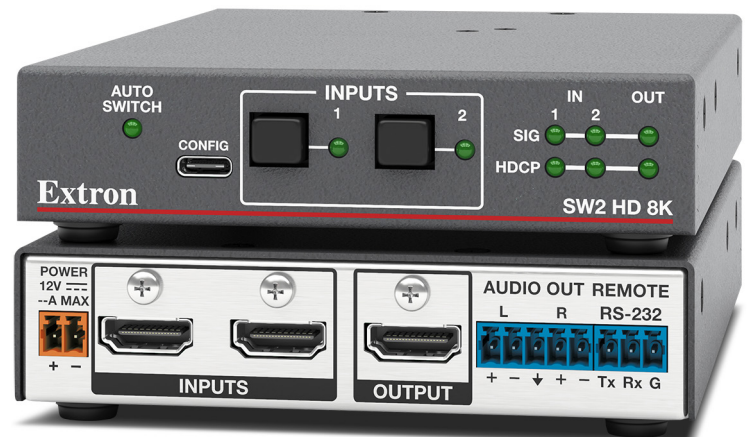


SW2 HD 8K

Two Input 8K HDMI Switcher with
Audio De-embedding



User Guide

HDMI Switchers

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 www.extron.com الخاص بأكسترون، الجزء رقم 68-290-01، على موقع إكسترون،

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、法規厳守、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.

Copyright

© 2025 Extron. All rights reserved. www.extron.com

Trademarks

All trademarks mentioned in this guide are the properties of their respective owners. The following registered trademarks (®), registered service marks (SM), and trademarks (TM) are the property of RGB Systems, Inc. or Extron (see the current list of trademarks on the [Terms of Use](#) page at www.extron.com):

Registered Trademarks (®)
Extron®, Cable Cubby®, ControlScript®, CrossPoint®, DTP®, eBUS®, EDID Manager®, EDID Minder®, eLink®, Everlast®, Flat Field®, FlexOS®, Glitch Free®, GlobalViewer®, Global Configurator®, Global Scriptor®, Hideaway®, HyperLane®, IP Intercom®, IP Link®, Key Minder®, LinkLicense®, LockIt®, MediaLink®, MediaPort®, NAV®, NetPA®, PlenumVault®, PoleVault®, PowerCage®, PURE3®, Quantum®, ShareLink®, Show Me®, StudioStation®, SoundField®, SpeedMount®, SpeedSwitch®, System INTEGRATOR®, TeamWork®, TouchLink®, V-Lock®, VN-Matrix®, VoiceLift®, WallVault®, WindoWall®, XPA®, XTP®, XTP Systems®, ZipClip®
Registered Service Mark (SM) : S3 Service Support Solutions
Trademarks (TM)
AAP™, AFL™ - Accu-RATE Frame Lock, ADSP™ - Advanced Digital Sync Processing, AVEdge™, CableCover™, CDRS™ - Class D Ripple Suppression, Codec Connect™, ConferenceShare™, DDSP™ - Digital Display Sync Processing, DMI™ - Dynamic Motion Interpolation, Driver Configurator™, DSP Configurator™, DSP Configurator Pro™, DSVP™ - Digital Sync Validation Processing, EQIP™, FastBite™, Flex55™, FOX™, FOXBOX™, InstaWake™, IP Intercom HelpDesk™, MAAP™, MicroDigital™, Opti-Torque™, PendantConnect™, ProDSP™, QS-FPC™ - QuickSwitch Front Panel Controller, Room Agent™, Scope-Trigger™, SIS™ - Simple Instruction Set, Skew-Free™, SpeedNav™, Triple-Action Switching™, True4K™, True8K™, Vector™ 4K, WebShare™, XTRA™, ZipCaddy™

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.

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.

VCCI-A Notice

この装置は、クラス A 情報技術装置です。この装置を家庭環境で使用すると、電波妨害を引き起こすことがあります。その場合には使用者が適切な対策を講ずるよう要求されることがあります。
VCCI-A

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. Do not replace the battery with 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 usagées selon le mode d'emploi.

Conventions Used in this Guide

Notifications

The following notifications are used in this guide:



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.

TIP: A tip provides a suggestion to make working with the application easier.

Software Commands

Commands are written in the fonts shown here:

```
^AR Merge Scene, 0p1 scene 1,1 ^B 51 ^W ^C.0  
[01] R 0004 00300 00400 00800 00600 [02] 35 [17] [03]  
[Esc] [X1] * [X17] * [X20] * [X23] * [X21] CE ←
```

NOTE: For commands and examples of computer or device responses used in this guide, the character “0” is the number zero and “O” is the capital letter “o.”

Computer responses and directory paths that do not have variables are written in the font shown here:

```
Reply from 208.132.180.48: bytes=32 times=2ms TTL=32  
C:\Program Files\Extron
```

Variables are written in *italics* 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 <https://www.extron.com/technology/glossary.aspx>

Contents

Introduction.....	1
About this Guide	1
About the SW2 HD 8K Switcher	1
Features	1
Application Diagram	3
Installation.....	4
Installation Overview	4
Rear Panel Features	5
Wiring the Power Connector.....	5
Wiring for RS-232 Control	7
LockIt Plus HDMI Cable Lacing Bracket Installation	7
Operation.....	9
Front Panel Features	9
Operations	10
Powering on the Switcher	10
Selecting an Input	10
Auto-switch.....	10
CEC Control	11
Resetting	11
EDID Minder.....	11
Remote Configuration and Control.....	13
Using the Simple Instruction Set (SIS) Commands	13
Host-to-switcher Communications	13
Switcher-initiated Messages	13
Error Responses	13
Using the Command and Response Tables	14
Symbol Definitions	14
Command and Response Table for SIS Commands	16
Symbol Definitions for CEC Communications Commands.....	21
Command and Response Table for CEC SIS Commands	22
Accessing the Product Configuration Software	24
Downloading PCS from the Website	24
Starting PCS	27
Using Firmware Loader	28
Downloading Firmware Loader	28
Updating Firmware Using Firmware Loader	29

Reference Information	32
Mounting the SW HD 8K Switcher.....	32
Rack Mounting	32
UL Rack Mounting Guidelines.....	32
Furniture Mounting	33
Tabletop Use	33
Best Practices for Cleaning Your Extron Products	33
Downloading the Firmware	34

Introduction

This section gives an overview of the Extron SW2 HD 8K switcher. Topics include:

- [About this Guide](#)
- [About the SW2 HD 8K Switcher](#)
- [Features](#)
- [Application Diagram](#)

About this Guide

This guide describes the SW2 HD 8K switcher and discusses how to install, configure, and operate them. In this guide, the terms “SW2 HD 8K,” “SW HD 8K switcher,” and “switcher” are used interchangeably to refer to the SW2 HD 8K switcher.

About the SW2 HD 8K Switcher

The Extron SW2 HD 8K is a two input HDMI switcher that switches signals from 480p up to 8K (7680 x 4320) @ 60 Hz with 4:4:4 chroma sampling between multiple HDMI source devices to a single display. The switcher supports data rates up to 48 Gbps, HDR resolutions, HDCP 2.3, 12-bit Deep Color, 3D, and HD lossless audio formats.

The SW2 HD 8K provides control via front panel buttons, USB, Extron Product Control Software (PCS), RS-232, and auto-switching for integration with any control system. Front panel LED indicators provide immediate visual confirmation of HDCP authentication and signal presence for each input and output.

Features

- **Inputs: Two HDMI type-A connectors.**
- **Output: One HDMI type-A connector and one 5-pole captive screw audio connector.**
- **Supports video resolutions up to 8K @ 60 Hz.**
- **Supports ultra-wide aspect ratios, including 21:9 and 5.K.**
- **De-embeds two-channel analog audio from an HDMI signal** — The SW2 HD 8K offers design flexibility, enabling separate two-channel analog audio or dual mono audio output while maintaining the embedded HDMI audio.
- **Supported HDMI 2.1 specification features include data rates up to 48 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats.**
- **Support for HDR – High Dynamic Range video** — Enables greater contrast range and wider color gamut by providing the necessary video bandwidth, color depth, and metadata interchange capability for HDR video.
- **HDCP 2.3 compliant** — Ensures display of content-protected media and interoperability with other HDCP compliant devices.
- **Comprehensive EDID management** — Use PCS software to access EDID Minder Plus for setting video input EDID, capturing EDID from connected displays, or uploading custom EDID files. Proper EDID management ensures that sources and displays are easily integrated into a system resulting in optimized system operation. Freely downloadable EDID Manager 3.0 software is available for advanced EDID editing and creating custom EDID files.
- **EDID Minder Plus automatically manages EDID communication between connected devices** — EDID Minder Plus supports additional memory blocks for displays that convey advanced features via both EDID and DisplayID for proper management of the extended EDID information required to reliably display and distribute 5K and 21:9 aspect ratio content.

- **Key Minder continuously verifies HDCP compliance for quick, reliable switching** — Key Minder authenticates and maintains continuous HDCP encryption between input and output devices to ensure quick and reliable switching in professional AV environments, while enabling simultaneous distribution of a single source signal to one or more displays.
- **Automatic input cable equalization** — Actively conditions incoming HDMI signals to compensate for signal loss when using long cables, low-quality cables, or source devices with poor signal output.
- **Selectable output muting** — Provides the capability to mute any combination of video and audio at any time. Both embedded audio and analog audio can be independently muted.
- **User-selectable HDCP authorization** — Allows individual inputs to appear HDCP compliant or non HDCP compliant to the connected source, which is beneficial if the source automatically encrypts all content when connected to an HDCP-compliant device. Protected material is not passed in non HDCP mode.
- **HDCP Visual Confirmation provides a green signal when encrypted content is sent to a non-compliant display** — A full screen green signal is sent when HDCP encrypted content is transmitted to a non HDCP compliant display, providing immediate visual confirmation that protected content cannot be viewed on the display.
- **Front panel LED indicators for signal presence, HDCP status, and power** — Provides visual indication of system status for real-time feedback and monitoring of key performance parameters.
- **Provides +5 VDC, 250 mA power on the output for external peripheral devices.**
- **Multiple control options including RS-232, front panel, and auto-switching.**
- **Auto-switching** — Automatically switches to the highest-numbered input with an active video signal or to an active input based on a configured priority.
- **RS-232 control port** — RS-232 control port enables the use of serial commands. Extron products use the SIS – Simple Instruction Set command protocol, a set of basic ASCII code commands that allow for quick and easy programming.
- **Easy to operate front panel controls** — Back-lit buttons for input source selection simplifies operation in live presentation environments.
- **Front panel security lockout** — Prevents unauthorized use in non-secure environments. All functions remain available through RS-232 and USB when lockout mode is active.
- **Front panel USB-C® configuration port** — Provides convenient access for information and firmware updates.
- **Easy setup and commissioning with Extron PCS – Product Configuration Software** — Conveniently configure multiple products using a single software application.
- **1-inch (2.5 cm) high, quarter rack wide enclosure** — Compact, low-profile enclosure for discreet placement and concealment. This allows for four units on a 1U shelf for high density mounting.
- **Includes LockIt Plus cable lacing brackets**
- **External 12 V, 1 A power supply included** — Provides worldwide power compatibility, with high demonstrated reliability and low power consumption for reduced operating costs.
- **Extron Everlast Power Supply is covered by a 7-year parts and labor warranty**

Application Diagram

The following diagram shows a typical application for an SW2 HD 8K.

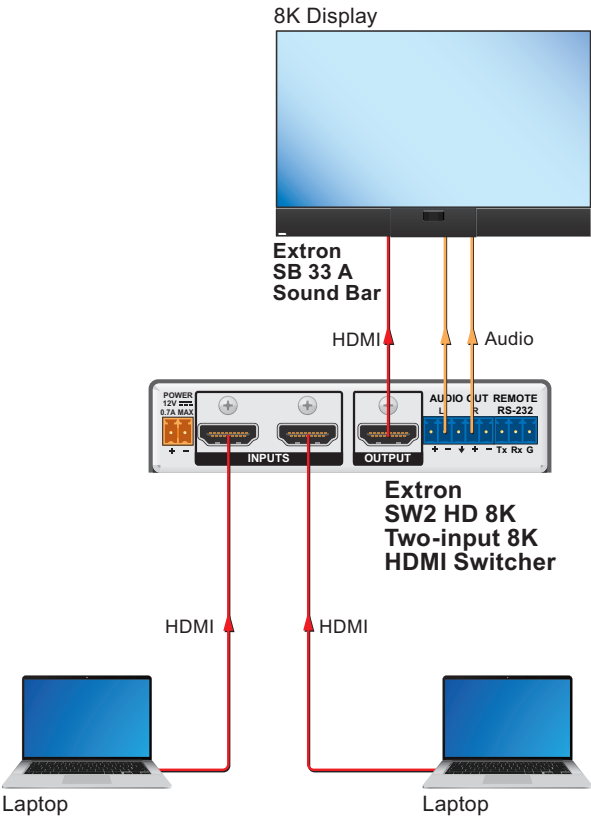


Figure 1. SW2 HD 8K Application Diagram

Installation

This section describes the installation and setup of the SW2 HD 8K switcher. Topics include:

- [Installation Overview](#)
- [Rear Panel Features](#)
- [Wiring the Power Connector](#)
- [Wiring for RS-232 Control](#)
- [LockIt Plus HDMI Cable Lacing Bracket Installation](#)

Installation Overview

To install and set up the SW2 HD 8K switcher:

1. Turn off all equipment and disconnect it from the power source.
2. (Optional) Mount the switcher on a rack shelf or furniture (see [Mounting the SW HD 8K Switcher](#) on page 32).
3. Connect HDMI sources to one or more of the SW HD 8K input connectors.

