


TLC Pro 526M, 726M, and 1026M Series


TouchLink Pro Control Systems



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 لتنبية المستخدم فيما يتعلق بوجود جهد كهربائي غير معزول على الغلاف الخارجي للمنتج وهو ما قد ينطوي على مخاطر حدوث صدمة كهربائية.

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Sicherheitsanweisungen • Deutsch


WARUNG: Dieses Symbol , auf dem Produkt 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 están 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.

ATTENZIONE: 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.

安全说明 • 简体中文

警告: ⚠ 产品上的这个标志意在警告用户, 该产品机壳内有暴露的危险电压, 有触电危险。

注意: ⚠ 产品上的这个标志意在提示用户, 设备随附的用户手册中有重要的操作和维护(维修)说明。

关于我们产品的安全指南、遵循的规范、EMI/EMF 的兼容性、无障碍使用的特性等相关内容, 敬请访问 Extron 网站, www.extron.com, 参见 Extron 安全规范指南, 产品编号 68-290-01。

安全記事 • 繁體中文

警告: ⚠ 若產品上使用此符號, 是為了提醒使用者, 產品機殼內存在未隔離的危險電壓, 可能會導致觸電之風險。

注意: ⚠ 若產品上使用此符號, 是為了提醒使用者, 設備隨附的用戶手冊中有重要的操作和維護(維修)說明。

有關安全性指導方針、法規遵守、EMI/EMF 相容性、存取範圍和相關主題的詳細資訊, 請瀏覽 Extron 網站: www.extron.com, 然後參閱《Extron 安全性與法規遵守手冊》, 準則編號 68-290-01。

安全上のご注意 • 日本語

警告: この記号 ⚠ が製品上に表示されている場合は、筐体内に絶縁されていない高電圧が流れ、感電の危険があることを示しています。

注意: この記号 ⚠ が製品上に表示されている場合は、本機の取扱説明書に記載されている重要な操作と保守(整備)の指示についてユーザーの注意を喚起するものです。

安全上のご注意、法規遵守、EMI/EMF適合性、その他の関連項目については、エクストロンのウェブサイト www.extron.com より「Extron Safety and Regulatory Compliance Guide」(P/N 68-290-01) をご覧ください。

안전 지침 • 한국어

경고: 이 기호 ⚠ 가 제품에 사용될 경우, 제품의 인클로저 내에 있는 접지되지 않은 위험한 전류로 인해 사용자가 감전될 위험이 있음을 경고합니다.

주의: 이 기호 ⚠ 가 제품에 사용될 경우, 장비와 함께 제공된 책자에 나와 있는 주요 운영 및 유지보수(정비) 지침을 경고합니다.

안전 가이드라인, 규제 준수, EMI/EMF 호환성, 접근성, 그리고 관련 항목에 대한 자세한 내용은 Extron 웹 사이트(www.extron.com)의 Extron 안전 및 규제 준수 안내서, 68-290-01 조항을 참조하십시오.

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FCC Class B Notice

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. There is no guarantee that interference will not occur. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of the manufacturer could void the user's authority to operate this equipment.

NOTE: 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

Class 1 Laser Product

Any service to this product must be carried out by Extron and its qualified service personnel.

CAUTION: Using controls, making adjustments, or performing procedures in a manner other than what is specified herein may result in hazardous radiation exposure.

NOTE: 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.

Produit laser de classe 1

Si ce produit a besoin d'un quelconque entretien, celui-ci doit être fait par Extron Electronics et son personnel qualifié.


ATTENTION : L'utilisation de commandes, la réalisation de réglages, ou l'exécution de procédures de manière contraire aux dispositions établies dans le présent document, présente un risque d'exposition dangereuse aux radiations.

Remarque : Pour plus d'informations sur les directives de sécurité, les conformités de régulation, la compatibilité EMI/EMF, l'accessibilité, et les sujets en lien, consultez le « [Informations de sécurité et de conformité Extron](#) » sur le site internet d'Extron.

FCC Radio Frequency Interference – Safety Notices

NOTE: The Safety Notices and Industry Canada Notices on this and the following pages refer to the TLC Pro 526M and TLC Pro 1026M models.

Antenna Warnings

 **WARNING:** The radiated output power of the wireless device is far below the FCC radio frequency exposure limits. Nevertheless, the unit should be used in such a manner that the potential for human contact during normal operation is minimized. To avoid the possibility of exceeding the FCC radio frequency exposure limits, you should keep a distance of at least 20 cm between you (or any other person in the vicinity) and the antenna that is built into the unit.

AVERTISSEMENT : La puissance de sortie rayonnée de l'appareil sans fil est bien inférieure aux limites d'exposition aux radiofréquences de l'organisme américain FCC (Federal Communications Commission). Néanmoins, l'unité doit être utilisée de telle sorte que le contact humain éventuel durant le fonctionnement régulier de l'appareil soit réduit. Afin d'éviter toute possibilité de dépassement des limites d'exposition aux radiofréquences de la FCC, vous êtes tenu de conserver une distance de 20 cm (8") au minimum entre vous (ou toute autre personne située à proximité) et l'antenne intégrée à l'unité.

NOTE: The wireless network device must be installed and used in strict accordance with Extron instructions as described in the user documentation that comes with the product. Any other installation or use will violate FCC Part 15 regulations.

Compliance IC

Canada, Industry Canada (IC) Notices

CAN ICES-3 (B)/NMB-3(B)

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This device complies with RSS247 of Industry Canada.

This Class B digital apparatus complies with Canadian ICES-003, Issue 4, and RSS-247, No 4.

To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing.

IC Antenna Statement

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This radio transmitter has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Type: Chip

Maximum Peak Gain: 0.5 dBi

Impedance: 50 Ohm

Radio Frequency (RF) Exposure Information

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the antenna and your body.

IC conformité

Canada, avis d'Industry Canada (IC)

CAN ICES-3 (B)/NMB-3(B)

Cet appareil est conforme aux normes des cahiers des charges sur les normes radioélectriques (CNR) de l'ISDE applicables aux appareils exempts de licence. Son utilisation est subordonnée aux deux conditions suivantes : (1) Cet appareil ne doit provoquer aucune interférence, et (2) cet appareil doit accepter toute interférence, y compris l'interférence susceptible de compromettre son fonctionnement.

Cet appareil est conforme aux normes CNR-247 de l'ISDE.

Cet appareil numérique de classe B est conforme aux normes canadiennes NMB-003, 4ème édition, et CNR-247, 4ème édition.

Afin d'éviter toute interférence électromagnétique avec le service faisant l'objet d'une licence, cet appareil doit être utilisé dans des applications intérieures et être éloigné des fenêtres afin de garantir une protection maximale. L'équipement (ou son antenne d'émission) installé dans des applications extérieures fait l'objet d'une licence.

Note du ministère ISDE Canada relative aux antennes

En vertu de la réglementation d'Industrie Canada, cet émetteur radio doit être utilisé uniquement avec une antenne d'un certain type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par le ministère. Afin de réduire les éventuelles interférences électromagnétiques préjudiciables aux autres utilisateurs, il est essentiel de choisir le type d'antenne et son gain de telle sorte que la puissance isotrope rayonnée équivalente (EIRP) se révèle inférieure aux besoins requis pour garantir une communication satisfaisante.

Le fonctionnement de l'émetteur radio avec les types d'antenne listés ci-dessous a été approuvé par Industrie Canada. Le gain maximal autorisé et l'impédance requise pour chaque antenne sont par ailleurs indiqués. L'utilisation des types d'antenne non inclus dans cette liste, qui possèdent un gain supérieur au gain maximal indiqué pour chaque type, est strictement interdite avec cet appareil.

Type : puce électronique

Gain d'antenne maximal : 0.5 dBi

Impédance : 50 ohms

Informations sur les limites d'exposition aux radiofréquences

Cet équipement est conforme aux limites d'exposition aux radiations CNR-102 établies pour un environnement non contrôlé. Il doit être installé et contrôlé à une distance minimale de 20 cm entre l'antenne et votre corps.

Conventions Used in this Guide

Notifications

In this user guide, the following are used:

WARNING: Potential risk of severe injury or death.

AVERTISSEMENT : Risque potentiel de blessure grave ou de mort.

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

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

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.

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Introduction

This guide describes the function, installation, and operation of the **TLC Pro 526M, TLC Pro 526M NC, TLC Pro 726M, TLC Pro 726M NC, TLC Pro 1026M, and TLC Pro 1026M NC** wall-mountable TouchLink Pro control systems.

NOTE: For use in a high-security environment, the camera, Bluetooth®, and microphone have been removed from the TLC Pro 526M NC, 726M NC, and 1026M NC models.

A range of mounting options are available for each model (see [Mounting](#) on page 29).

Unless otherwise stated the term “TLC” refers to all models.

This section discusses the following topics:

- [About the TLC Pro 526M, 726M and 1026M Series](#)
- [Features](#)
- [Application Diagram](#)
- [Requirements](#)

About the TLC Pro 526M, 726M and 1026M Series

These TouchLink Pro control systems are ideal for any AV application requiring small or medium-sized touchpanels with a built-in IP Link Pro control processor.

The screen layout is designed with the Extron GUI Designer software. The functions are assigned to the screen objects with the Extron Global Configurator Plus and Professional software.

The user can define the graphics and the functions associated with those graphics, providing versatility and adaptability to the configuration and control of an AV system.

