooting.
- The *802.1X Primer white paper*, also available from **www.extron.com**, provides a general overview of the protocol and its use within a control system.

> **NOTES:**
> - You must run Toolbelt as an administrator.
> - Machine certificates require a private key file, which can be encrypted.

Certificate File Requirements

PEM (Privacy-enhanced Electronic Mail) file types are ASCII encoded, and they are the required format for 802.1X authentication for the TouchLink Pro control systems. DER (Distinguished Encoding Rules) file types are binary encoded and can typically have several file extension variations, such as .crt and .cer.

NOTE: DER encoded files (files with .der, .crt, or .cer extensions that are encoded in DER binary format) must be converted to a PEM encoded file type (.pem) before being used for authentication.

DER encoded certificates must be converted to PEM encoding using a third-party tool. Contact your IT administrator for more information on required tools.

To create the 802.1X security certificate for uploading to Extron TouchLink Pro control systems, ensure that the certificate file meets the following requirements:

- It contains X.509 certificate information.
- It contains a private key (for machine certificates only).
- It is PEM encoded.
- It has a file extension that is .crt or .pem
- Its file name consists of the following types of valid characters:
    - Alphanumerical (A-Z, a-z, 0-9) characters
    - Some special characters (colon [:], underscore [_], and hyphen [-])

NOTE: Spaces are not permitted anywhere in the name.

Private Key File Requirements

Private key files are required only when employing machine certificates. Follow these requirements for creating a private key:

- Its file name consists of the following types of valid characters:
    - Alphanumerical (A-Z, a-z, 0-9) characters
    - Some special characters (colon [:], underscore [_], and hyphen [-])
- It has a file extension that is .key or .pem.
- It can have optional encryption (via password or passphrase).

Extron Warranty

Extron warrants this product against defects in materials and workmanship for a period of three years from the date of purchase. In the event of malfunction during the warranty period attributable directly to faulty workmanship and/or materials, Extron will, at its option, repair or replace said products or components, to whatever extent it shall deem necessary to restore said product to proper operating condition, provided that it is returned within the warranty period, with proof of purchase and description of malfunction to:

USA, Canada, South America, and Central America:
Extron
1230 South Lewis Street
Anaheim, CA 92805
U.S.A.

Asia:
Extron Asia Pte. Ltd.
135 Joo Seng Road, #04-01
PM Industrial Bldg.
Singapore 368363
Singapore

Japan:
Extron, Japan
Kyodo Building, 16 Ichibancho
Chiyoda-ku, Tokyo 102-0082
Japan

Europe:
Extron Europe
Hanzeboulevard 10
3825 PH Amersfoort
The Netherlands

China:
Extron China
686 Ronghua Road
Songjiang District
Shanghai 201611
China

Middle East:
Extron Middle East
Dubai Airport Free Zone
F13, PO Box 293666
Dubai, United Arab Emirates

Africa:
Extron South Africa
South Tower
160 Jan Smuts Avenue
Rosebank 2196, South Africa

This Limited Warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, abnormal operating conditions, or if modifications were made to the product that were not authorized by Extron.

> **NOTE:** If a product is defective, please call Extron and ask for an Application Engineer to receive an RA (Return Authorization) number. This will begin the repair process.
>
> | | | | |
> |---|---|---|---|
> | **USA:** | 714.491.1500 or 800.633.9876 | **Asia:** | 65.6383.4400 |
> | **Europe:** | 31.33.453.4040 or 800.3987.6673 | **Japan:** | 81.3.3511.7655 |
> | **Africa:** | 27.11.447.6162 | **Middle East:** | 971.4.299.1800 |

Units must be returned insured, with shipping charges prepaid. If not insured, you assume the risk of loss or damage during shipment. Returned units must include the serial number and a description of the problem, as well as the name of the person to contact in case there are any questions.

Extron makes no further warranties either expressed or implied with respect to the product and its quality, performance, merchantability, or fitness for any particular use. In no event will Extron be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Extron has been advised of such damage.

Please note that laws vary from state to state and country to country, and that some provisions of this warranty may not apply to you.