NOTE: LockIt Plus cable lacing brackets, one for each HDMI input and output connector, are provided with the SW2 HD 8K. These brackets can be used to secure the HDMI cables to the rear panel connectors to reduce stress on the HDMI connectors and prevent signal loss due to loose cable connections. For information on attaching the LockIt Plus brackets, see [LockIt Plus HDMI Cable Lacing Bracket Installation](#) on page 7.

4. Connect an HDMI output device to the HDMI output connector. By default, the EDID of this device is stored at the HDMI inputs.
5. Connect control devices. Connect your computer to one of the following SW2 HD 8K ports to configure and control the switcher via SIS commands:
 - **RS-232 port** — 3-pole captive screw connector for serial RS-232 control (see [Wiring for RS-232 Control](#) on page 7 for connection procedures)
 - **Config port** — USB-C connector for USB control
6. Power on the output display.
7. Connect power to the switcher (see [Powering on the Switcher](#) on page 10).
8. (Optional) **Configure the EDID Minder** (see [EDID Minder](#) on page 11).
9. Power on the source devices.

Rear Panel Features

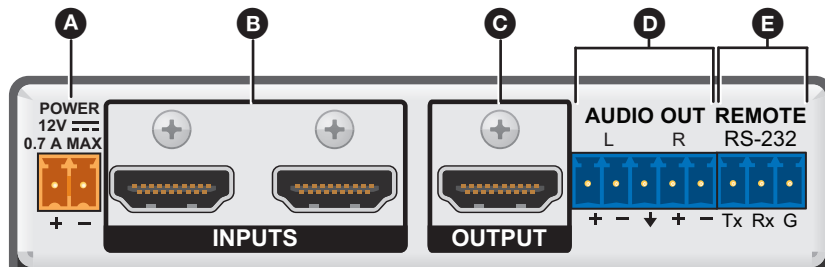


Figure 2. SW2 HD 8K Rear Panel

- A Power connector** — Plug the provided external 12 VDC, 1.5 A power supply into this 2-pole, 3.5 mm captive screw connector and into an AC power outlet.

- B Input connectors** — Connect HDMI video input sources to these female HDMI type A connectors.

NOTE: LockIt Plus cable lacing brackets are provided with the SW HD 8K units. These brackets secure the HDMI cables to the rear panel connectors and reduce stress on the connectors, preventing signal loss due to loose cable connections (see [LockIt Plus HDMI Cable Lacing Bracket Installation](#) on page 7 for more information).

- C Output connector** — Connect an HDMI display device to this female HDMI A connector.

The EDID information is read from the connected output device via this connector and is written to memory on each input whenever the output device is connected to this port and powered on.

NOTE: The EDID information is also read and stored whenever power is recycled to the connected output device or when the output device is replaced.

- D Audio output connector** — Connect an amplifier or display to this female 5-pole captive screw connector for analog output as shown in figure 3.

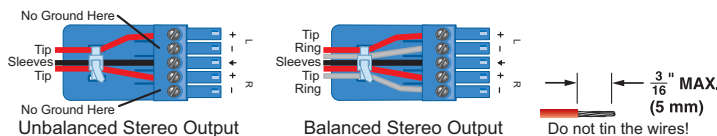


Figure 3. Wiring the Audio Output Connector

- E Remote RS-232 connector** — Use this 3-pole, 3.5 mm captive screw connector for RS-232 communication with the switcher (including firmware updates).

To enable RS-232 control, connect the Tx (transmit), Rx (receive) and G (ground) pins to the computer serial port (see [Wiring for RS-232 Control](#) on page 7).

Wiring the Power Connector

A 12 VDC, 1.5 A, pre-wired power supply is provided with the SW2 HD 8K. If, instead, you intend to use a different power supply, follow the instructions below to wire the provided 2-pole captive screw connector to your power supply.

CAUTION: The wires must be kept separate while the power supply is plugged in. Remove power before wiring.

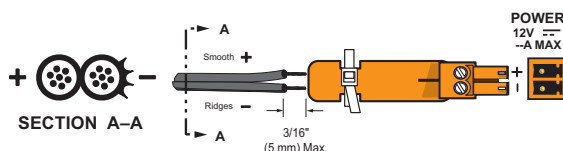
ATTENTION : Les deux cordons d'alimentation doivent être tenus à l'écart l'un de l'autre quand l'alimentation est branchée. Couper l'alimentation avant de faire l'installation électrique.

ATTENTION:

- Always use a power supply supplied and 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 power source marked "Class 2" or "LPS" and rated at 12 VDC and a minimum of 1.5 A.
- Si ce produit ne dispose pas de sa propre source d'alimentation électrique, il doit être alimenté par une source d'alimentation de classe 2 ou LPS et paramétré à 12 V et 1.5 A minimum.
- 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. The power supply shall not be permanently fixed to building structure or similar structure.
- Cette installation doit toujours être en accord avec les mesures qui s'applique au National Electrical Code ANSI/NFPA 70, article 725, et au Canadian Electrical Code, partie 1, section 16. La source d'alimentation ne devra pas être fixée de façon permanente à une structure de bâtiment ou à une structure similaire.
- Power supply voltage polarity is critical. Incorrect voltage polarity can damage the power supply and the unit. The ridges on the side of the cord (see figure 4) identify the power cord negative lead.
- La polarité de la source d'alimentation est primordiale. Une polarité incorrecte pourrait endommager la source d'alimentation et l'unité. Les stries sur le côté du cordon permettent de repérer le pôle négatif du cordon d'alimentation.
- To verify the polarity before connection, plug in the power supply with no load and check the output with a voltmeter.
- Pour vérifier la polarité avant la connexion, brancher l'alimentation hors charge et mesurer sa sortie avec un voltmètre.
- The length of the exposed (stripped) copper wires is important. The ideal length is 3/16 inch (5 mm). Longer bare wires can short together. Shorter wires are not as secure in the connectors and could be pulled out.
- La longueur des câbles exposés est primordiale lorsque l'on entreprend de les dénuder. La longueur idéale est de 5 mm (3/16 inches). S'ils sont un peu plus longs, les câbles exposés pourraient se toucher et provoquer un court circuit. S'ils sont un peu plus courts, ils pourraient sortir, même s'ils sont attachés par les vis captives.
- Unless otherwise stated, the AC/DC adapters are not suitable for use in air handling spaces or in wall cavities.
- Sauf mention contraire, les adaptateurs AC/DC ne sont pas appropriés pour une utilisation dans les espaces d'aération ou dans les cavités murales.

To wire the SW2 HD 8K power connector:

1. Cut the DC output cord to the length needed.
2. Strip the jacket to expose 3/16 inches (5 mm) of the conductors.
3. Slide the leads into the supplied 2-pole captive screw plug, and use a small screwdriver to secure them.

**Figure 4. Wiring the Power Connector (SW2 Only)**

4. To verify the power cord polarity before connecting the plug, connect the power supply with no load and check the output with a voltmeter.
5. Use the supplied tie wrap to strap the power cord to the extended tail of the connector.

Wiring for RS-232 Control

Use a female 9-pin D-to-bare wire RS-232 cable or a universal control cable (UC50' or UC100') to connect your computer or control system to the RS-232 pins of the REMOTE connector.

1. Wire the unterminated end of the RS-232 cable to the provided 3-pole captive screw plug as described below. Connect the transmit, receive, and ground wires of the cable to the connector:
 - Connect the transmit wire to pin 1, which plugs into the Tx (transmit) port.
 - Connect the receive wire to pin 2, which plugs into the Rx (receive) port.
 - Connect the ground wire to pin 3, which plugs into the G (ground) port.
2. Plug the 3-pole connector into the REMOTE receptacle on the rear panel of the switcher.
3. Connect the other end of the cable to the appropriate computer or control system connector.

Figure 5 shows how to wire this shared connector for RS-232.

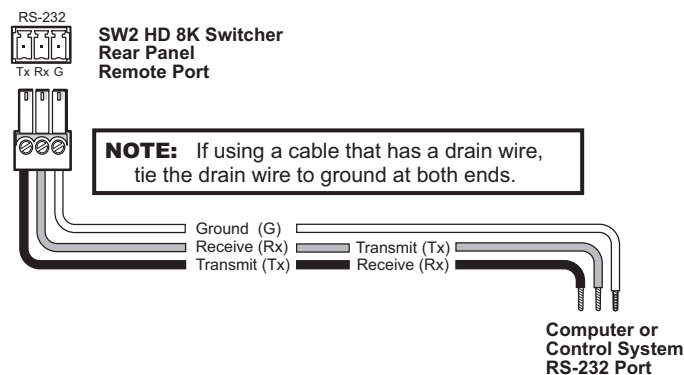


Figure 5. Remote Connector Pin Assignments

LockIt Plus HDMI Cable Lacing Bracket Installation

The Extron LockIt Plus lacing bracket secures a standard HDMI cable to most HDMI devices.

NOTE: The HDMI device must have an HDMI connection mounting screw for this bracket to be used.

Follow these instructions to secure the HDMI connectors to the unit with the provided LockIt Plus lacing brackets:

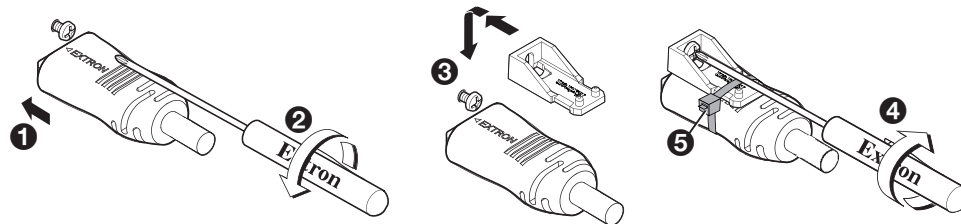


Figure 6. LockIt Plus Installation Diagram

- 1 **Plug in the cable** – Connect the HDMI cable to the HDMI port.
- 2 **Loosen the screw** – Slightly loosen the mounting screw (do not remove it).
- 3 **Attach the bracket** – Place the bracket over the screw.
- 4 **Tighten the screw** – Do not overtighten the connector mounting screw.
- 5 **Secure the cable** – Tighten the tie wrap around the connector and bracket, and cut off the extra length.

ATTENTION:

- Do not overtighten the HDMI connection mounting screw. The shield to which it is fastened is very thin and can easily be stripped.
- Ne serrez pas trop la vis de montage du connecteur HDMI. Le blindage auquel elle est attachée est très fin et peut facilement être dénudé.

Operation

This section describes the operation of the SW HD 8K switcher. Topics include:

- [Front Panel Features](#)
- [Operations](#)

Front Panel Features

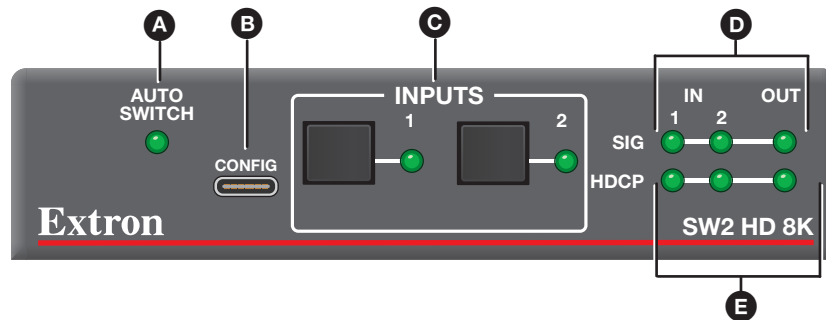


Figure 7. SW2 HD 8K Front Panel

- A AUTO SWITCH LED** — This LED lights when auto-switching is enabled (see [Enabling and disabling auto-switching \(modes 0 and 1\)](#) on page 11 for the procedure to set up automatic input selection).
- B CONFIG port** — Connect a USB cable (USB-A to USB-C) between your computer and this female USB-C port to configure and control the switcher via SIS commands or PCS and to update the firmware.
- C Input selection buttons and LEDs** — Press one of these buttons to select an input to switch to the output. The LED at the right of each button lights when the corresponding input is selected. If auto-switching is in effect, these buttons are disabled, but the LEDs continue to light to indicate the selected input.
- D Signal status LEDs**
 - Inputs** — Each input has a corresponding numbered Signal LED which lights when a source is connected to the input connector and TMDS clock activity is detected on it.