Features

- **Integrated control solution** — combines a TouchLink Pro touchpanel with a built-in IP Link Pro control processor
- All-in-one design saves space in equipment racks and simplifies system designs
- **LCD touchscreen** — vibrant edge-to-edge glass display with 24-bit color depth and a more responsive control surface.
 - **TLC Pro 526 Series** — 5-inch capacitive touchscreen with 800x480 (WVGA) resolution
 - **TLC Pro 726 Series** — 7-inch capacitive touchscreen with 1024x600 (WSVGA) resolution
 - **TLC Pro 1026 Series** — 10.1-inch capacitive touchscreen with 1280x800 (WXGA) resolution
- **Gorilla Glass® screen is tough, scratch, and smudge-resistant** — Corning® Gorilla Glass is stronger and more scratch-resistant than standard glass, while maintaining touch sensitivity, color saturation, and brightness.
- Provides control of multiple devices directly from the Ethernet port:
 - Four with GC Plus
 - Eight with GC Pro

- Port expansion adapter provides convenient control directly from the touchpanel:
 - Two bidirectional RS-232 ports
 - One contact closure port
 - One IR port
 - Two relays
- **On-board digital input port** — allows for a connection with a variety of devices, such as sensors and switches
- **Quad-core processing** — provides enhanced response and overall user experience.
- **Power over Ethernet (PoE 802.3af, class 3) compliance** — allows the device to be powered directly by a PoE switch or injector, eliminating the need for bulky local power supplies.
- **Built-in speaker** — provides audible feedback from button presses.
- **Light sensor** — adjusts screen brightness as the ambient room lighting changes.
- **Energy-saving features:**
 - Adjustable sleep timer puts TLC into sleep mode
 - Motion detector wakes the TLC
- **Automatic clock synchronization** — allows TLC to display the accurate time and date.
- **Configurable red and green status lights** — indicate the availability or call status of a room.
- **System connection status indicator** — the communication LED provides visual feedback if the touchpanel is not communicating with a control processor.
- **High speed USB 2.0 port** — for future expansion
- **Mounting options** — these control systems mount in a one-gang (TLC Pro 526M Series) or two-gang (TLC Pro 726M and TLC Pro 1026M Series) junction boxes or on a wall, lectern, or any flat surface, including glass, with the optional mounting kits (see www.extron.com).
- **Manage, monitor, and control this device remotely** — using GlobalViewer Enterprise (GVE) Resource Management software.
- **Fully customizable using Extron control system software** — GUI Designer combined with Global Configurator Plus or Global Configurator Professional.
- **Supports the Extron Control App and Extron Control for Web.**
- **Vast library of Pro Series device drivers for use with Global Configurator** — Start and execute projects quickly using Extron Global Configurator device drivers to control various display and source devices, such as projectors, flat-panel displays, and Blu-ray players. Extron offers fully tested Ethernet, serial, and IR device drivers.

Application Diagram

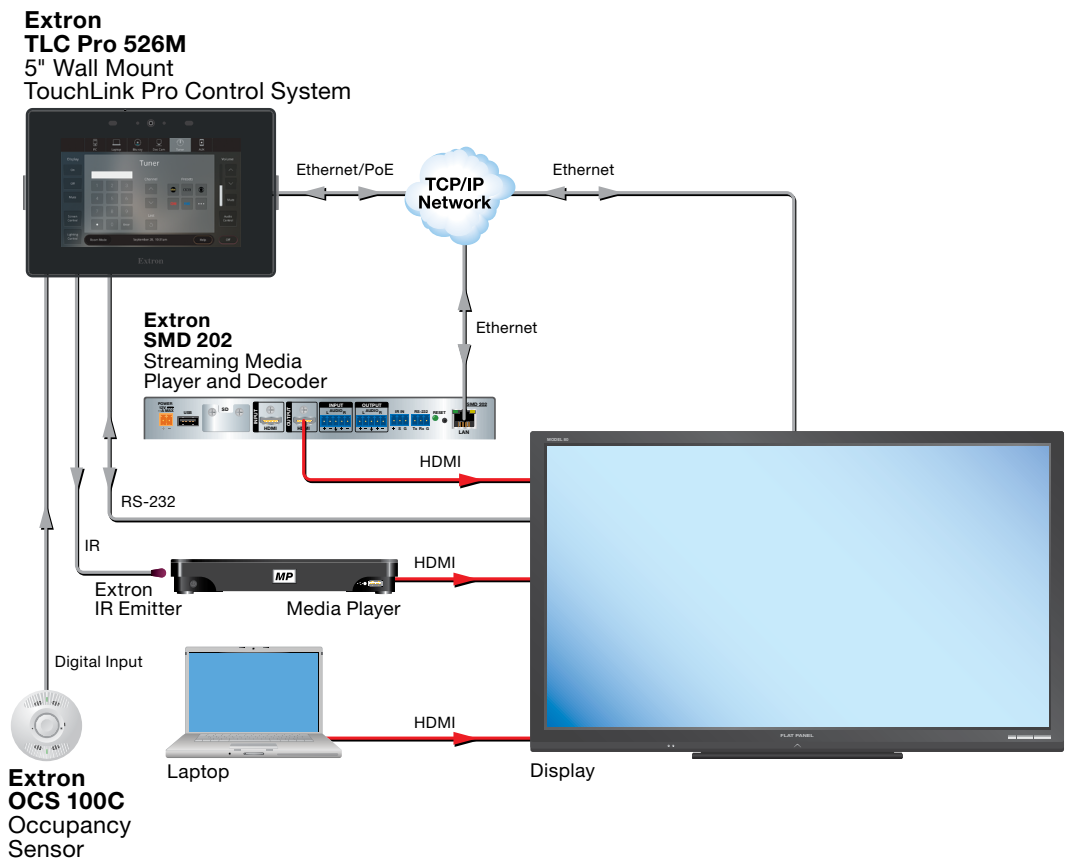


Figure 1. Application Diagram

Requirements

Software

For a complete list of the requirements for running GUI Designer, Global Configurator Plus and Professional, Global Scripiter, and Toolbelt, see the Extron web page (www.extron.com) for that software.

NOTE: These TouchLink Pro control systems are not compatible with Global Configurator 3 or GUI Configurator.

Hardware

These TouchLink Pro control systems contain a built-in IP Link Pro control processor.

Installation Overview

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

1. Before starting to install the TLC Pro models, download and install the latest versions of the following software:

- ☐ **GUI Designer** — For designing layouts for Extron TouchLink Pro control systems and third party touch interfaces.
- ☐ **Global Configurator Plus and Professional** — For setting up and configuring the control system.
- ☐ **Toolbelt** — Provides device discovery, device information, firmware updates, and configuration of network settings, system utilities, and user management for TouchLink Pro devices.

NOTE: These software programs are available from www.extron.com. For more information, see [Configuration Software](#) on page 23.

- ☐ **IP Link Pro Device Drivers** — To allow the control ports to interact with the devices they are controlling.
2. Before starting to install the TLC Pro models, 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**
 - ☐ **User name** — This can be either **admin** or **user**.
 - ☐ **Password** — By default this is the serial number of the TLC (for admin and user).

NOTE: The factory configured passwords for all accounts on this device have been set to the device serial number. If the device is reset, the passwords revert to **extron**. Passwords are case sensitive.

- ☐ **MAC address** — Make a note of the TLC MAC address, which can be found on the rear panel label.
- ☐ Obtain model names and setup information for the devices that will be controlled by the TouchLink Pro control system.
- ☐ The TLC comes with a factory-installed Secure Sockets Layer (SSL) security certificate. 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](#) on page 37).
- ☐ IEEE 802.1X authentication is also supported once enabled (see [IEEE 802.1X Certificates](#) on page 37).

3. Mount and cable the units:

- ☐ Connect cables to the touchpanels (see **Rear Panel Features** on page 8) and the USB adapter (see **USB Adapter Features** on page 11).
- ☐ Connect the power cords and power on all devices (see **LAN/PoE Connector** on page 9).

ATTENTION:

- Do not power on the touchpanels until you have read the **Attention** about Power over Ethernet (PoE) power supplies (see page 10).
- Ne branchez pas les écrans tactiles avant d'avoir lu la **mise en garde** sur les sources d'alimentation via Ethernet (PoE) (voir page 10).

- ☐ Connect control ports to the devices they are controlling or monitoring.
- ☐ Mount the units.

NOTE:

- If you use the setup menu to configure the TLC Pro 526M, 726M, or 1026M for network communication (see step 4, below), configure the touchpanel before mounting as you will need access to the rear panel **Menu** button.
- The TLS models do not use the setup menu.

There are several mounting options for TLC Pro devices (see **Mounting** on page 29). Once the unit is mounted, the rear panel is not accessible. Ensure all cables have been connected before mounting.

- ☐ Power on all devices.

4. Set up the TLCs for network communication:

- ☐ Connect the PC that you will use for setup and the TouchLink Pro control system to the same Ethernet subnetwork.
- ☐ Use the **Setup Menu** (see page 16) or Toolbelt to set the DHCP status and, if required, the IP address, subnet mask, gateway, and related settings for the TLC.

5. Configure the TLC Pro control system — the *GUI Designer Help File*, the *Global Configurator Plus and Professional Help File*, the *Global Scriptor 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 Scriptor provides an Extron-exclusive Python library (ControlScript) and Global Scriptor 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 33.

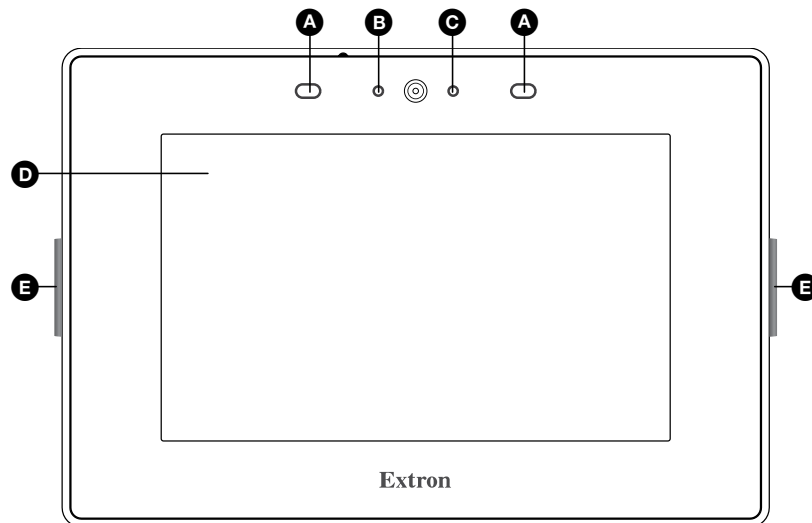
Panel Features

This section describes the TLC Pro control systems:

- [Front Panel Features](#)
- [Rear Panel Features](#)
- [USB Adapter Features](#)
- [Control Ports — Touchpanel](#)
- [Control Ports — USB Adapter](#)

Front Panel Features

Figure 2 shows the TLC Pro 526M front panel. The front panels for all models have the same features and are very similar, apart from size.



- A** [Motion sensor](#)
- B** [Communication LED](#)
- C** [Light sensor](#)
- D** [Capacitive LCD touchscreen](#)
- E** [Status light](#)

Figure 2. TLC Pro 526M Front Panel

- A** **Motion sensor** (two) — The sensor detects motion between 3 to 5 feet (0.9 to 1.5 meters) from the TLC, and at least 15° from the center axis.

When both sleep mode and wake on motion have been enabled (see [Display](#) on page 19):

- When no motion has been detected for a user-defined period of time, the touchpanel enters sleep mode.
- When motion is detected by the sensor, the screen display is restored and active.

B Communication LED — (see [figure 2](#) on the previous page). Shows the configuration and connection status of the TLC:

- Unlit during normal operation.
- Lights steadily if the TLC has not been configured.

The indicator can be enabled and disabled, using the [Setup Menu](#) (see page 16).

C Light sensor — Monitors ambient light level and adjusts screen brightness, based on the settings configured using the [Setup Menu](#).

D Capacitive LCD touchscreen — made with tough, scratch-resistant Gorilla Glass touchscreen.

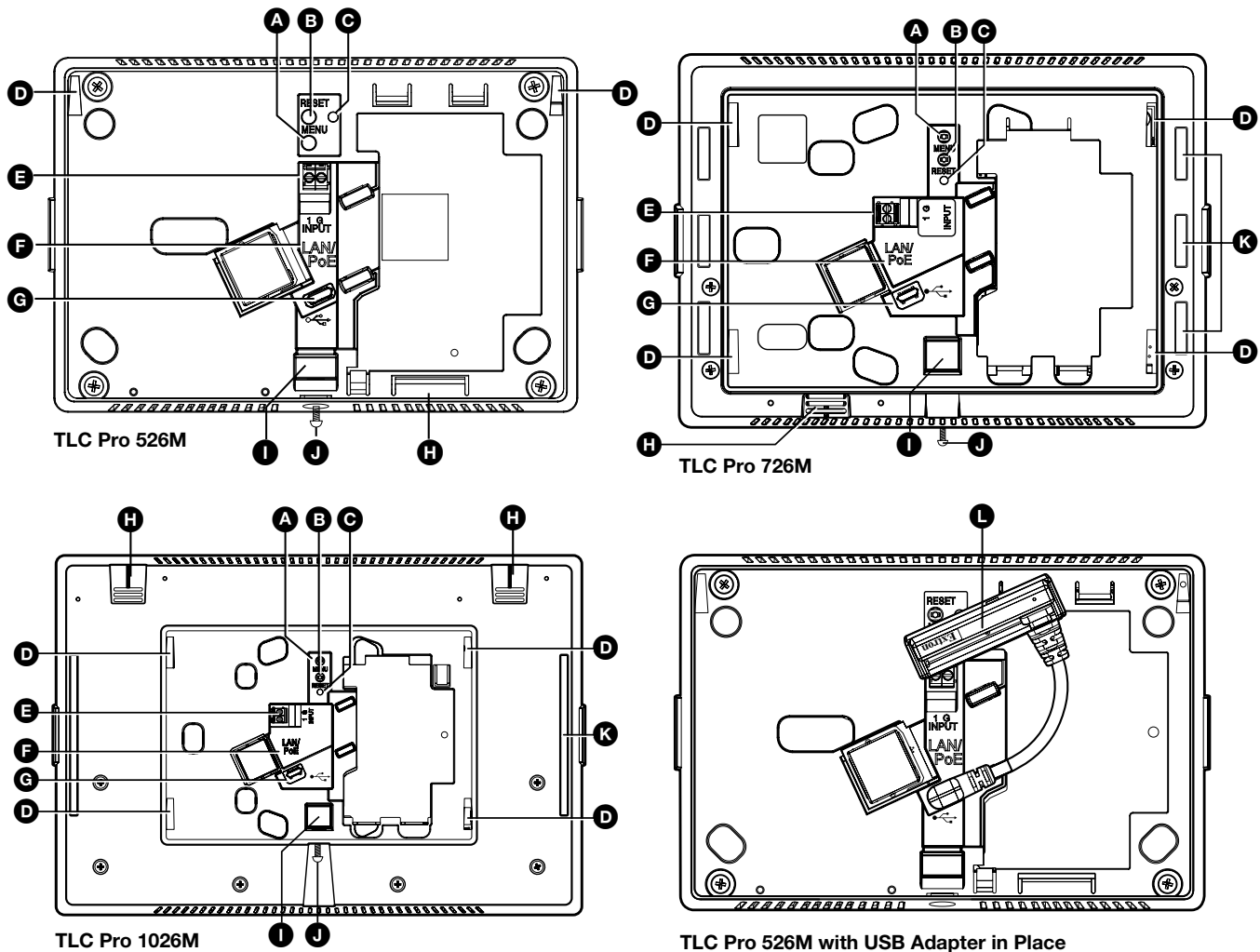
- TLC Pro 526 Series — 5-inch touchscreen with 800x480 (WVGA) resolution
- TLC Pro 726 Series — 7-inch touchscreen with 1024x600 (WSVGA) resolution
- TLC Pro 1026 Series — 10.1-inch touchscreen with 1280x800 (WXGA) resolution

E Status light — Two LED light bars, one on either side of the screen, which can be configured, using Global Configurator, to provide system feedback, by lighting red or green and by blinking or staying continuously lit.

Rear Panel Features

NOTES:

- The panels in figure 3 are for illustration only and are not to the same scale.
- For clarity, the first three rear panels in figure 3 are shown with the USB adapter removed.
- The fourth panel (bottom right corner) shows the TLC Pro 526M with the USB adapter (see figure 3, **L**) in place. The alignments of the TLC Pro 726M and 1026M with the adapter are very similar.



- | | |
|---|--|
| A Menu Button (page 9) | G USB Port (page 11) |
| B Reset Button (page 9) | H Speaker (page 11) |
| C Reset LED (page 9) | I Mounting Plate Slot (page 11) |
| D Mounting Slots (page 9) | J Mounting Screw (page 11) |
| E Digital Input Monitoring Port (page 9) | K Rear Status Light (page 11) |
| F LAN/PoE Connector (page 9) | L USB Adapter (page 11) |

Figure 3. TLC Pro 526M Rear Panel with the USB Adapter Removed (top left).
 TLC Pro 726M Rear Panel with the USB Adapter Removed (top right).
 TLC Pro 1026M Rear Panel with the USB Adapter Removed (bottom left).
 TLC Pro 526M Rear Panel with the USB Adapter In Place (bottom right).

- A Menu Button** (see [figure 3](#) on the previous page) — Activates the setup menu (see [Setup Menu](#) on page 16).
- B Reset Button** — Pressing the **Reset** button allows the unit to be reset in any of four different modes and can also be used to toggle between enabling and disabling the DHCP client (see [Reset Modes](#) on page 34).
- C Reset LED** — Provides feedback about the reset status when the **Reset** button is pressed (see [Reset Modes](#)).
- D Mounting Slots** — The TLC Pro 726M and 1026M have four, one in each corner. The TLC Pro 526M has two, one in each top corner (see [Mounting](#) on page 29).
- E Digital Input Monitoring Port** — This two-pole captive screw port (1 = signal and G = ground) monitors digital input with or without a +5 VDC pull-up.

The table below provides information about the ports:

Digital Input, Pull-up Disabled	
Logic State	Notes
Logic Low	Voltage below 2.0 VDC
Logic High	Voltage above 2.8 VDC
Digital Input, Pull-up Enabled	
Logic State	Notes
Logic Low	Externally shorted to ground
Logic High	Open, +5V from pull-up resistor

See [Digital Input Port Use-cases](#) on page 12, for examples of how these ports function.

- F LAN/PoE Connector** — The TLC Pro 526M, TLC Pro 726M and TLC Pro 1026M are Power over Ethernet (PoE 802.3af, class 3) compliant. Connect the TLC to a PoE power injector using a twisted pair cable, terminated with an RJ-45 connector. Connect the power injector to the LAN through a network switch.

ATTENTION:

- Do not power on the touchpanels until you have read the [Attention](#) on the next page.
- Veillez lire la partie « [mise en garde](#) » en page suivante, avant de mettre sous tension les écrans tactiles.

NOTE: These devices ship without a power injector. The power injector must be purchased separately.

Figure 4 shows the Extron XTP PI 100. Your power injector may look different.

The network port has two LEDs. The green LED lights steadily to indicate that the TLC is connected correctly to a network. The yellow LED blinks to indicate that data is being passed to or from the device.

Connect a straight-through Ethernet cable from the power injector to a switch or router (see figure 4, **1**). This cable carries network information from the switch or router to the power supply. Connect a second straight-through cable (**2**) from the power injector to the TLC. This cable carries the network information and 48 VDC from the power injector to the device. Connect the IEC power cord to a convenient 100 VAC to 240 VAC, 50-60 Hz power source (**3**).

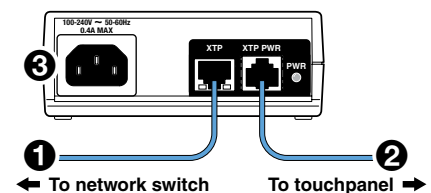


Figure 4. XTP PI 100 Power Injector

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.
-
- 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.
 - 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.
-
- 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 these products are not provided with a power supply, they are intended to be supplied by a UL Listed power source marked "Class 2" or "LPS" and output rated 48 VDC or 56 VDC (PoE), minimum 0.35 A, or UL Listed Extron XTP/DTP remote power source.
 - Si ces produits ne sont pas fournis avec une source d'alimentation, ils doivent être utilisés avec une source d'alimentation certifiée UL de classe 2 ou LPS avec une tension nominale 48 Vcc ou 56 Vcc (PoE), 0,35 A minimum, ou une source d'alimentation à distance XTP/DTP Extron certifiée UL.
-
- 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.