NOTE: If the source device connected to the selected input is HDCP encrypted (requires HDCP authentication), the corresponding signal LED may not light unless HDCP has been authenticated.
 - Outputs** — The Output Signal LED lights when an active sink (output) device is connected to the HDMI output.
- E HDCP status LEDs**
 - Inputs** — Each input has a corresponding numbered HDCP LED. If the connected source requires HDCP, the corresponding LED lights when authentication is successful.

NOTE: HDCP is authenticated on each input regardless of the currently selected source.
 - Outputs** — The output HDCP LED lights if the currently selected input requires HDCP and the connected output device has been successfully authenticated.

NOTE: HDCP is re-authenticated on the output whenever a new input is selected.

Operations

Powering on the Switcher

To power on the SW HD 8K:

1. Connect all input and output devices to the rear panel connectors on the switcher (see [Rear Panel Features](#) on page 5 for the rear panel connections).
2. Power on the display.
3. Power on the SW HD 8K. Plug the power supply into the 2-pole captive screw power connector on the switcher rear panel. During the boot process:
 - a. The unit performs a self-test, during which the front panel AUTO SWITCH, INPUT, SIGNAL, and HDCP LEDs each blink once in sequence from left to right.
 - b. The AUTO SWITCH LED blinks while the unit is powering up. During this time, the switcher reads the available EDID information from the connected output device and writes it to memory on each input. When power is removed, these settings remain in memory and are in effect when power is reapplied.
 - c. At the end of the boot process, all front panel LEDs turn off, then the LED for the most recently selected input lights.
4. Power on the input devices.

Selecting an Input

Switching an input to the output can be done by the following methods. Only one input can be switched to the output at a time.

- **Front panel buttons** — Press the desired input button on the front panel (ensure that auto switching is not enabled). The LED corresponding to the selected input button lights and remains lit until a new input is selected.
- **Auto-switch modes** — Configure the Switcher to select the active, connected input based on detection of an active video signal. This can be done via SIS commands (see [Auto-switch](#)).

NOTE: While the SW2 HD 8K is in any auto-switch mode, inputs can still be manually selected via PCS, or SIS. This allows the user to switch to any input during usage and not rely on auto-switching. Making a manual switch when the unit is in auto-switch mode does not disengage auto-switch.

- **Remote control** — Inputs can be selected using SIS commands (see [Input Selection](#) on page 16) or PCS (see the *SW2 HD 8K Help File*).

Auto-switch

Auto-switching allows the switcher to automatically select the active, connected input based on detection of an active video signal (TMDS clock activity). If two or more inputs are active, the highest-numbered input port with an active signal is selected (for example, input 2 on a SW2 HD 8K switcher).

When auto-switching is in effect, the green AUTO SWITCH LED on the front panel lights. (Manual switching is still available.)

Auto-switch modes

The SW2 HD 8K switcher provides three auto switch modes, which can be selected via SIS commands (see [Auto-switch Mode](#) on page 16) and PCS (see the *SW2 HD 8K Help File*).

- **Mode 0 (disabled mode)** — Auto-switch is disabled. Inputs must be selected via front panel buttons, SIS, or PCS.
- **Mode 1 (user-assigned mode)** — The switcher selects the input to which you assign priority (via SIS commands or PCS). If no priority is assigned, the switcher selects the active input with the highest number (default user selection).
- **Mode 2 (input memory priority mode)** — The switcher selects the most recently applied input, and retains a history of the order in which active inputs are connected to the unit. If an active input is removed, the switcher switches to the most recently selected input.
- **Mode 2 timeout** — Using SIS commands or PCS, you can set the number of seconds the switcher delays between when the current input is removed and the unit switches to the most recent previous input. The timeout duration range is 0-500 seconds in 1-second increments. The default is 3 seconds.

Locking and Unlocking the Front Panel (Executive Mode)

Front panel lock mode (executive mode) locks and disables all front panel controls (USB control remains available). Putting the switchers in lock mode enhances security by protecting against inappropriate or accidental changes to settings. If a front panel button is pressed during lock mode, all front panel LEDs blink once.

Lock mode can be configured via SIS commands (see [Front Panel Lockout \(Executive Mode\)](#) on page 17) or PCS (see the *SW2 HD 8K Help File*). The following lock mode options are available:

- Lock entire front panel
- Disable lock mode (default). All front panel controls are accessible.

Executive mode is retained after a power cycle. Any reset mode unlocks the unit.

CEC Control

Consumer Electronics Control (CEC) is a bi-directional bus available on HDMI connections. It allows basic control functions such as device power on and off, input switching, volume, mute, and so on, to be passed via the HDMI cable between a sink (display) and source (such as a DVD/Blu-Ray player). The SW2 HD 8K does not pass through CEC information from the input to the output, and supports CEC control only on the video output (not the inputs).

CEC is available via SIS (see the [Command and Response Table for CEC SIS Commands](#) on page 22) and PCS (see the *SW2 HD 8K Help File*).

Resetting

The SW HD 8K switcher can be reset by entering the `[Esc]ZXXX←` SIS command (see the [Resetting commands](#) on page 20) or via PCS (see the *SW HD 8K Help File*). These two methods reset the unit to its factory defaults, removing any user-specified values.

EDID Minder

EDID Minder ensures that a source device connected to the SW HD 8K input continuously recognizes the EDID of a sink device, even when the input is not selected or the sink is not physically connected. As a result, the video source powers up properly and outputs content when selected.

Each input has a dedicated store slot to which it is permanently assigned. Each slot contains a default factory EDID appropriate to its supported video format. Via PCS, EDIDs can be imported to these slots, overwriting the defaults. EDIDs in these slots are stored in non-volatile memory.

EDID can be set to match output rate, a custom user-defined EDID, or a factory setting. A variety of EDID are available to be loaded via PCS and assigned to the inputs (see the *SW HD 8K PCS Help* file, provided with the PCS program, for information on assigning EDID).

The following table lists the available EDID store slots and default EDID for each input.

EDID Lookup Table

	Slot	Default EDID File	Details
1	Input 1 (store) slot	EXN_HDMI_1080p60_2Ch.bin	Manually populated via PCS
2	Input 2 (store) slot	EXN_HDMI_1080p60_2Ch.bin	Manually populated via PCS
9	Output Slot	n/a	Automatically populated with sink EDID

- **Hot Plug Detect (HPD)** — Hot plug detect (HPD) means that power is detected on a connected sink. HPD remains high on all inputs while the unit is powered on. The HPD drops low only while EDID is being updated.
- **Output slot** — The output slot is automatically populated by the EDID from the connected sink device. When HPD is detected, the EDID of the sink is automatically stored in the output slot. The output slot exists solely for the purpose of exporting to PCS.
- **EDID Memory Retention** — The assigned EDID is stored to an EEPROM, which is located at the HDMI input. The stored EDID is retained until a reset is initiated, when it reverts back to the default EDID.
- **Reset** — The input slots revert to their default EDID after a reset.
- **Updating** — The switcher monitors HPD on the HDMI output to determine if a new sink has been connected. If necessary, the signal for that output is modified in response to the EDID of the connected device.

Remote Configuration and Control

This section describes remote operation of the SW HD 8K switcher. Topics include:

- [Using the Simple Instruction Set \(SIS\) Commands](#)
- [Using the Command and Response Tables](#)
- [Command and Response Table for SIS Commands](#)
- [Command and Response Table for CEC SIS Commands](#)
- [Accessing the Product Configuration Software](#)
- [Using Firmware Loader](#)

Using the Simple Instruction Set (SIS) Commands

The SW HD 8K can be remotely set up and controlled via Extron SIS commands that are issued from a host computer or other device, such as a control system. SIS commands can be issued via RS-232 from the computer serial port to the switcher rear panel Remote port (see [Wiring for RS-232 Control](#) on page 7), or via USB from a computer USB port to the switcher front panel CONFIG port.

Host-to-switcher Communications

SIS commands consist of one or more characters per field. No special characters are required to begin or end a command sequence. You can enter these commands from your computer using a communication software program such as Extron DataViewer. When the switcher determines that a command is valid, it executes the command and sends a response to the host device. Responses from the SW HD 8K to the host computer end with a carriage return and a line feed (CR/LF = ↵), which signals the end of the response character string. A string is one or more characters.

Switcher-initiated Messages

When a local event such as a front panel selection or change in signal status takes place, the switcher responds by sending a message to the host, indicating what change has occurred. No response is required from the host. The switcher sends the following message when it is first powered on:

(C) Copyright 20nn, Extron, SW HD 8K, Vn.nn, 60-1985-01

20nn is the year in which the copyright for the firmware was registered, Vn.nn is the firmware version number, and 60-1985-01 is the switcher part number.

NOTE: This message is displayed at power-up only with an RS-232 connection.
--

Error Responses

When the switcher receives a valid SIS command, it executes the command and sends a response to the host device. If the switcher is unable to execute the command because the command is invalid or it contains invalid parameters, the switcher returns an error response to the host. The error response codes are:

E01 – Invalid input channel (out of range)
E06 – Invalid input during auto-switching
E10 – Invalid command
E13 – Invalid value (out of range)

Timeout

Pauses of 10 seconds or longer between command ASCII characters result in a timeout. The command operation is aborted with no other indication.

Using the Command and Response Tables

The Command and Response Tables, starting on [page 16](#) list valid ASCII and hexadecimal command codes, the switcher responses to the host, and a description of the command function or results of executing the command.

The conversion table below is for use with the command and response table.

ASCII to Hex Conversion Table															
Space →	20	!	21	"	22	#	23	\$	24	%	25	&	26	'	27
(	28	)	29	*	2A	+	2B	,	2C	-	2D	.	2E	/	2F
0	30	1	31	2	32	3	33	4	34	5	35	6	36	7	37
8	38	9	39	:	3A	;	3B	<	3C	=	3D	>	3E	?	3F
@	40	A	41	B	42	C	43	D	44	E	45	F	46	G	47
H	48	I	49	J	4A	K	4B	L	4C	M	4D	N	4E	O	4F
P	50	Q	51	R	52	S	53	T	54	U	55	V	56	W	57
X	58	Y	59	Z	5A	[	5B	\	5C	]	5D	^	5E	_	5F
`	60	a	61	b	62	c	63	d	64	e	65	f	66	g	67
h	68	i	69	j	6A	k	6B	l	6C	m	6D	n	6E	o	6F
p	70	q	71	r	72	s	73	t	74	u	75	v	76	w	77
x	78	y	79	z	7A	{	7B		7C	}	7D	~	7E	DEL	7F

Figure 8. ASCII to Hex Conversion Table

Symbol Definitions

↵ = CR/LF (carriage return with line feed) (hex 0D 0A)

← or | = Soft carriage return (no line feed)

• = Space

Esc or w = Escape

NOTE: Unless otherwise indicated, commands are **not** case-sensitive.

X1 = Input number

0 through the maximum number of inputs on the unit

0 = Deselect (mute) all inputs (resulting in the output disabled)

For auto-switching:

1 through maximum number of inputs available.

X2 = On and Off status

0 = Off or unmute (default)

1 = On or mute

X3 = Video mute

0 = Unmute video and sync (default)

1 = Mute video to black screen while sync is on

2 = Mute video and sync

X4 = Audio mute

0 = Unmute audio (default)

1 = Mute audio

X5 = Auto-switch mode

0 = Disabled — Manual switching (default)

1 = User-defined priority mode — The switcher selects the input to which the user assigns priority. If no priority is assigned, the switcher selects the active input with the highest number.

2 = Input memory priority mode — The switcher selects the most recently applied input, and retains a history of the order in which active inputs are connected to the unit. If an active input is removed, the switcher switches to the most recently prioritized input.

X6 = Auto-switch mode 2 timeout duration

1-250 = Number of seconds the switcher delays before switching to the most recently selected input.