- G USB Port** (see [figure 3](#) on page 8) — Compatible with USB 2.0.
- H Speaker** — Provides audible feedback for the user.
 - TLC Pro 526M — a single speaker
 - TLC Pro 726M — a single speaker
 - TLC Pro 1026M — two speakers (support stereo or dual mono)
- I Mounting Plate Slot** — The tongue at the bottom of the mounting plate fits into this slot, for wall mounting (see [Mounting](#) on page 29).
- J Mounting Screw** — Tightens against the tongue of the mounting plate to secure the TLC (see [Mounting](#)).
- K Rear Status Light**
 - The TLC Pro 526M — no lights.
 - The TLC Pro 726M — six LEDs (three on each side of the rear panel).
 - The TLC Pro 1026M has a single LED strip on each side.

The lights can provide system feedback:

 - Light red or green
 - Blink or remain steadily lit

The rear panel status lights of the TLC Pro 726M and the TLC Pro 1026M can be disabled, using the [Setup Menu](#) (see page 16).

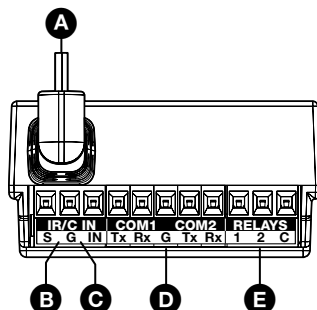
The lights can be configured using Global Configurator, to provide feedback information about the system using these variables.

Different combinations, for example a red LED lit steadily or a green LED that is blinking, can provide indications about the system. For information about setting up these LEDs, see the *Global Configurator Help File*.
- L USB Adapter** — Provides additional control ports (see “USB Adapter Features” below).

USB Adapter Features

Attaching the USB Adapter to the Touchpanel

1. Connect the adapter to the USB port (see [figure 3](#), **G**, on page 8).
2. Use the provided zip tie to secure the adapter to the back of the touchpanel.



- A USB Connector** — Insert into the USB Port (see [figure 3](#), **G**)
- B IR connector**
- C Contact Closure connector**
- D (2) Communications ports**
- E (2) Relay ports**

Figure 5. USB Adapter Features

Control Ports — Touchpanel

Digital Input Monitoring Port

This port monitors digital input from external devices. Connect as follows:



Figure 6. Digital Input Monitoring Port

- Pin 1 = signal
- Pin 2 (G) = ground.

The port measures two states: high and low. Digital input is triggered by an external switch or voltage between the digital input pin and ground. The threshold voltages are:

- Low to high 2.8 VDC
- High to low 2.0 VDC

If the connected device does not provide its own power, use Global Configurator to configure an internal pull-up resistor.

Digital Input Port Use-cases

Connecting an Occupancy Sensor to the Digital Input Port

Digital I/O digital input with pull-up disabled:

Digital input is triggered by an external switch or voltage between the digital input pin and ground.

Example application: occupancy sensor connection:

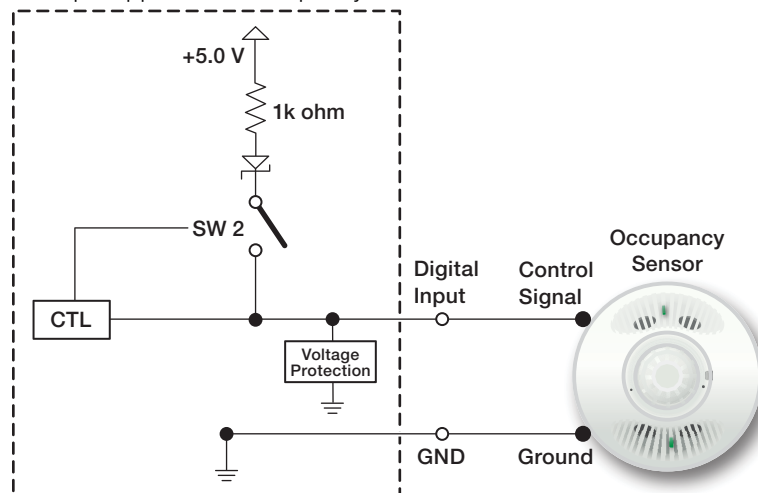


Figure 7. Connecting an Occupancy Sensor to the Digital Input Port

- **Room Occupied** — Digital input reads +2.8 to 24 VDC = Logic High
- **Room Unoccupied** — Digital Input reads 0 VDC = Logic Low

NOTE: An occupancy sensor typically supplies +24 VDC when occupancy is detected. After a defined period when no occupancy is detected, the sensor supplies 0 VDC.

Connecting a Two-position Switch to the Digital Input Port

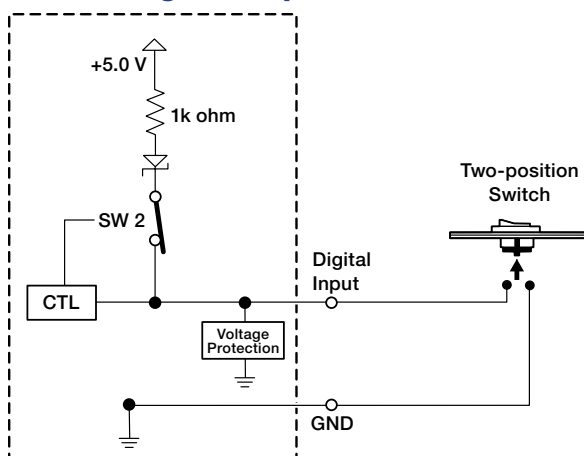


Figure 8. Connecting a Two-position Switch to the Digital Input Port

- **Port Configured** — Input with pull-up (switch 2 closed)
- **Two Position Switch Open** — Digital input reads +5 VDC = Logic High
- **Two Position Switch Closed** — Digital input reads 0 VDC = Logic Low

Control Ports — USB Adapter

IR Port

Insert the wires from an IR Emitter into the IR port and place the head of the emitter over or next to the IR signal pickup window of the device being controlled.

Connect two wires to the IR port, as shown in figure 9. If both the IR port and contact closure port are used, the ground pin must be shared by both devices.

NOTE: Each emitter must be within 100 feet (30.4 meters) of the TLC control system for best IR control results.

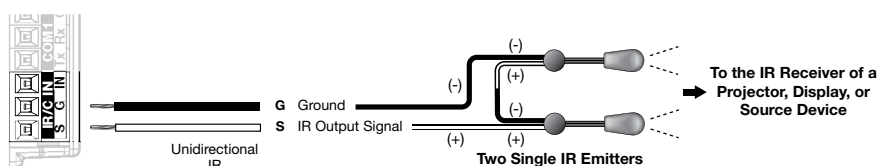


Figure 9. IR Connector

The IR port can accept a single IR emitter (see figure 10, top), a dual IR emitter (center) or two single IR emitters, tied in series (bottom).

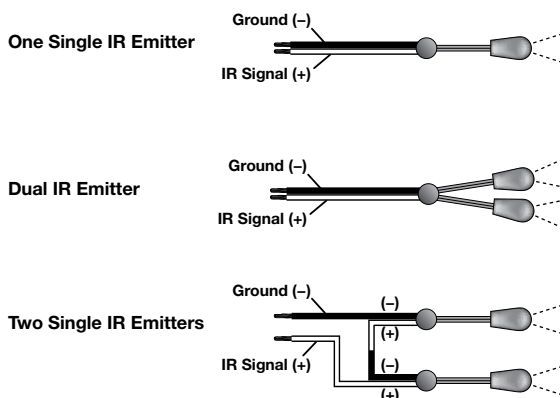


Figure 10. IR Emitter Configurations

Contact closure

The contact closure port is used to monitor switches, sensors, or similar devices, and to trigger events in response to changes to the monitored device. Insert the wires from the monitored device into the contact closure port.

A 1k ohm pull-up resistor in a TTL (5 VDC) circuit senses the contact closure.

- When the external switch closes (shorts to ground, logic low) the port is on.
- When the external switch opens (logic high) the port is off.

Connect two wires to the contact closure port, as shown in figure 11. If both the IR port and contact closure port are used, the ground pin must be shared by both devices.

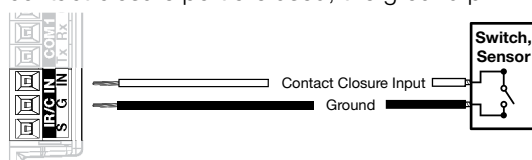


Figure 11. Contact Closure Port

COM ports

The TLC has two COM ports, which support software flow control. They share a common ground pin. Figure 12 shows how to wire a single port or both.

COM ports control and receive status messages from connected devices, using the following RS-232 protocols:

- 300 to 115200 baud (default = 9600 baud)
- 7 or 8 data bits (default = 8)
- 1 or 2 stop bits (default = 1)
- No parity, even parity, or odd parity (default = no parity)
- This port supports software flow control. The default is no flow control.

NOTE: The maximum distance from the TLC to the device being controlled is usually 200 feet (61 meters), but this can vary, depending on factors such as cable gauge, baud rates, environment, and output levels from the TLC or the device being controlled.

For bidirectional serial communication, the transmit, ground, and receive pins must be wired at both the adapter and the device being controlled. For information about wiring the device being controlled, see the user guide for that device.

If you use cable that has drain wire, the drain wire must be tied to ground at both ends. For best results, insulate the common or drain wires using heat shrink.

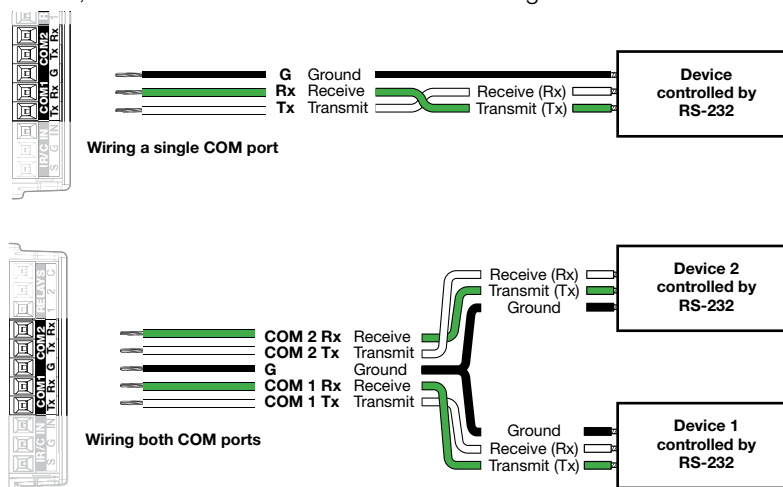


Figure 12. COM Ports

Relays

There are two relay ports, which share a common ground. These ports may be used to control any equipment as long as the contact specifications of a total of 24 V at 1 A are not exceeded for each port. These relays are normally open by default.