0 = Immediate switch (no delay)

X8 = Current EDID information in hexadecimal format (up to 512 bytes of hex data — text form)

X10 = Native resolution and refresh rate from selected EDID (for example, 1920 x 1080p @ 60 Hz)

- X11** = Output 5 V mode
 0 = Auto: 5 V is enabled only when a source with 5 V is present.
 1 = 5 V is always enabled (default).
- X12** = Input HDCP status
 0 = No source detected
 1 = Source with HDCP detected
 2 = Source without HDCP detected
- X13** = Output HDCP status
 0 = No sink detected
 1 = Sink with HDCP detected
 2 = Sink without HDCP detected
- X14** = Output HDCP mode
 0 = Encrypt as required by input (default).
 For HDMI sinks, perform continuous trials.
 For DVI sinks, attempt for 10 seconds, then fail.
 1 = Always encrypt.
 For HDMI sinks, perform continuous trials.
 For DVI sinks, attempt for 10 seconds, then fail.
- X18** = Unit name. The name can have up to 24 alphanumeric characters including hyphens (-), with no spaces.
 The first character must be a letter, and the last character cannot be a hyphen. The default is SW HD 8K-xx-xx-xx.
- X19** = Verbose mode
 0 = None
 1 = Verbose mode (default)
 2 = Tagged responses for queries
 3 = Verbose mode and tagged responses for queries

NOTES:

- In **verbose response** mode, the switcher responds with unsolicited responses for value and setting changes that may result from a signal change, or a setting adjustment made via another interface.
- For example, the switcher can send out a notice of a change in some setting without receiving a query via a PC or a control system. That change could have been a result of an internal process, a selection made from the front panel, or a selection made via PCS. This is an example of a verbose (wordy) relationship between the controller and a connected device.
- If **tagged responses** are enabled, all View type commands return the command string plus the data, the same as in responses for setting a value. For example, in the following Unit Name command:

Command: `[Esc] CN←`

Response: `Ipn • X18↵` (tagged response) or
`X18↵` (untagged response)

- X20** = Set date and time: *MM/DD/YY-HH:MM:SS* (Displayed as: *DD Mmm YYYY-HH:MM:SS*)
 Example: 06/21/02-10:54:00
- X27** = Baud rate: 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 9600 (default), 14400, 19200, 28800, 38400, 57600, 115200
 Port 1 is fixed at 9600.
- X28** = Parity: Odd, Even, None, Mark, Space (only the first letter is required)
- X29** = Data bits: 7 or 8 (default)
- X30** = Stop bits: 1 (default) or 2
- X31** = Port timeout intervals
 1 (10 seconds) - 65000 (in 10-second increments). Default is 30 = 300 seconds = 5 minutes.
- X33** = Firmware version to the second decimal place. (*n.nn*).
- X34** = Unit part number: 60-1985-01
- X41** = Auto-switch priority: 1 - maximum number of inputs
- X42** = Auto-switch priority number (mode 2): 1 or 2
- X43** = Volume level
 -100 to 0 in 1 dB steps. Default = -10 dB

Command and Response Table for SIS Commands

Command	ASCII Command (Host to Switcher)	Response (Switcher to Host)	Additional Description
Input Selection			
Select input (audio and video)	[X1]!	In[X1]•All←	Select input [X1].
View input	!	[X1]← <i>In verbose modes 2 and 3:</i> In [X1]•All←	View the selected input ([X1]).
KEY: [X1] = Input number 0 through the highest numbered input on the unit (2) 0 = deselect all inputs (disable output)			
Muting			
Video mute	[X3]B	Vmt[X3]←	Mute the video signal.
Query video mute status	B	[X3]← <i>In verbose modes 2 and 3:</i> Vmt[X3]←	Show video mute status [X3].
Mute embedded audio	[Esc][X2]AFMT←	Afmt[X4]←	Mute or unmute ([X4]) the embedded audio signal.
View embedded audio mute status	[Esc]AFMT←	[X4]← <i>In verbose modes 2 and 3:</i> Afmt[X4]←	Show embedded audio mute status [X4].
KEY: [X3] = Video mute setting 0 = unmuted (default), 1 = video muted, 2 = video and sync muted [X4] = Audio mute setting 0 = unmuted (default), 1 = muted			
Volume — Analog			
Set volume level	[X43]V	Vol[X43]←	Set the output volume to [X43].
Increment volume	+V	Vol[X43]←	Increase the output volume by 1 dB.
Decrement volume	-V	Vol[X43]←	Decrease the output volume by 1 dB.
View volume	V	[X43]←	View current volume setting [X43].
Auto-switch Mode			
Set the auto-switch mode	[Esc][X5]AUSW←	Ausw[X5]←	Set the auto-switch mode to [X5].
View auto-switch mode	[Esc]AUSW←	[X5]← <i>In verbose modes 2 and 3:</i> Ausw[X5]←	View current auto-switch mode [X5].
Set user priority order for auto-switch	[Esc] P[X41]•[X41]AUSW←	AuswP[X41]•[X41]←	Set the priority switching order of the inputs.
View priority order	[Esc] PAUSW←	[X41]•[X41]← <i>In verbose modes 2 and 3:</i> AuswP[X41]•[X41]←	View the order in which the inputs will be selected.
KEY: [X5] = Auto-switch mode 0 = Disabled — Manual switching (default) 1 = User-defined priority mode — The switcher selects the input to which the user assigns priority. If no priority is assigned, the switcher selects the active input with the highest number. 2 = Input memory priority mode — The switcher selects the most recently applied input, and retains a history of the order in which active inputs are connected to the unit. If an active input is removed, the switcher switches to the most recently prioritized input. [X41] = Auto-switch priority number 1 or 2 [X43] = Volume Volume level — -100 to 0 in 1 dB steps. Default = -10 dB			

Command	ASCII Command (Host to Switcher)	Response (Switcher to Host)	Additional Description
Auto-switch Mode (continued)			
View unit priority order for mode 2	[Esc]OAUSW ←	[X42]•[X42] ↵ <i>In verbose modes 2 and 3:</i> AuswO [X42]•[X42] ↵	View the order in which the inputs are selected in auto-switch mode 2.
Set time-out duration for mode 2	[Esc]T[X6]AUSW ←	AuswT [X6] ↵	Set the number ([X6]) of seconds (0-500) the switcher delays before switching to the most recently applied input.
View mode 2 timeout duration	[Esc]TAUSW ←	[X6] ↵ <i>In verbose modes 2 and 3:</i> AuswT [X6] ↵	View the mode 2 timeout [X6] .
KEY: [X6] = Auto-switch mode 2 timeout duration switching to the most 1-500 = Number of seconds (in 1 second intervals) the switcher delays before recently selected input. Default is 3 seconds. 0 = Immediate switch (no delay) [X42] = Auto-switch priority number (mode 2) 1 or 2			
Signal Status			
Request status of all signals	[Esc]LS ←	[X12]•[X12]*[X12] ↵ <i>In verbose modes 2 and 3:</i> Sig [X12]•[X12]*[X12] ↵	View signal status [X12] of both inputs, followed by the output (* [X12]).
KEY: [X12] = Input and output signal status 0 = No signal detected (default), 1 = Signal detected 2 = Source without HDCP detected			
Output 5 V Mode			
Set output 5 V mode	[Esc] M [X11] HPLG ←	Hp1g M [X11] ↵	Select output 5 V mode [X11] .
View output 5 V mode status	[Esc] MHPLG ←	[X11] ↵ <i>In verbose modes 2 and 3:</i> Hp1g M [X11] ↵	View current output 5 V mode.
KEY: [X11] = Output 5 V mode 0 = Auto: 5 V is enabled only when a source with 5 V is present. 1 = 5 V is always enabled (default).			
Front Panel Lockout (Executive Mode)			
Enable or disable lock mode	[X2]X	Exe [X2] ↵	Select front panel lock mode [X2] .
Query lockout status	X	[X2] ↵ <i>In verbose modes 2 and 3:</i> Exe [X2] ↵	Show executive mode status.
KEY: [X2] = Front panel lock mode 0 = Lock mode off (default) 1 = Lock mode on			

Command	ASCII Command (Host to Switcher)	Response (Switcher to Host)	Additional Description
HDCP Commands			
HDCP Status			
View HDCP status for an input	[Esc]I[X1]HDCP ←	[X12] ← <i>In verbose modes 2 and 3:</i> Hdcp I [X12] ←	Show HDCP status [X12] for input [X1] . [X1] = Input 1 or 2
View HDCP status for both inputs	[Esc]IHDCP ←	[X12]•[X12] ← <i>In verbose modes 2 and 3:</i> Hdcp I [X12]•[X12] ←	Show HDCP status [X12] for all the inputs.
View output HDCP status	[Esc]OHDCP ←	[X13] ← <i>In verbose modes 2 and 3:</i> Hdcp O [X13] ←	Show HDCP status [X13] for the output.
HDCP Input Authorization			
HDCP authorization per input	[Esc]E[X1]*[X2]HDCP ←	Hdcp E [X1]*[X2] ←	Set HDCP authorization for input [X1] to [X2] .
Enable or disable HDCP authorization for all inputs	[Esc]E[X2]HDCP ←	Hdcp E [X2] ←	Set HDCP authorization to [X2] for all inputs.
View HDCP authorization status for all inputs	[Esc]EHDCP ←	[X2]•[X2] ← <i>In verbose modes 2 and 3:</i> HdcpE [X2]•[X2] ←	View the current HDCP authorization setting [X2] for all the inputs.
KEY: [X1] = Input number [X2] = Enable or disable HDCP authorization [X12] = Input HDCP status [X13] = Output HDCP status 1 or 2 0 = Disable HDCP authorization, 1 = Enable HDCP authorization (default) 0 = No source detected, 1 = Source with HDCP detected, 2 = Source without HDCP detected 0 = No sink detected, 1 = Sink with HDCP detected 2 = Sink without HDCP detected			
Output HDCP Mode			
Set the output HDCP mode	[Esc]S[X14]HDCP ←	Hdcp S [X14] ←	Set the output HDCP mode to [X14] .
View the output HDCP mode	[Esc]SHDCP ←	[X14] ← <i>In verbose modes 2 and 3:</i> Hdcp S [X14] ←	View HDCP mode [X14] for the output.
KEY: [X14] = Output HDCP mode			
0 = (Default) Encrypt as required by input: For HDMI sinks, perform continuous trials. Attempt for 10 seconds For DVI sinks, attempt for 10 seconds, then fail. 1 = Always encrypt: For HDMI sinks, perform continuous trials. For DVI sinks, attempt for 10 seconds, then fail.			

Command	ASCII Command (Host to Switcher)	Response (Switcher to Host)	Additional Description
Unit Name			
Set unit name ²⁴	[Esc] [X18] CN ↵	Ipn• [X18] ↵	Assign name [X18] for the switcher.
Set unit name to factory default ²⁴	[Esc] • CN ↵	Ipn•SW2-HD-8K↵	
View unit name	[Esc] CN ↵	[X18] ↵ <i>In verbose modes 2 and 3:</i> Ipn• [X18] ↵	Show the current switcher name [X18] .
KEY: [X18] = Unit name Consists of up to 24 alphanumeric characters, including the hyphen (-) with no spaces. The first character must be a letter, and the last character cannot be a hyphen. The default is SW-HD-8K-XX-XX-XX.			
Information Requests			
Request information	I	In [X1] •Ausw [X5] •Afmt [X4] •Vmt [X3] ↵	View selected input [X1] , auto-switch mode [X5] , Audio mute status [X4] , and video mute status [X3] .
Query model name	1I	SW2•HD•8K↵ <i>In verbose modes 2 and 3:</i> Inf01*SW2•HD•8K↵	Show the switcher model name.
Query model description	2I	SWITCHER2•HD•SUPPORT•8K60↵ <i>In verbose modes 2 and 3:</i> Inf02*SWITCHER2•HD•SUPPORT•8K60↵	Show the switcher signal type, number of inputs, and 8K support.
Query part number	N	60-1985-01↵	Show part number of the switcher.
Query firmware version	Q	[X33] ↵	Show firmware build number [X33] , to the second decimal place.
<i>Example:</i>	Q	1.01↵	
KEY: [X1] = Input number 1 through the highest numbered input on the unit (2 through 8, depending on the model) [X3] = Video mute status 0 = Unmuted (default) 1 = Muted 2 = Video and sync muted [X4] = Audio mute status 0 = Unmuted 1 = Muted [X5] = Auto-switch mode 0 = Disabled — Manual switching (default) 1 = User-defined priority mode — The switcher selects the input to which the user assigns priority. If no priority is assigned, the switcher selects the active input with the highest number. 2 = Input memory priority mode — The switcher selects the most recently applied input, and retains a history of the order in which active inputs are connected to the unit. If an active input is removed, the switcher switches to the most recently prioritized input. [X33] = Firmware version to the second decimal place. (<i>n.nn</i>).			

Command	ASCII Command (Host to Switcher)	Response (Switcher to Host)	Additional Description
Verbose Mode			
Set verbose mode	[Esc] [X19] CV←	Vrb [X19] ↵	Set the verbose mode to [X19] .
View verbose mode	[Esc] CV←	[X19] ↵ <i>In verbose modes 2 and 3:</i> Vrb [X19] ↵	View current verbose mode [X19] .
KEY: [X19] = Verbose mode 0 = None 1 = Verbose mode (default for USB and RS-232 connections) 2 = Tagged responses for queries 3 = Verbose mode and tagged responses for queries See the Verbose mode symbol definition on page 15 for details on these modes.			
Resetting			
Reset all device settings to factory defaults	[Esc] ZXXX←	Zpx↵	Reset product-specific settings to factory default values. Does not affect IP settings or user files.
Reboot system	[Esc] 1BOOT←	Boot1↵	Reboot the system. A firmware update requires this command to complete.