When activated, the open contacts close. They can be set up to operate in one of two ways:

- Latching (brief or indefinite period contact) (press to close, press to open), or
- Pulsed (timed cycle) (press to close, timeout to open, with automatic repeat).

In pulse mode the default timeout period (hold time) is 0.5 second (500 ms). This time can be changed with Global Configurator.

NOTE: The pulse function is absolute: it always sets the relay state to closed, times out (briefly), then opens the contact. It overrides the previously selected setting (on state, off state, or toggle).

To use a single relay port connect Pin 3 (Common) and either Pin 1 (Relay 1) or Pin 2 (Relay 2) to the device being controlled. To use both relay ports, connect the pins as shown in figure 13. Pin 3 (C) must be connected to both devices being controlled.

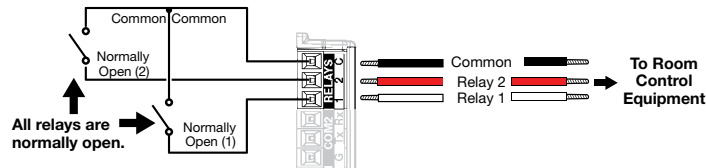


Figure 13. Relay Ports

On-screen Menus

On-screen menus allow initial configuration of the TLCs. The figures in this section show screens for the TLC Pro 526M. Unless stated otherwise, the screens for the other TLCs are very similar.

Setup Menu

To open the setup menu, use a pen or Extron Tweaker to press the **MENU** button. The **MENU** button is located on the rear panel (see [figure 3](#) on page 8).

The menus open at the **Status** screen. There are five different screens:

- **Status** (see below)
- **Audio** (see page 20)
- **Network** (see following page)
- **Advanced** (see page 21)
- **Display** (see page 19)

These can be selected by pressing the appropriate button in the navigation panel at the top of the screen.

Buttons that have been selected, turn yellow. All other buttons are black. This is true of both the buttons in the navigation panel and buttons on the various screens.

There is also a red **Exit** button in the top right corner of the screen.

NOTE: Pressing the **Exit** button closes the page. If you wish to save changes made to a page you must do so before pressing the **Exit** button.

Status

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

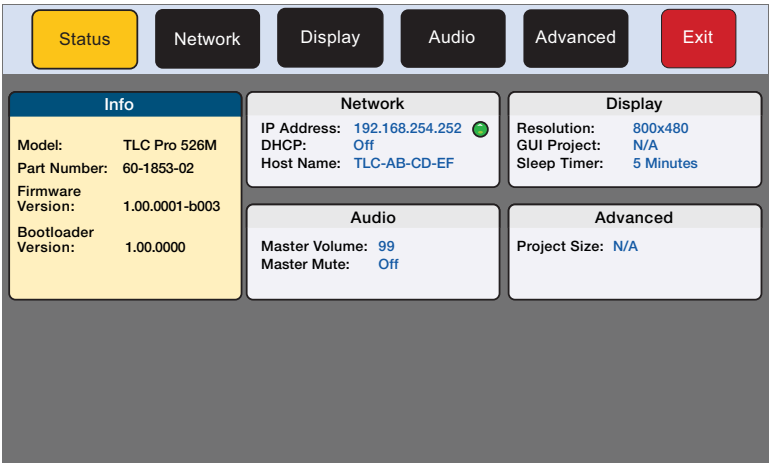


Figure 14. Status Screen

The **Status** screen is a read-only screen that provides basic information about the TLC. Each of the other four panels shows a summary of the information on the other screens.

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

A green bubble in the **Network** panel lights when there is a network connection or a red square appears if there is no connection.

Network

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

The Network configuration screen features a top navigation bar with buttons for Status, Network (highlighted in yellow), Display, Audio, Advanced, and Exit. Below this, there are two main sections: 'DHCP' and 'Max Ethernet Speed'. The 'DHCP' section has 'On' and 'Off' buttons. The 'Max Ethernet Speed' section has '100Mbps' and '1.0Gbps' buttons. Below these sections, there are input fields for Host Name (TLC-AB-CD-EF), IP Address (192.168.254.252), Subnet Mask (255.255.255.0), Gateway (0.0.0.0), DNS Primary (127.0.0.1), Domain Name, and MAC Address (00-05-A6-AB-CD-EF). At the bottom right, there are 'Revert' and 'Apply' buttons.

Figure 15. Network Screen

1. If IP addresses are assigned by DHCP, press **On**.
 - When DHCP is off, the **Host Name** is grayed out and cannot be edited. All addresses can be edited (as shown in [figure 17](#), on the next page).
 - 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.

If IP addresses are assigned manually, press **Off**.

2. If DHCP is on, press the **Host Name** button to edit the host name. The **Host Name** dialog box opens:

The Host Name dialog box shows a text input field at the top with the value 'TLC-AB-CD-EF'. Below the field is a full QWERTY keyboard layout. The 'N' key is highlighted in yellow. At the bottom right, there are 'Enter' and 'Cancel' buttons.

Figure 16. Host Name Dialog Box

Use the dialog box 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. By default, the first octet is selected.

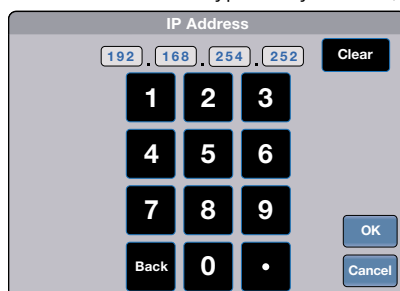


Figure 17. Numeric Pad for Setting IP Addresses

- b. Enter the 3-digit value for each octet (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 (see figure 18, top). 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 (see figure 18, bottom). If you have not made any changes, the **Apply** and **Revert** buttons are grayed out.



Figure 18. IP Address unsaved (top) and saved (bottom)

Display

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

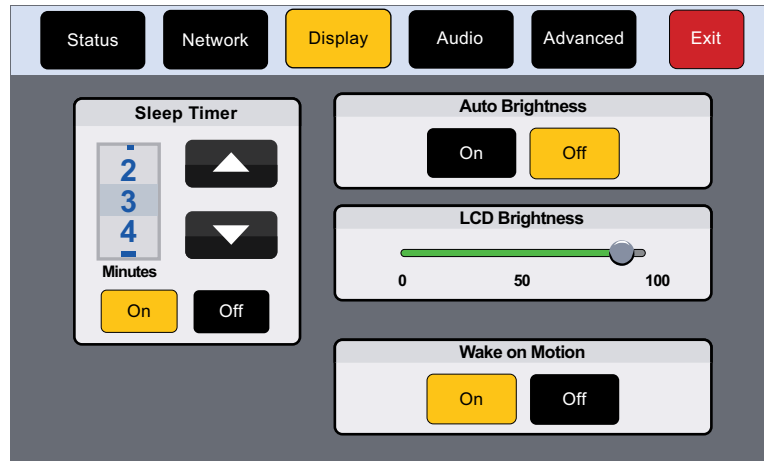


Figure 19. Display Screen

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**.
 - 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, D](#), 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.
 - If Wake on Motion is **On**, and the touchpanel is in sleep mode, any motion detected by the motion sensor (see [figure 2, A](#), on page 6) wakes the panel from sleep mode. The screen lights and all buttons become functional.
 - If Wake on Motion is **Off**, the panel does not wake in response to nearby motion and the screen can be activated by pressing it.

Audio

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

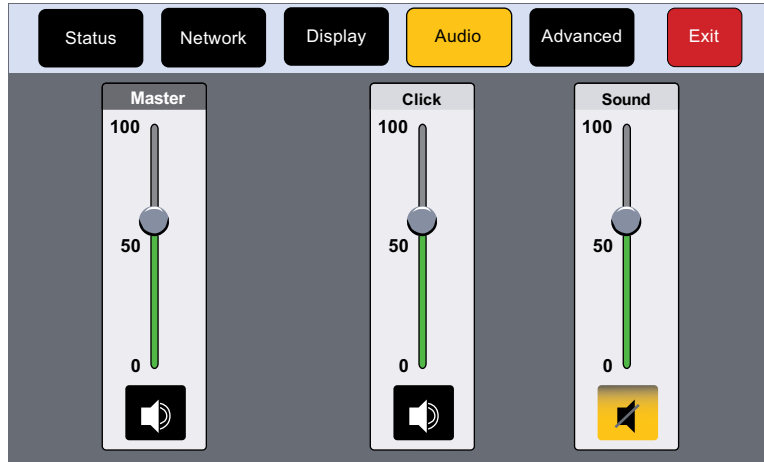


Figure 20. Audio Screen

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

- **Master** — Sets the maximum volume for all the other sound volume settings. For example, if the master volume is set to 80 (80 percent of maximum), even when the sound volume is set to 100, it is equivalent to only 80 percent of maximum.
- **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.

Click on the **Speaker** icon at the bottom of each panel to toggle between audio on and audio mute. The **Sound** audio is muted in figure 20.

Advanced

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

NOTES:

- The TLC Pro 726M and TLC Pro 1026M Series wall mount models have the option to switch the rear panel status lights on or off. (Figure 21 shows the **Advanced** screen for the TLC Pro 726M. The **Advanced** screen for the TLC Pro 1026M is almost identical.)
- This option is not available for the TLC Pro 526M (see figure 22).

The Advanced Screen for the TLC Pro 726M features a navigation bar at the top with buttons for Status, Network, Display, Audio, Advanced (highlighted in yellow), and Exit (red). The main content area is divided into two columns: System and GUI Project. The System column displays Touchpanel Name (TLC-AB-CD-EF), Controller Name (TLC-AB-CD-EF), and Controller IP (192.168.254.252). Below this is the Global Configurator Project section, showing Name (NorthHall), Version (01.00.1383), Creation Date (2/15/2016 2:48:20 PM), and Revision Date (2/16/2016 4:15:45 PM). The GUI Project column displays Name (Jet Video Conference System), Resolution (1024x600), Creation Date (2/12/2016), Revision Date (02/12/2016), Version (01.00.16), Project Size (12 MB), Storage Size (115 MB), and Project Usage (0%). At the bottom, there are three control sections: Menu PIN (On, Off, Change buttons), Rear Status Lights (Enable, Disable buttons), and Communication LED (Enable, Disable buttons).