Symbol Definitions for CEC Communications Commands

X101 = CEC mode
 0 = Disable CEC operations for this IO port (default)
 2 = Enable insertion (unidirectional)
 4 = Enable insertion and publish received CEC messages (bidirectional) (recommended mode)

X102 = CEC status
 0 = CEC mode 0 disabled
 2 = CEC mode 2 enabled but no device detected (unidirectional)
 3 = CEC mode 2 enabled and device detected (unidirectional)
 4 = CEC mode 4 enabled but no device detected (bidirectional)
 5 = CEC mode 4 enabled and device detected (bidirectional)

X103 = Source logical address (our pseudo): 0 through 15 (-1 = not found or port not enabled)

X104 = Destination logical address (theirs): 0 through 15 (-1 = not found or port not enabled)

CEC Logical Addresses	
Address	Device
0	TV
1	Recording Device 1
2	Recording Device 2
3	Tuner 1
4	Playback Device 1
5	Audio System
6	Tuner 2
7	Tuner 3
8	Playback Device 2
9	Recording Device 3
10	Tuner 4
11	Playback Device 3
12	Reserved
13	Reserved
14	Free Use
15	Unregistered (as initiator address) Broadcast (as destination address)

X105 = CEC command: Predefined actions as strings within double quotes: "PwrOn" or "PwrOff"

X106 = CEC send result
 0 = Failed (NAK)
 1 = Success (ACK) of entire message
 2 = Unable to send

X107 = CEC physical address: 4 hexadecimal digits (*Example: %10%00* for 1000)

X109 = CEC data: User selected elements (0 to 15) in the form of percent sign followed by two hex digits (*Example: %2A%07%FF*)

X110 = CEC address byte: In the form of percent sign followed by two hex digits
Example: %E0 = Extron output (14) to TV (0)

Command and Response Table for CEC SIS Commands

Command	ASCII Command (Host to Switcher)	Response (Switcher to Host)	Additional Description
CEC Enable/Disable			
Enable or disable one output CEC	<code>[Esc]01*[X101]CCEC←</code>	<code>Ccec01*[X101]↵</code>	
Enable or disable all outputs CEC	<code>[Esc]0[X101]*CCEC←</code>	<code>Ccec0[X101]↵</code>	
View output CEC status	<code>[Esc]01CCEC←</code> <i>Verbose mode 2/3</i>	<code>[X102]*[X103]*[X104]↵</code> <code>Ccec01*[X102]*[X103]*[X104]↵</code>	
Send CEC Commands			
Default discovered target logical address			
Send CEC data to Output (downstream sink)	<code>[Esc]01*[X105] DCEC←</code> or <code>[Esc]01*[X109] DCEC←</code>	<code>Dcec01*[X110][X109]*[X106]↵</code>	The response is always in a hex representation (<code>[X109]</code>), for example: %2A%07%FF.
Broadcast to all devices			
Send CEC data to Output (downstream sink)	<code>[Esc]01*15*[X105] DCEC←</code> or <code>[Esc]01*15*[X109] DCEC←</code>	<code>Dcec01*[X110][X109]*[X106]↵</code>	
NOTE: Attempting to send a CEC command to an input or output that is disabled returns an E14 error.			
KEY: [X101] = CEC mode 0 = Disable CEC operation for this IO port (default) 2 = Enable insertion and break CEC connection input to output (unidirectional) 4 = Enable insertion and publish received CEC messages (bidirectional) [X102] = CEC status 0 = CEC mode 0 disabled 2 = CEC mode 2 enabled but no device detected (unidirectional) 3 = CEC mode 2 enabled and device detected (unidirectional) 4 = CEC mode 4 enabled but no device detected (bidirectional) 5 = CEC mode 4 enabled and device detected (bidirectional) [X103] = Source logical address (our pseudo): 0 through 15 (-1 = not found or port not enabled) [X104] = Destination logical address (theirs): 0 through 15 (-1 = not found or port not enabled) (see CEC Logical Addresses on page 21) [X105] = CEC command Predefined actions as strings within double quotes: "PwrOn", "PwrOff", or "ShowMe" [X106] = Send result 0 = Failed (NAK) device not detected, 1 = Success (ACK) device detected, 2 = Unable to send [X109] = CEC data User selected elements (0 to 15) in the form of percent sign followed by two hex digits (Example: %2A%07%FF) [X110] = CEC address byte In the form of percent sign followed by 2 hex digits Example: %E0 = Extron output (14) to TV (0)			

Command	ASCII Command (Host to Switcher)	Response (Switcher to Host)	Additional Description
CEC Usage Examples			
Unidirectional Mode — No CEC received data messages (including answers to queries) desired			
Set mode	[Esc] 01*2CCEC←	Ccec01*2←	Power on TV on output 1.
Send data	[Esc] 01*"PwrOn"DCEC← or [Esc] 01*%04DCEC←	Dcec01*%E0%04*1←	
Bidirectional Mode — CEC received data messages desired			
Set mode	[Esc] 01*4CCEC←	Ccec01*4←	Switch TV on output 1 to our signal (HDMI 2 on TV).
Send data	[Esc] 01*"ShowMe"DCEC← or [Esc] 01*15*%82%20%00DCEC←	Dcec 01*%EF%82%20%00*1←	
Examples of possible unsolicited messages		Ceco1*%0F%32%65%6E%67*1← Ceco1*%0E*1←	TV broadcast command to set the menu language to English ("eng"). TV pings us to confirm we are still there.
NOTE: Asynchronous received data messages from CEC in bidirectional mode (4) format: Ceco1*[X110][X107]*[X106]←			
Other CEC Commands			
Rediscover device on output	[Esc] 01QCEC←	Qcec01*1← Qcec01*0*[X106]← ... Qcec01*13*[X106]←	
Report physical address of output port	[Esc] 01PCEC← <i>Verbose mode 2/3</i> <i>Example</i>	[X107]← Pcec01*[X107]← %10%00	For 1000 (usually first HDMI input on TV).
KEY: [X106] = Send result [X107] = CEC physical address [X110] = CEC address byte 0 = Failed (NAK) device not detected, 1 = Success (ACK) device detected, 2 = Unable to send Four hexadecimal digits in the form of %xx%xx (<i>Example: %32%00</i>) In the form of percent sign followed by 2 hex digits Example: %E0 = Extron output (14) to TV (0)			

Accessing the Product Configuration Software

The Extron Product Configuration Software offers another way to control the switcher via USB. The graphical interface includes many of the same functions as those available via the device front panel and SIS commands. PCS is compatible with most Microsoft® Windows operating systems.

The software is available at www.extron.com. This section provides instructions for downloading, installing, and opening the software. For detailed information about configuring the device using PCS, see the *SW HD 8K Help* file, provided with the software.

Downloading PCS from the Website

To use PCS, download the latest version of the program from the [Extron web page](http://www.extron.com) and install it on the PC connected to the switcher, as described in the following sections. Updates to the SW2 HD 8K software can also be downloaded as they become available.

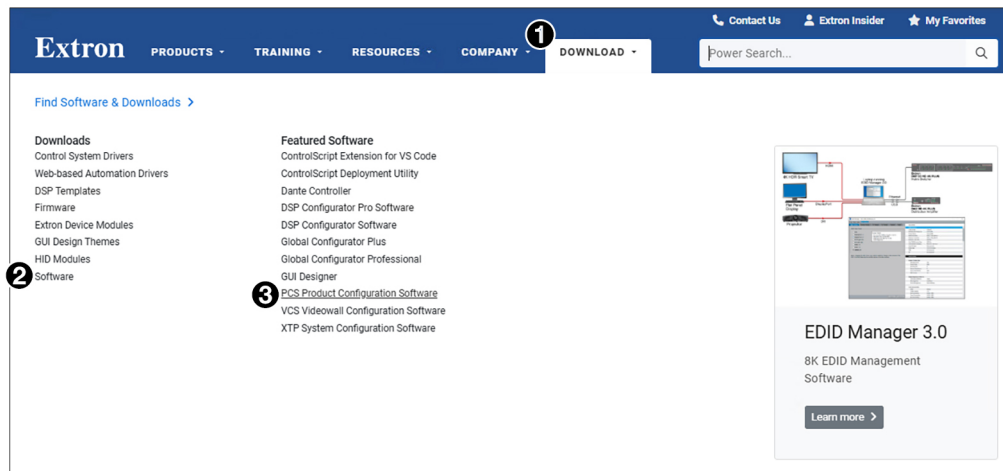


Figure 9. Download Center Page on the Extron Website

To access the software:

1. On the Extron website, hover the pointer over the **Download** tab (see figure 9, ①).
2. Click the **Software** link (②) in the Downloads column, or if PCS is listed, click the **PCS** link (③).

Downloading using the Download Center page

If the **Software** link is clicked, the Download Center page is displayed. Follow these steps:

1. On the Download Center screen, click on the down arrow in the **Search Software** box to see a list of the downloadable software (see [figure 10, ①](#) on page 25). If you need an Extron Insider ID number to access this box, see your Extron representative.

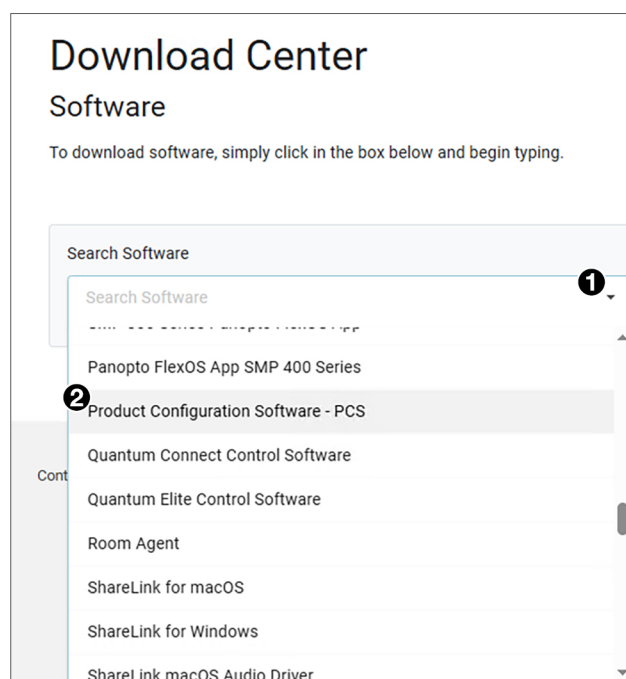


Figure 10. PCS Links on Software Download Center Screen

2. From the drop-down list, select Product Configuration Software - PCS (see [figure 10](#), **2**).
3. On the Download Center Software screen, click the link to the active PCS version (see [figure 11](#), **1**). After a few seconds, a link to the VCS installer on your PC appears.

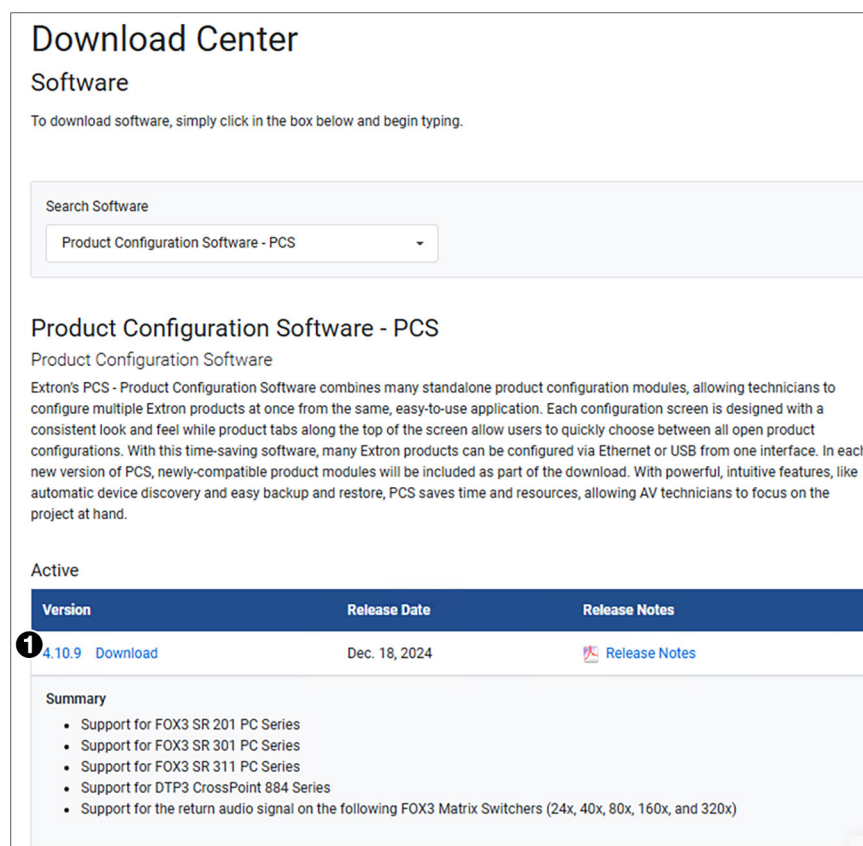


Figure 11. PCS Download Center Screen

4. Click the link to locate the installer file, then follow the instructions on the screen to complete the PCS installation.

- On the login page that appears next, fill in the required information to log in to www.extron.com (if you need an Extron Insider ID number, see your Extron representative).
- Follow the instructions on the subsequent screens to complete the software program installation. By default, the PCS file is placed on the computer in the Downloads folder at \Desktop\This PC. From there, it can be moved to a desired storage location on the computer C: drive.

Downloading using the PCS product page

If the PCS Product Configuration Software link (see [figure 9](#), ③ on page 25) is clicked, the PCS product page opens (see figure 12).

Extron PRODUCTS TRAINING RESOURCES COMPANY DOWNLOAD

Power Search...

Product Home / Software / Configuration Software / PCS

Share | Email | Print

PCS

Product Configuration Software

Key Features

- Configure multiple standalone products at once from the same software application
- Includes many modules for Extron products
- All modules have same look and feel for consistency
- Automatic device discovery
- Supports devices with Ethernet or USB connectivity
- Easily backup and restore to one or more devices using Ethernet or USB

[See All Features >](#)

[Image Gallery](#)

[Save to Favorites List](#)

Version	Release Date	New in the Current Release	Size	Release Notes
4.3.0	Jul. 9, 2018	- Added support for HC 403 - Added language support for Spanish, Simplified Chinese, Japanese, German, and French - Ability to restore configuration to multiple devices across all IN1608 products - Ability to update firmware to multiple devices across all DVS 605 products - Added new features for MediaPort 200 - Various bug fixes	162.5 MB	0.9 MB Download

SIMILAR PRODUCTS

[Dante Controller Configuration Software for Dante-Enabled Audio Products](#)

[Show all](#)

Figure 12. PCS Product Page

- In the Power Search field (①), type PCS. A drop-down list of selected search results appears under the field.
- Press <Enter> on the keyboard or select PCS from the drop-down list.
- Click the **Download** button (②).
- Submit any required information to start the download. Note where the file is saved.
- Open the executable (.exe) file from the save location.
- Follow the instructions that appear on the screen. By default, the installation creates a directory in the Program Files (x86) folder.

Starting PCS

In order to use the PCS software, the switcher must be connected to the computer via the front panel USB-C port.

1. Click **Start > Programs > Extron > Extron PCS**, or

Browse to locate the EAF .exe file on the computer desktop and double-click it.

The Product Configuration Software opens with the Device Discovery window (see figure 13).

2. In the Device Discovery panel of the PCS window, click on the name of the SW HD 8K (❶). (It may be necessary to scroll to locate it, depending on the number of devices listed.) Because PCS is accessed through the USB port, no IP address is displayed for it.

The **Connect** button (❷) becomes available.

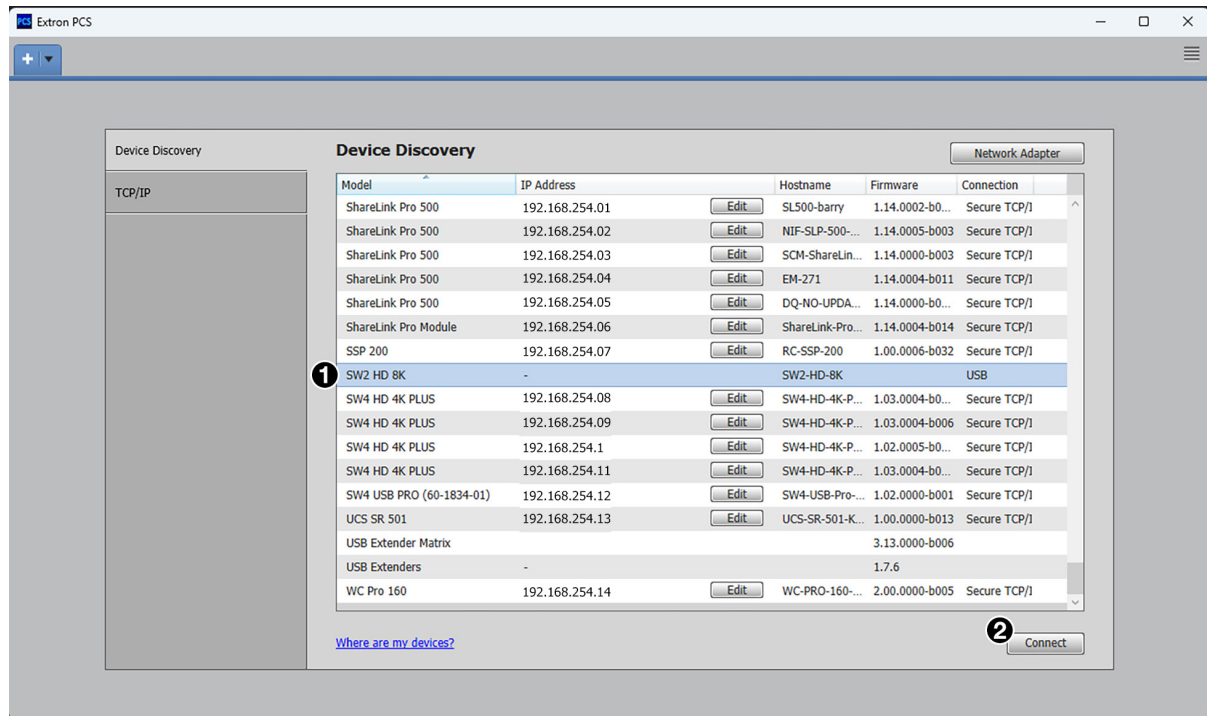


Figure 13. Device Discovery Window

3. Click **Connect** (❷). The PCS screens for SW HD 8K open with the Input/Output Configuration window (see figure 14).

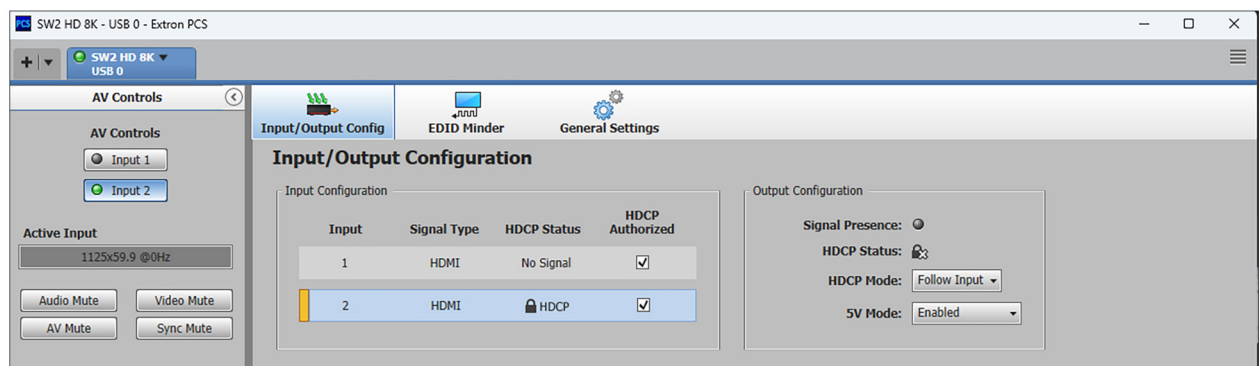


Figure 14. Input/Output Configuration Window

Using Firmware Loader

The Firmware Loader program enables the user to upload new versions of firmware to SW HD 8K switcher. The program also provides a means of uploading firmware files to multiple devices simultaneously. When notified that new firmware is available for the switcher, download the firmware file from the Extron website and install it on the computer (see Downloading Firmware Loader). You can then upload the new version of firmware to the switcher.

Before updating any Extron product to the latest revision level, be sure to read the supplied release notes or contact Extron Technical Support to determine if your product requires a firmware update.

Downloading Firmware Loader

To obtain Firmware Loader from the Extron website:

1. On the Extron website, select the **Download** tab (see figure 15, ①).

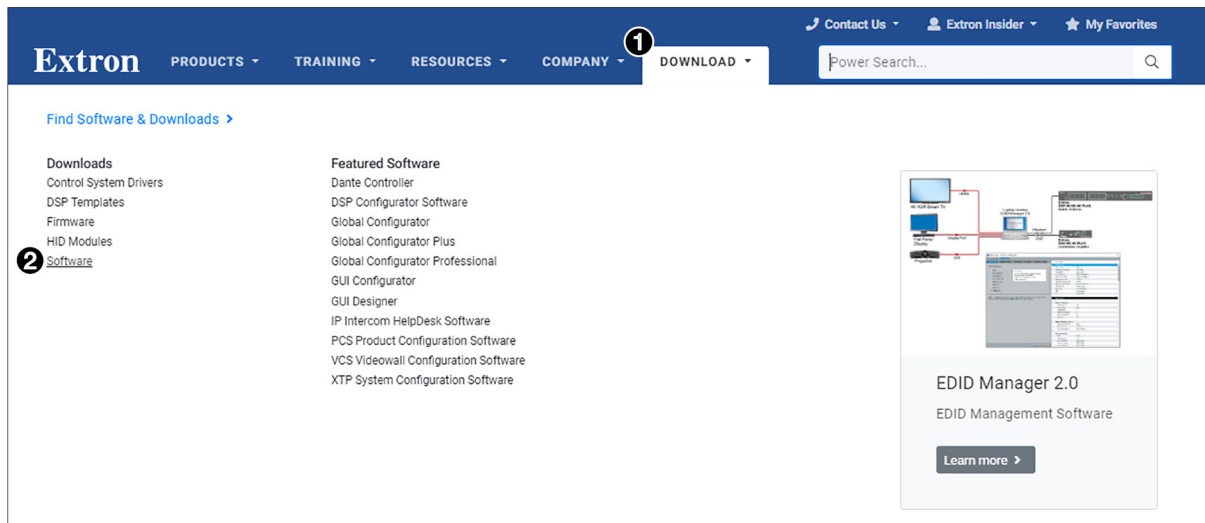


Figure 15. Software Link on the Download Page

2. Click the **Software** link (②) in the Downloads column.
3. On the Software Download Center screen, click on the down arrow (see figure 16, ①) in the **Search Software** box and select **Firmware** Loader from the drop-down list. If you need an Extron Insider ID number to access this box, see your Extron representative.

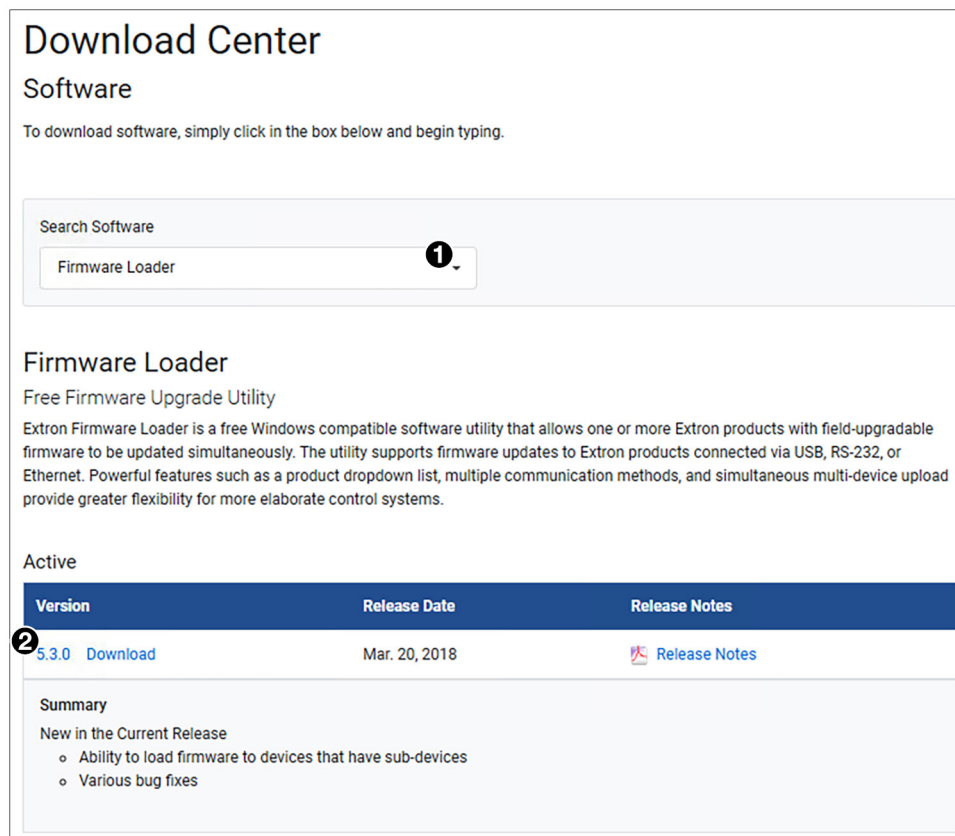


Figure 16. Firmware Loader Download Center Page

- Click the link to the active Firmware Loader version (see figure 16, ②). After a few seconds, a link to the firmware installer file in your Downloads folder appears.