Figure 21. Advanced Screen (TLC Pro 726M)

The Advanced Screen for the TLC Pro 526M features a navigation bar at the top with buttons for Status, Network, Display, Audio, Advanced (highlighted in yellow), and Exit (red). The main content area is divided into two columns: System and GUI Project. The System column displays Touchpanel Name (TLC-AB-CD-EF), Controller Name (TLC-AB-CD-EF), and Controller IP (192.168.254.252). Below this is the Global Configurator Project section, showing Name (NorthHall), Version (01.00.1383), Creation Date (2/15/2016 2:48:20 PM), and Revision Date (2/16/2016 4:15:45 PM). The GUI Project column displays Name (Jet Video Conference System), Resolution (800x480), Creation Date (2/12/2016), Revision Date (02/12/2016), Version (01.00.16), Project Size (12 MB), Storage Size (115 MB), and Project Usage (0%). At the bottom, there are two control sections: Menu PIN (On, Off, Change buttons) and Communication LED (Enable, Disable buttons). The Rear Status Lights section is absent in this version.

Figure 22. Advanced Screen (TLC Pro 526M)

System and GUI Project Panels

These panels are read only, providing information about the system, the Global Configurator Project, and the GUI Designer Project.

Menu PIN

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 0-9.

1. Enter a four-digit PIN.

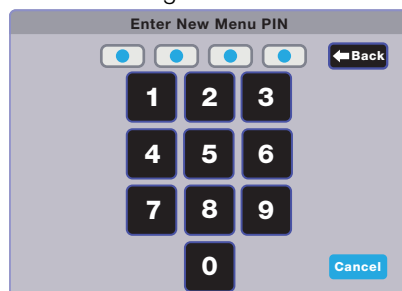


Figure 23. Numeric Keypad for Setting PIN

2. The title bar 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.

Communication LED

The LED can be switched on or off by pressing the **Enable** or **Disable** button.

- When this option is enabled, the Communication LED (see [figure 2, B](#), on page 6) is active and shows the configuration and connection status of the touchpanel. It is unlit during normal operation and lights steadily if the touchpanel has not been configured.
- When this option is disabled, the Communication LED is not active.

Rear Status Lights

NOTES:

- The TLC Pro 526M has no rear status lights.
- The TLC Pro 726M has six lights (three on each side of the rear panel).
- The TLC Pro 1026M has a single LED strip on each side.

These lights can be switched on or off by pressing the **Enable** or **Disable** button.

- When this option is enabled, the rear status lights (see [figure 3, K](#), on page 8) are active.
The lights can be configured with Global Configurator to light green or red and to blink, light steadily, or remain off. Different combinations (for example a red, steadily lit, LED can provide feedback about the system).
- When this option is disabled, the rear status lights are not active.

Configuration Software

This section of the user guide provides information about:

- [Configuration Software](#)
- [Drivers](#)
- [TouchLink Pro Control System Web Page](#)
- [Updating the Firmware](#)

Configuration Software

NOTE: Use GUI Designer, Global Configurator Plus and Professional, and Toolbelt to configure the TLC Pro control system.

The TLC Pro series touchpanels must be configured before use in order to recognize and accept commands and pass them on to the controlled device. They can be configured via a host PC connected to the same network as the touchpanel.

1. Design the layout of the screen text and graphics using GUI Designer. You can either customize an existing template or create an entirely new interface. GUI Designer offers several templates.
2. After designing the user interface, the project is saved, built, and imported into Global Configurator, where the appropriate control functions are assigned to the text and graphic items of the interface. After assigning the control functions, the project is rebuilt and uploaded to the TLC.

The GUI Designer and the Global Configurator Plus and Professional programs provide versatility and adaptability for configuration and control of an AV system as it grows and evolves.

Installing GUI Designer, Global Configurator, and Toolbelt

GUI Designer, Global Configurator, and Toolbelt can be downloaded from www.extron.com.

1. Select the **Download** button (see figure 24, ①) and then click the **Software** option (②).

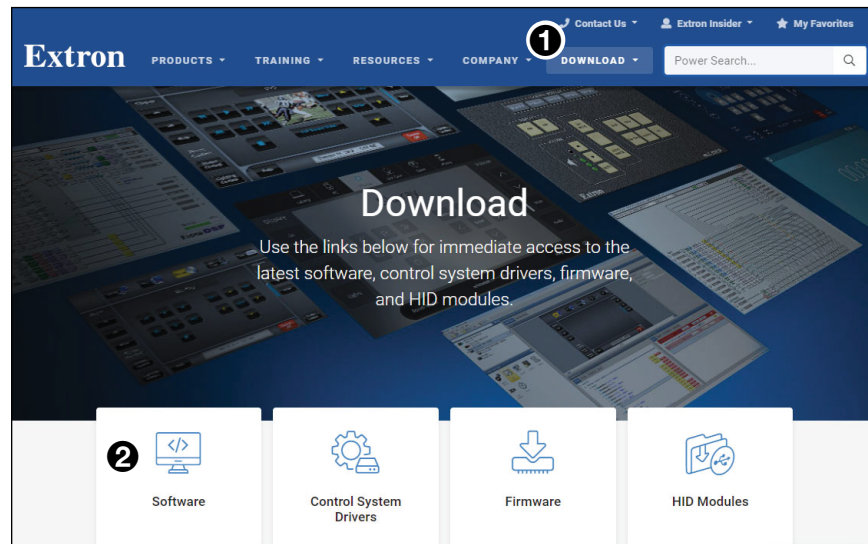


Figure 24. Extron Download Page

You may see the product immediately, for example Global Configurator Plus and Professional (see figure 25, ②). Use the left and right arrows (③) to scroll through all the highlighted products. If the software is not shown, click the initial letter of the product in the alphabet menu (④).

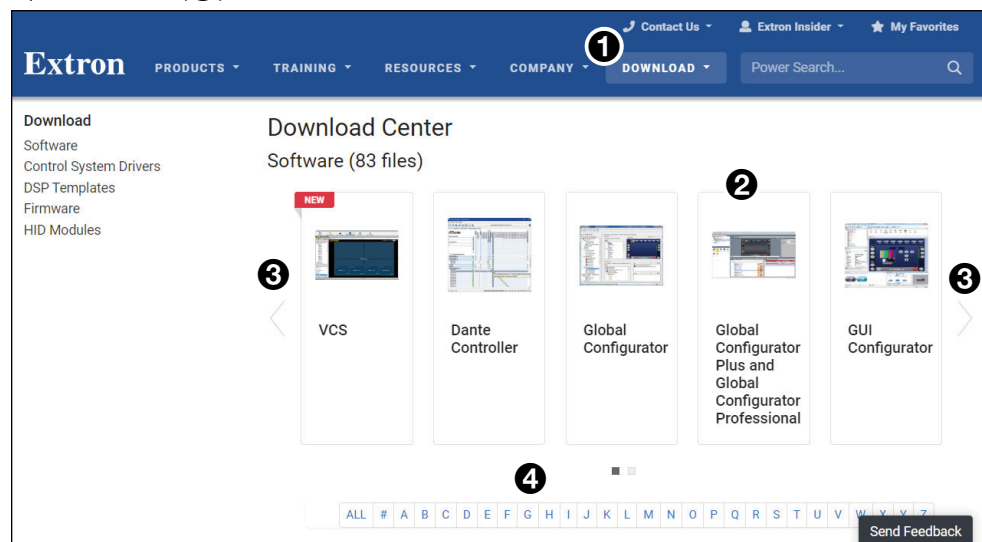


Figure 25. Downloading Software

2. **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.

- **GUI Designer** — Click the **Download** button next to the program and follow the on-screen instructions.
- **Global Configurator** — Ensure you are downloading Global Configurator **Plus and Professional**. Click the **Download** button next to the program and follow the on-screen instructions.
- **Toolbelt** — Click the **Download** button next to the program and follow the on-screen instructions.

NOTE: You need an Extron Insider account to run Global Configurator Plus and Professional or Toolbelt. To obtain one, contact the [Extron Sales Department](#).

3. 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

GUI Designer

Use the GUI Designer software to design the screen layout for the TLC (see the *GUI Designer Help* file for step-by-step instructions and more detailed information).

Global Configurator

Use the Global Configurator Plus and Professional software to set up and configure the TLC (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.

Toolbelt

Use the Toolbelt software for device discovery, device information, firmware updates, and configuration of network settings, system utilities, and user management for TouchLink Pro devices (see the *Toolbelt Help* file for more detailed information).

Drivers

For Extron software to interact with third-party devices, you must download the appropriate device drivers. These can be obtained from www.extron.com.

1. Select the **Download** button (see figure 26, ①) and then click the **Control System Drivers** option (②).

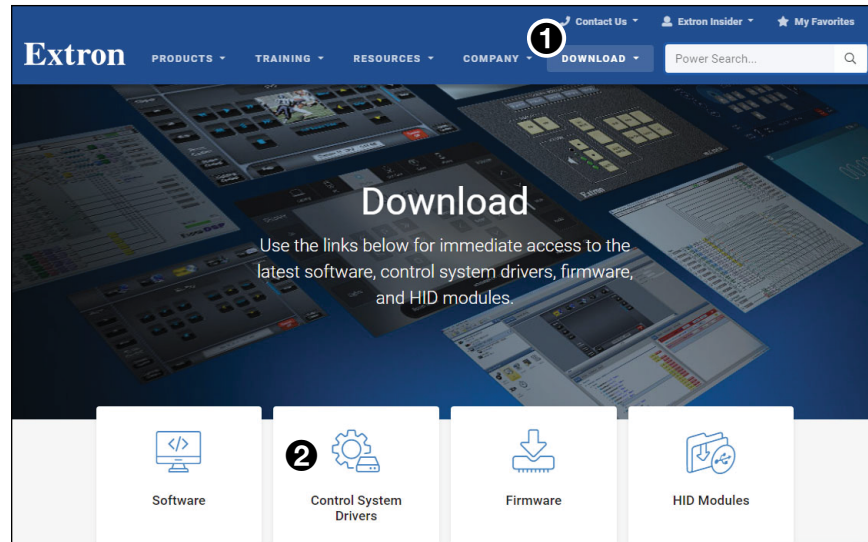


Figure 26. Extron Download Page

The Control System Drivers download page opens:

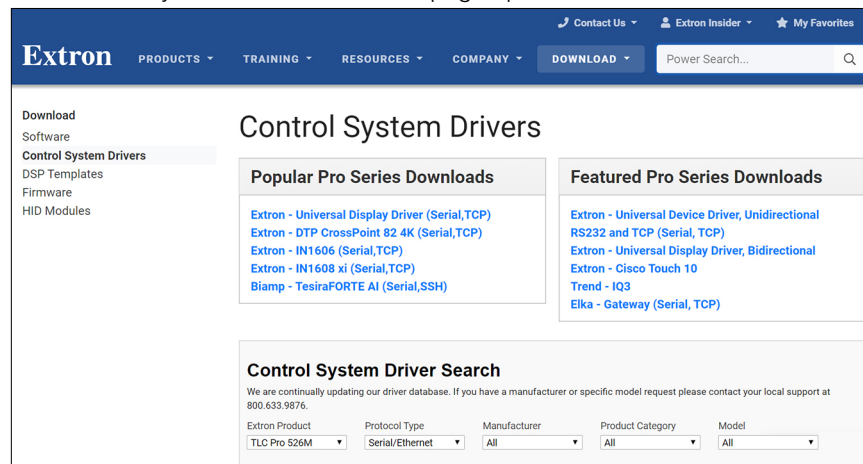


Figure 27. Control System Drivers Download Page

2. Locate the driver package that you require and follow the on-screen instructions to download it.

These drivers are used when the system is configured to allow the TLC to control the functions of a third-party device.

TouchLink Pro Control System Web Page

This provides general and network information about the unit in read-only form (see figure 29, below). Use the **Setup Menu** (see page 16) or Toolbelt to configure the TLC network settings.

To access the TLC default web page, enter the IP address of the TLC into the web browser on a device connected to the same subnet. A login page opens asking for your user name and password. By default, the user name is **admin** and the password is the serial number of the TLC.

NOTE: The factory configured passwords for all accounts on this device have been set to the device serial number. If the device is reset, the password reverts to **extron**. Passwords are case sensitive.

Figure 28 shows the TLC Pro 1026M web page. The web pages for the other control systems are very similar.

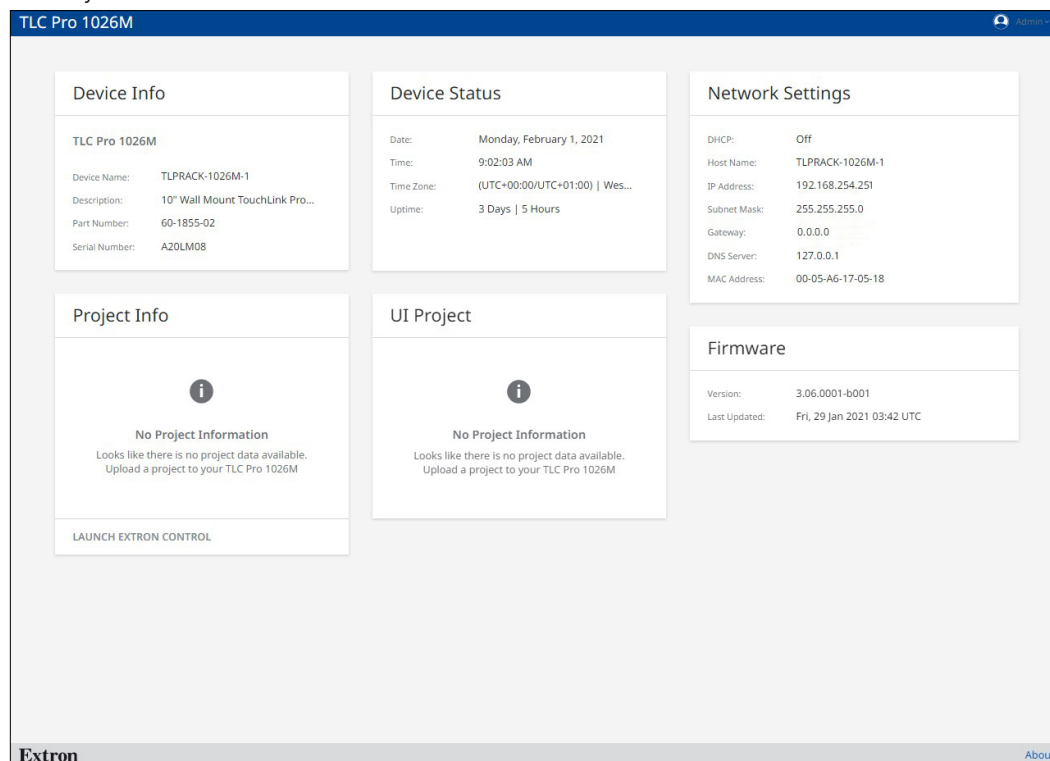


Figure 28. TLC Pro 1026M Web Page

All the information is read only.

To change any of the device network settings use the **On-screen Menus** (see page 16) or Toolbelt (see the *Toolbelt Help File*).

To update firmware see see **Updating the Firmware** on page 28.

Updating the Firmware

Firmware for the TLC Pro control systems can be upgraded using Toolbelt. Before starting, consult your IT team and ensure that the TLC has a unique IP address.

1. Power on a computer that is connected to the same network as the TLC.
2. Go to www.extron.com, click **Download** (see figure 29, ①) and then click **Firmware** (②).

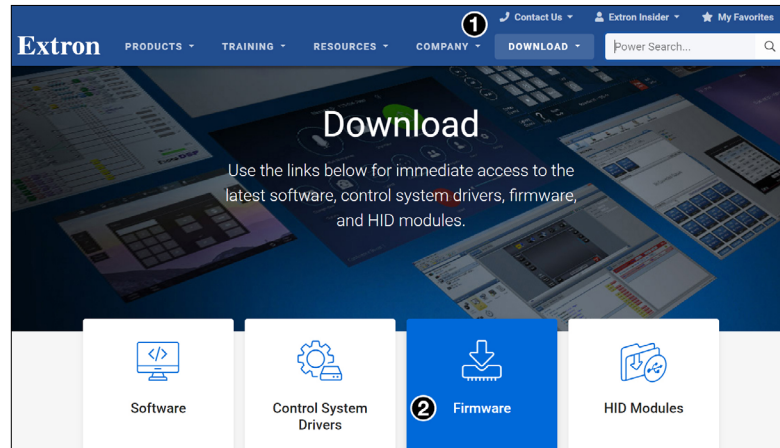


Figure 29. Firmware Download Center

3. Click the letter **T** from the alphabet menu.
4. Scroll down the page until you find the firmware.

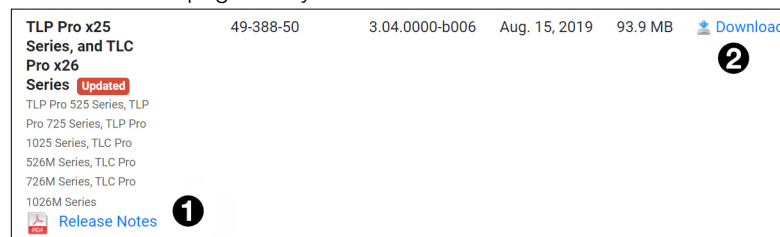


Figure 30. TLC Pro Control System Firmware download

NOTE: The TouchLink control processors use the same firmware as the corresponding TLP Pro x25 Series touchpanels.

5. Click **Release Notes** (see figure 31 ①) for more information about the firmware (optional).
6. Click **Download** (②).
7. Enter the required information and click the download button. An executable (.exe) file is downloaded to your computer. Run this program to place the firmware on your computer for future use. Make a note of the folder where the firmware is saved.
8. Upload this file to the touchpanel using Toolbelt. For information about using Toolbelt to update the firmware, see the *Toolbelt Help File*.

Mounting

There are several options for mounting these TouchLink Pro control systems. Visit the Extron website (www.extron.com) for a complete list.

This section outlines the various options for:

- **Mounting to a Wall Box or Junction Box**
- **Mounting to Drywall**
- **Mounting with Optional Kits**

ATTENTION:

- All structural steps and electrical installation must be performed by qualified personnel in accordance with local and national building codes and electrical codes.
- Toute étape structurelle et installation électrique, doit être effectuée par un personnel qualifié, conformément aux codes du bâtiment, aux codes incendie et sécurité, et aux codes électriques, locaux et nationaux.
- Do not install touchpanels in a fire resistant rated wall or partition assembly.
- Ne pas installer les écrans tactiles sur un mur protégé par un dispositif coupe-feu ou dans une cloison.

Mounting to a Wall Box or Junction Box

Some local building codes require the TLC to be mounted in a junction box. Junction boxes or wall boxes must be purchased separately.

NOTES:

- The TLC Pro 526M mounts to a 1-gang junction box. The US 1-gang junction box should be installed so that the long side is horizontal. EU or MK 1-gang junction boxes should be installed in the standard orientation.
- The TLC Pro 526M has its own mounting plate (see figure 32, top).
- The TLC Pro 726M and 1026M control systems mount to a 2-gang junction box and both use the same mounting plate (see figure 32, bottom).