NOTE: When downloaded from the Extron website, by default the Firmware Loader files are placed at C:\Program Files (x86)\Extron\FWLoader.

- Click the link to the installer file, then follow the instructions on the screens to install the Firmware Loader.

Updating Firmware Using Firmware Loader

To use Firmware Loader to upload a new firmware file to your unit:

- Open the Firmware Loader via the desktop Start menu. The Firmware Loader window opens with the Add Device dialog box displayed in front of it.
- In the Identify Target Device panel (see figure 17, ① on page 30), make the following selections:
 - From the Device Name drop-down list, select **SW2 HD 8K**.
 - From the Connection Method drop-down list, select **USB** or **RS-232**.
 - If USB was selected, select **Extron USB Device 0** from the Available Devices drop-down list.
 If RS-232 was selected, select the desired communication port (the default is **COM1**) and baud rate the default is 9600 baud) from the Com Port and Baud Rate drop-down lists.

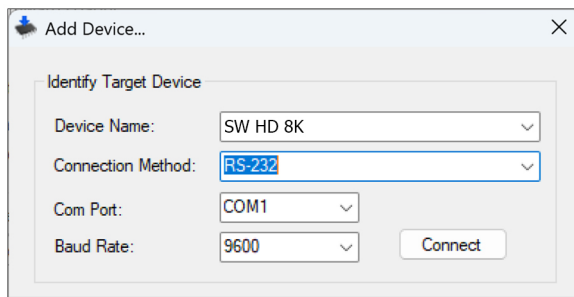


Figure 17. Identify Target Device Panel for an RS-232 Connection

3. Click **Connect** (see figure 18, ①). If the connection is successful, **SW2 HD 8K** ✓ is displayed in green in the Connected Device panel (②).

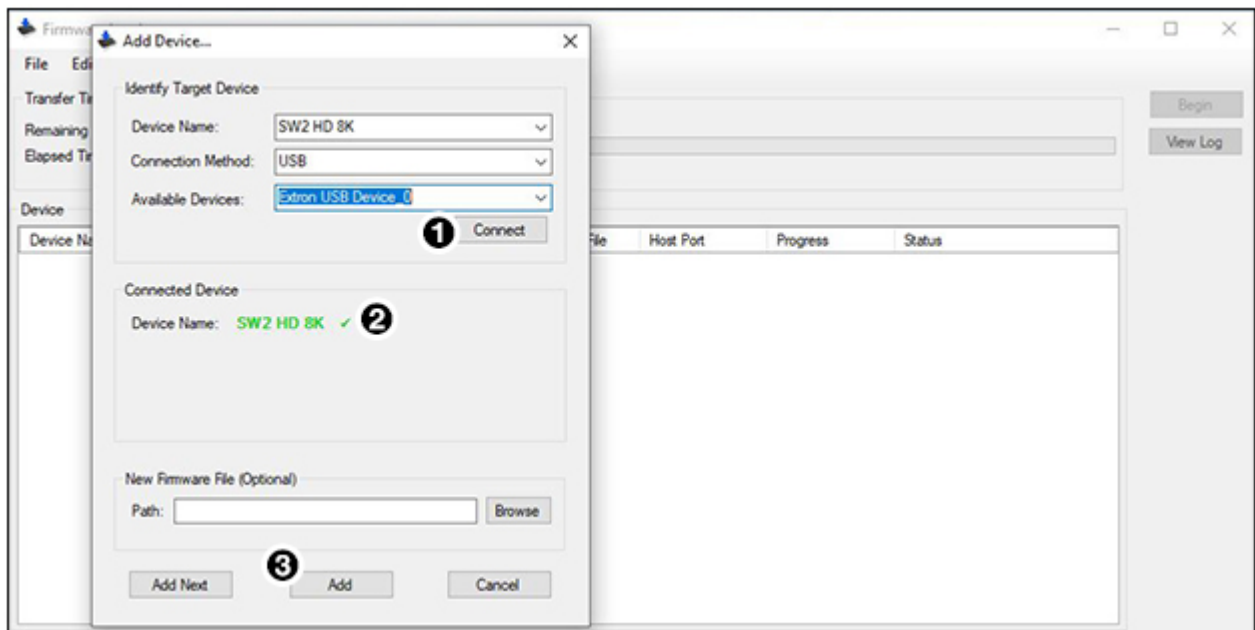


Figure 18. Successful USB-Connection to the Switcher via Firmware Loader

Click **Add** (③). The Add Device window closes, and the SW HD 8K information is added to the Device panel of the Firmware Loader dialog box.

4. Double click on <double click to set> in the New Firmware File column.
5. In the Choose Firmware File window, browse to locate the new firmware file, select it (see figure 19, ① on page 31) and click **Open** (②).

ATTENTION:

- Valid firmware files must have the file extension .s19. A file with any other extension is not a firmware upgrade for this product and could cause the device to stop functioning.
- Les fichiers firmware valides doivent contenir l'extension fichier .s19. Un fichier avec n'importe quelle autre extension n'est pas une mise à jour de firmware pour cet appareil et l'appareil pourrait arrêter de fonctionner.

NOTE: When downloaded from the Extron website, by default the firmware is placed at C:\Program Files (x86)\Extron\Firmware\SW2 HD 8K.

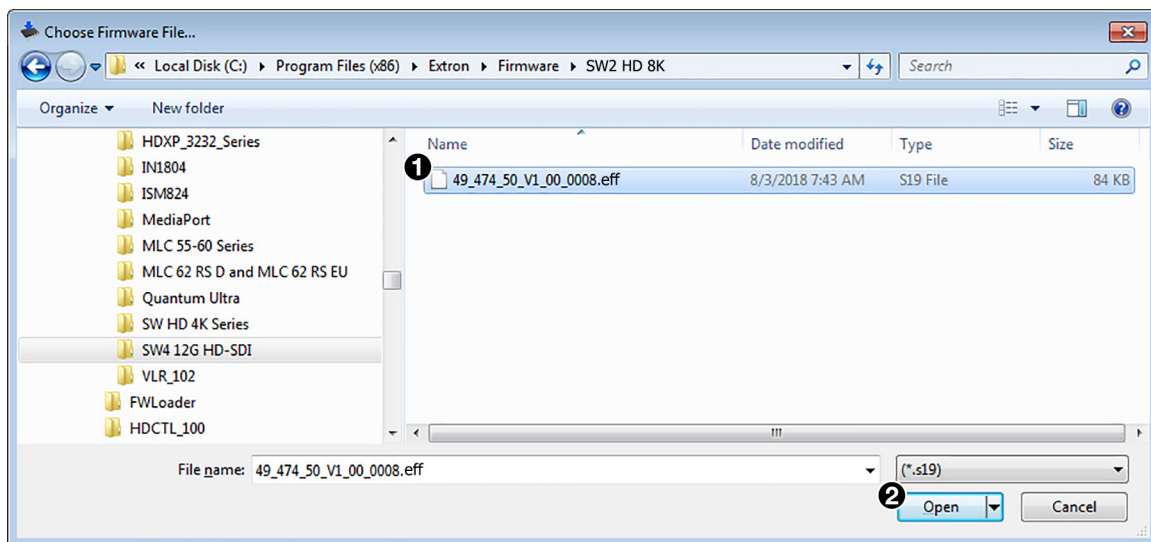


Figure 19. Choose Firmware File Window

ATTENTION:

- Valid firmware files must have the file extension .s19. A file with any other extension is not a firmware upgrade for this product and could cause the device to stop functioning.
- Les fichiers firmware valides doivent contenir l'extension fichier .s19. Un fichier avec n'importe quelle autre extension n'est pas une mise à jour de firmware pour cet appareil et l'appareil pourrait arrêter de fonctionner.

6. In the Firmware Loader dialog box, click **Begin** (see figure 20, ①).

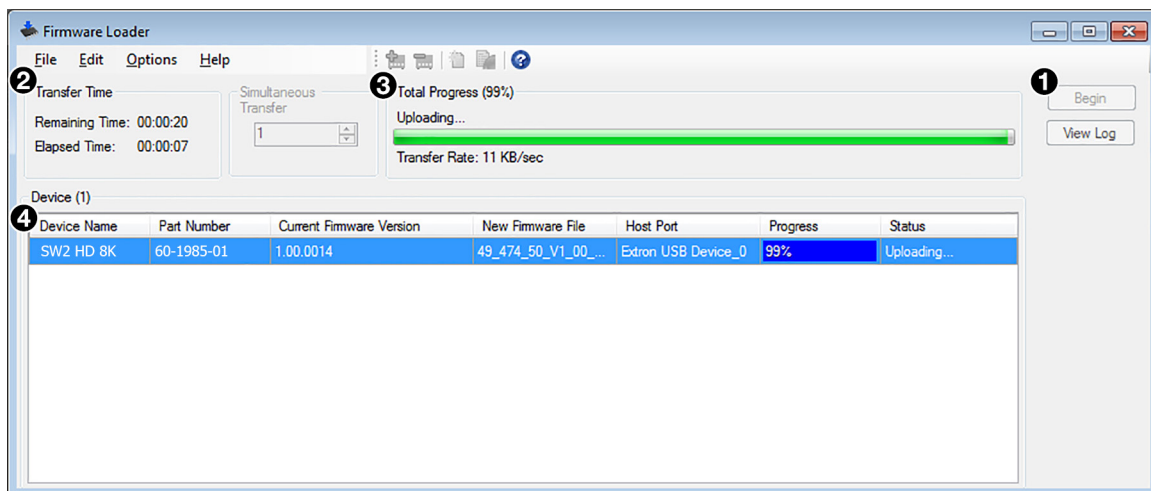


Figure 20. Firmware Upload in Progress

The following indicators show the progress of the update:

- The Transfer Time panel shows the amounts of remaining and elapsed time for the update (②).
 - The Total Progress panel (③) displays a progress bar with Uploading above it.
 - In the Devices panel (④), the Progress column displays an incrementing percentage and another progress bar. The Status column displays Uploading.
7. The upload is complete when the Remaining Time panel shows 00.00.00, the Progress column shows 100%, and Completed is displayed above the progress bar and in the Status column. Close the Firmware Loader dialog box.

NOTE: The original factory-installed firmware is permanently available on the SW2 HD 8K. If the attempted firmware upload fails for any reason, the switcher reverts to the factory version.

Reference Information

This section provides reference information on mounting, cleaning the unit, and downloading firmware from the extron website. Topics include:

- [Mounting the SW HD 8K Switcher](#)
- [Wiring for RS-232 Control](#) on page 7
- [Downloading the Firmware](#)

Mounting the SW HD 8K Switcher

The SW HD 8K switcher can be set on a table, mounted on a rack shelf, or mounted under a desk, podium, or table.

ATTENTION:

- Installation and service must be performed by authorized personnel only.
- L'installation et l'entretien doivent être effectués par le personnel autorisé uniquement.

Rack Mounting

The SW HD 8K unit can be mounted on a 9.5-inch, 6-inch, or 3.5-inch deep rack shelf. It can also be mounted vertically to the front or back rack support. For mounting procedures, see the instructions provided with the mounting option.

UL Rack Mounting Guidelines

The following Underwriters Laboratories (UL) guidelines pertain to the safe installation of the SW HD 8K enclosure in a rack.

CAUTION:

- **Elevated operating ambient temperature** — If the equipment is installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, install the equipment in an environment compatible with the maximum ambient temperature (TMA = +122 °F, +50 °C) specified by Extron.
- **Reduced air flow** — Install the equipment in a rack so that the amount of air flow required for safe operation of the equipment is not compromised.
- **Mechanical loading** — When mounting the equipment in the rack, ensure that uneven mechanical loading does not cause a hazardous condition.
- **Circuit overloading** — When connecting the equipment to the supply circuit, consider the effect that circuit overloading might have on overcurrent protection and supply wiring. Consider equipment nameplate ratings when addressing this concern.
- **Reliable earthing (grounding)** — Maintain reliable grounding of rack-mounted equipment. Pay particular attention to supply connections other than direct connections to the branch circuit (for example, use of power strips).

Consignes UL Pour le Montage en Rack

Les consignes UL (« Underwriters Laboratories ») suivantes concernent l'installation en rack d'un boîtier SW HD 8K :

ATTENTION :

- **Température ambiante élevée** — En cas d'installation de l'équipement dans un rack fermé ou composé de plusieurs unités, la température du rack peut être supérieure à la température ambiante. Par conséquent, il est préférable d'installer l'équipement dans un environnement qui respecte la température ambiante maximale (Tma) spécifiée par Extron.
- **Réduction du flux d'air** — Si l'équipement est installé dans un rack, veillez à ce que le flux d'air nécessaire pour un fonctionnement sécurisé de l'équipement soit respecté.
- **Charge mécanique** — Installez l'équipement en rack de manière à éviter toute situation dangereuse causée par le déséquilibre de la charge mécanique.
- **Surcharge électrique** — Lorsque vous connectez l'équipement au circuit d'alimentation, observez la connexion de l'équipement et étudiez les effets possibles d'une surcharge du circuit sur les protections contre les surintensités et les conducteurs d'alimentation. Consultez à cet égard les indications de la plaque d'identification de l'équipement.
- **Mise à la terre** — Assurez-vous que l'équipement est correctement mis à la terre. Accordez une attention particulière aux connexions électriques autres que les connexions directes au circuit de dérivation (ex. : les multiprises).

Furniture Mounting

The SW HD 8K switcher can be mounted under a desk, table, or podium using an optional under-desk mounting kit, available at www.extron.com (see the mounting instructions provided with the kit).

Tabletop Use

Four self-adhesive rubber feet are included with the SW HD 8K units. For tabletop use, attach one foot at each corner on the bottom of the unit, and place the switcher where desired.

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:

- 70% concentration or higher Isopropyl Alcohol
- 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 an Extron 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 Extron if you have any questions about the guidelines outlined in this section or if you have a question about cleaning a specific Extron product.

Downloading the Firmware

Extron periodically updates product firmware in conjunction with the release of new software revisions. Before updating any Extron product to the latest revision level, be sure to read the supplied release notes or contact Extron Technical Support to determine if your product requires a firmware update. To obtain the latest version of firmware for the SW2 HD 8K:

1. Go to www.extron.com, hover the mouse pointer over the **Download** tab (see figure 21, ①), then slide the pointer to the Downloads column, and click the **Firmware** link (②).

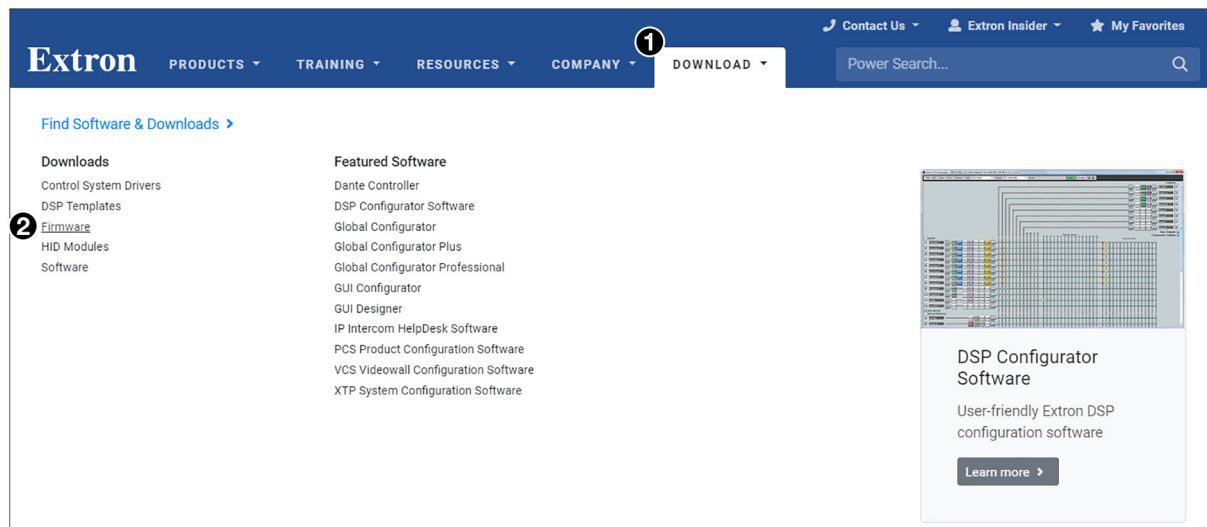


Figure 21. Firmware Link on the Download Tab

Alternatively, click the **Download** tab (see figure 22, ①), then click the **Firmware** button (②).

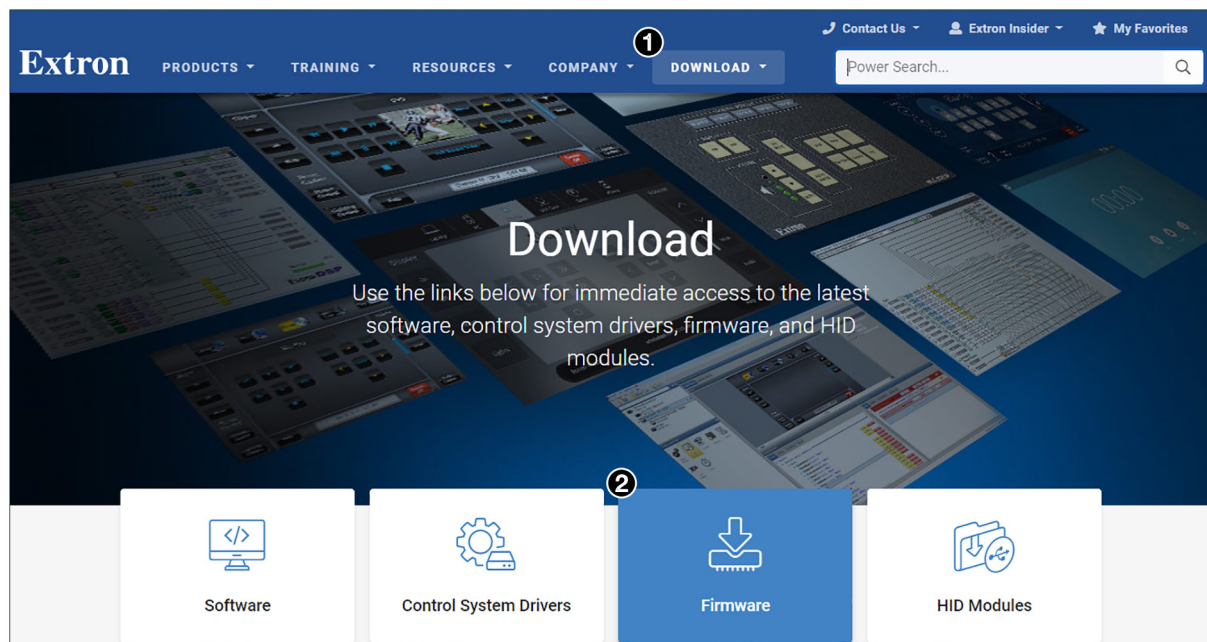


Figure 22. Firmware Button on Download Screen

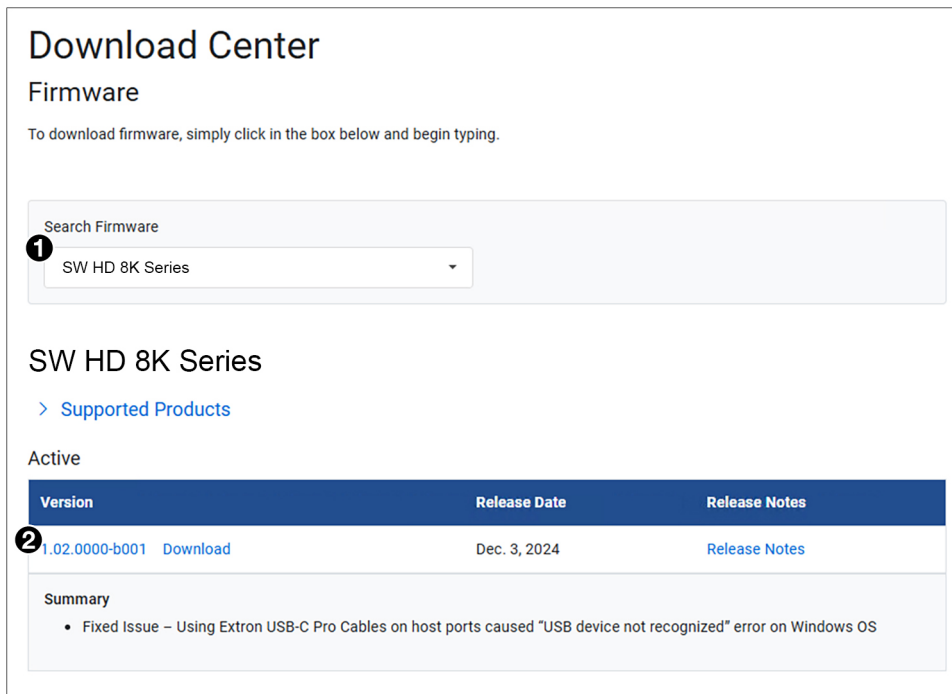


Figure 23. SW2 HD 8K Firmware Download Center Page

- On the Firmware Download Center screen, click on the down arrow in the Search Firmware box (see figure 23, ❶), and select **SW2 HD 8K** from the drop-down list. If you need an Extron Insider ID number to access this box, see your Extron representative.
- Ensure the available firmware version is a later version than the current one on the device.

NOTE: The firmware release notes provide details about the changes between different firmware versions. The file can be downloaded from the same page as the firmware.

- Click the link to the active firmware version (❷). After a few seconds, a link to the firmware installer file in the Downloads folder on the PC appears.
- Click the link to the installer file, then follow the instructions on the screens to install the firmware.

By default, the firmware file is stored on the computer in the Downloads folder at \Desktop\This PC. From there, move it to a desired storage location on the computer C: drive.

Extron Warranty



Powered Product Warranty

Extron warrants its powered products against any defects in materials and workmanship for a period of three years from the date of invoice. In the event of a malfunction during the warranty period, Extron will repair or replace a product to its original operating condition.

To assure the highest level of service, a return authorization number must be obtained from Extron before products are returned for service. Products must be shipped to Extron, prepaid along with proof of purchase **ONLY** after obtaining a Return Authorization (RA) number from the Extron Customer Support department.

This statement of policy is in lieu of any other policy expressed or implied and no representative or person is authorized to assume any other liability or adopt any other policy for Extron Electronics without our written consent.

Powered Product Warranty Exceptions

Everlast™ Power Supplies — Extron warrants Everlast power supplies against any defects in materials and workmanship for a period of seven years from the date of invoice. In the event of a malfunction during the warranty period, Extron will repair or replace the power supply to its original operating condition. Extron engineers will examine the returned product and determine whether the Everlast Power Supply Warranty or Powered Product Warranty applies.

Speakers — Extron warrants Flat Field®, SoundField®, SpeedMount®, Column Array, and System *INTEGRATOR*® speakers against any defects in materials and workmanship for a period of five years from the date of invoice.

Touchscreens — Extron warrants touchscreen display and overlay components against any defects in materials and workmanship for a period of one year from the date of invoice.

Annotator 300 — Extron warrants the Annotator 300 against any defects in materials and workmanship for a period of five years from the date of invoice.

Non-Powered and Cable Products - Lifetime Limited Performance Warranty

Extron warrants that its non-powered products and cable products will be free from defects in material and workmanship for as long as you or your customer owns the product. All Extron non-powered products and cables are designed and engineered to meet and exceed performance specifications. If, at anytime, the product fails due to manufacturer defect, Extron will repair or replace the product to ensure that it meets original performance specifications. Reduced performance due to normal wear and tear, or damages caused by misuse or negligence will not be covered. Extron will test and evaluate all non-powered and cable products claimed defective.

To assure the highest level of service, a return authorization number must be obtained from Extron before products are returned for service. Products must be shipped to Extron, prepaid along with proof of purchase **ONLY** after obtaining a Return Authorization (RA) number from the Extron Customer Support department.

This statement of policy is in lieu of any other policy expressed or implied and no representative or person is authorized to assume any other liability or adopt any other policy for Extron Electronics without our written consent.

Non-Powered and Cable Product Warranty Exceptions

Cable Cubby, Hideaway Surface Access Enclosures and Retractors — Extron warrants Cable Cubby cable access enclosures, HSA Hideaway Surface Access enclosures, and Retractor cable retraction modules for a period of three years from the date of invoice.

Active Cables and Active Adapters — Extron warrants active cables and active adapter cables for a period of three years from the date of invoice.

Cable Termination Tools and Dies — Extron warrants cable termination tools for a period of three years from the date of invoice, excluding the die.

General

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 non-Extron authorized modification to the product. Extron Electronics 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 Electronics be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Extron Electronics 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.

Return Information

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.

NOTE: To assure the highest level of service, a return authorization number must be obtained from Extron before products are returned for service. Products must be shipped to Extron, prepaid along with proof of purchase **only** after obtaining a Return Authorization (RA) number from the Extron Customer Support department.

Please contact Extron to receive an RA (Return Authorization) number:

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 and Middle East: 971.4.299.1800

China: 4000.398766

Worldwide Headquarters: Extron USA West, 1025 E. Ball Road, Anaheim, CA 92805, 800.633.9876