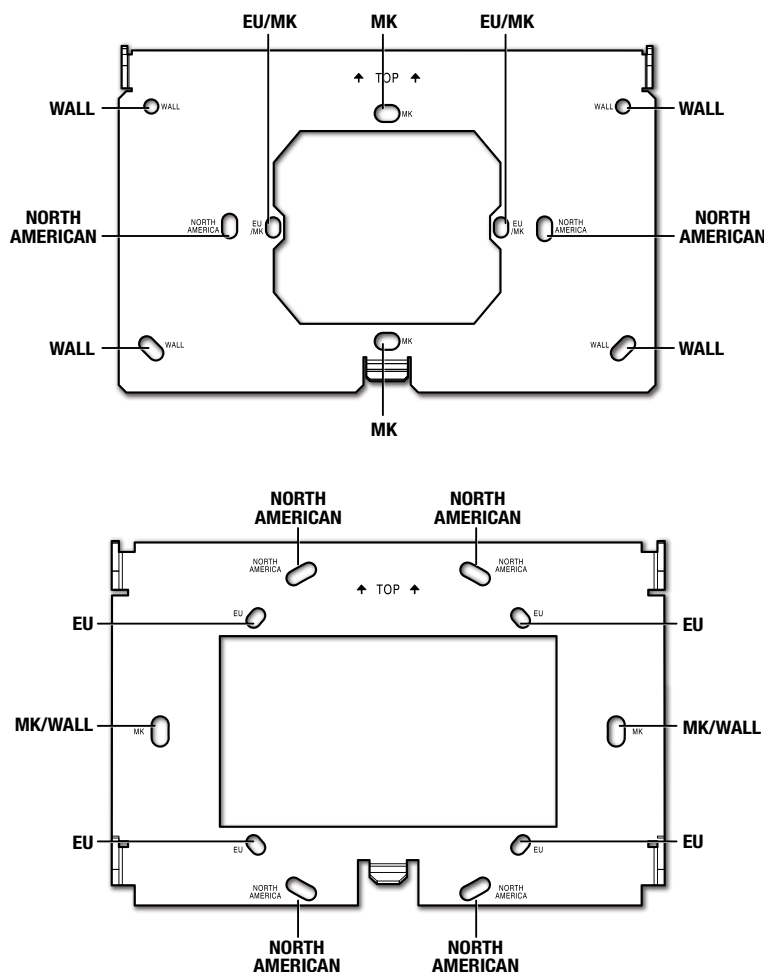


Figure 31. Mounting Plates for TLC Pro 526M (top) and TLC Pro 726M and 1026M (bottom)

Figure 32 shows how to mount the TLC Pro 726M. Mounting the TLC Pro 526M or 1026M is very similar.

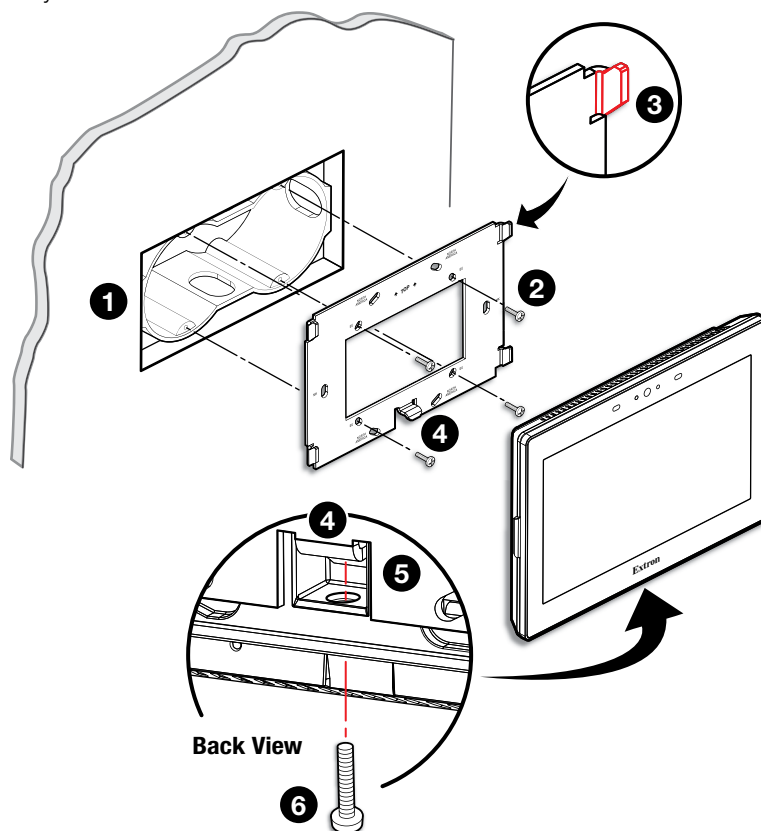


Figure 32. Mounting the TLC Pro 726M to a Wall Box

1. Install a junction box or wall box (see figure 31, ①), following the instructions provided by the manufacturer.

NOTE: If you are mounting a TLC Pro 526M, the US 1-gang junction box should be installed so that the long side is horizontal.

2. Make sure you have the correct mounting plate for your TLC and fasten it to the wall with the provided screws (②). Use the mounting holes that are appropriate to the junction box you are using (see figure 31, on the previous page).

NOTES:

- Extron provides four 3/4" #6-32 Philips pan head screws for mounting to US junction boxes.
- Extron provides two 16 mm M 3.5 Philips pan head screws for mounting to MK junction boxes.
- EU junction boxes usually provide their own screws.

3. Run and connect cables to the back of the TLC (see [Rear Panel Features](#) on page 8).
4. Position the touch panel so that the mounting slots in the rear of the TLC align with the hooks on the mounting plate. The TLC Pro 726M and 1026M mounting plate has four hooks (③), one in each corner, top and bottom. The TLC Pro 526M mounting plate has two hooks, one in each corner at the top.
5. Move the TLC inwards so that slots move over the hooks.
6. Move the TLC down so that it is seated securely on the hooks, and the tongue at the bottom of the mounting plate (④) is sitting in a groove in the bottom of the TLC (see inset, ⑤).
7. Tighten the mounting screw (⑥) to fasten the TLC to the mounting plate.

Mounting to Drywall

If the wall box is not required by local building codes, you can mount the TLC Pro 526M, 726M, or 1026M directly into drywall.

1. Go to www.extron.com and download the cut-out template for your TLC model. Print the template at 100% size (no scaling).
2. Remove the gray area in the center of the template, place the template against the wall or furniture in a suitable location, and ensure that it is level. Use the template to mark the hole that is being cut and the location of the MK/Wall slots (see [figure 31](#) on page 30).

NOTE: The mounting plate for the TLC Pro 526M has four holes marked Wall for mounting to drywall. The mounting plate for the TLC Pro 726M and TLC Pro 1026M has two holes that double for mounting to drywall and MK junction boxes.

3. Cut a hole in the wall or furniture (see [figure 32](#), ❶, on the previous page).
4. Drill two pilot holes at the location of the MK/Wall slots.
5. Secure the mounting plate to the wall. Extron recommends using two molly bolts or SnapToggle bolts.
6. Complete the installation as described in [steps 3 through 7](#) of the previous section.

NOTE: Extron provides four 3/4" #6-32 Philips pan head screws for mounting to US junction boxes and two 16 mm M 3.5 Philips pan head screws for mounting to MK junction boxes. Screws are usually provided with EU junction boxes.

Mounting with Optional Kits

A number of kits are available for mounting these TouchLink Pro control systems (see www.extron.com). The kits must be purchased separately and installed by following the instructions provided with the kit.

Reference Material

This section describes:

- **Best Practices for Cleaning Your Extron Products**
- **Network Port Requirements and Licensed Third-Party Software Used by the TouchLink Pro Control Systems**
- **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 TouchLink Pro Control Systems

For information about network port requirements and licensed third-party software for all the TLCs described in this guide, please refer to the *Pro Series Control Product Network Ports and Licenses Guide*, which is available at www.extron.com.

Reset Modes

The TLCs described in this guide have three reset modes that are initiated by pressing the **Reset** button. An additional (fourth) mode toggles between enabling and disabling the DHCP client:

- **Use Factory Firmware** (see below).
- **Project Recovery** (see following page).
- **Run/Stop Program** (see following page).
- **Reset All IP Settings** (see following page).
- **Reset to Factory Defaults** (see page 34).
- **Enable or Disable the DHCP Client** (see page 36)

The **Reset** button is found on the rear panel of the TLC Pro 526M, 726M, and 1026M series (see **figure 3 B**, on page 8).

Use Factory Firmware

This mode is used to boot up the unit with factory-installed firmware for a single power cycle if a firmware update fails or incompatibility issues arise with user-loaded firmware.

Activation

To start the **Use Factory Firmware** reset mode and replace firmware:

1. Remove power from the TLC.
2. On the TLC, hold down the recessed **Reset** button (see **figure 3, B**) while re-applying power to the unit. When power is restored, the **Reset** LED lights. Hold the **Reset** button for a further 2 seconds before releasing it. The TLC enters factory firmware mode.
3. Upload new firmware to the unit as desired (see **Updating the Firmware** on page 28).

NOTE: Do not continue to operate the TLC 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.

Project Recovery

This mode is activated using Global Configurator Plus and Professional. See the *Global Configurator Help File* for more help.

Run/Stop Program

This mode allows you to restart any programs that were stopped by resetting IP settings.

Activation

To run or stop programs:

1. Hold down the **Reset** button for about 3 seconds until the Power LED blinks once.
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

The Power LED blinks twice if the program is starting, or three times if the program is stopping.

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 for about 6 seconds until the Power 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 (192.168.254.252).
- 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 TLC settings to factory defaults and removes all configurations. It allows you to start over with configuration and uploading.

NOTE: The factory configured passwords for all accounts on this device have been set to the device serial number. If the device is reset to factory defaults, the passwords revert to **extron**. Passwords are case sensitive.

Activation

To reset the unit to all factory default settings:

1. Hold down the **Reset** button for about 9 seconds until the Power 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

Reset to Factory Defaults mode performs a complete reset to factory defaults (except the firmware):

- Does everything Reset All IP Settings mode does.
- Removes TLC user interface layout and configurations.
- Resets all TLC settings 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 17) or Toolbelt (see the *Toolbelt Help File*).

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:

- 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 DHCP, the unit reverts to using the previously-set static IP address.

Secure Sockets Layer (SSL) Certificates

Extron TouchLink Pro control systems 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 to a controller.

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, 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** (see the next page) and the **Private Key File Requirements** (see the next page) 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 TouchLink 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:
 - Alphanumeric (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:
 - Alphanumeric (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
Europe: 31.33.453.4040 or 800.3987.6673
Africa: 27.11.447.6162

Asia: 65.6383.4400
Japan: 81.3.3511.7655
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.