

HDMI 101 Plus

Cable Equalizer



Safety Instructions • English



This symbol is intended to alert the user of important operating and maintenance (servicing) instructions in the literature provided with the equipment.



This symbol is intended to alert the user of the presence of uninsulated dangerous voltage within the product enclosure that may present a risk of electric shock.

Caution

Read Instructions • Read and understand all safety and operating instructions before using the equipment.

Retain Instructions • The safety instructions should be kept for future reference.

Follow Warnings • Follow all warnings and instructions marked on the equipment or in the user information.

Avoid Attachments • Do not use tools or attachments that are not recommended by the equipment manufacturer because they may be hazardous.

Consignes de Sécurité • Français



Ce symbole sert à avertir l'utilisateur que la documentation fournie avec le matériel contient des instructions importantes concernant l'exploitation et la maintenance (réparation).



Ce symbole sert à avertir l'utilisateur de la présence dans le boîtier de l'appareil de tensions dangereuses non isolées posant des risques d'électrocution.

Attention

Lire les instructions • Prendre connaissance de toutes les consignes de sécurité et d'exploitation avant d'utiliser le matériel.

Conservier les instructions • Ranger les consignes de sécurité afin de pouvoir les consulter à l'avenir.

Respecter les avertissements • Observer tous les avertissements et consignes marqués sur le matériel ou présentés dans la documentation utilisateur.

Eviter les pièces de fixation • Ne pas utiliser de pièces de fixation ni d'outils non recommandés par le fabricant du matériel car cela risquerait de poser certains dangers.

Sicherheitsanleitungen • Deutsch



Dieses Symbol soll dem Benutzer in der im Lieferumfang enthaltenen Dokumentation besonders wichtige Hinweise zur Bedienung und Wartung (Instandhaltung) geben.



Dieses Symbol soll den Benutzer darauf aufmerksam machen, daß im Inneren des Gehäuses dieses Produktes gefährliche Spannungen, die nicht isoliert sind und die einen elektrischen Schock verursachen können, herrschen.

Achtung

Lesen der Anleitungen • Bevor Sie das Gerät zum ersten Mal verwenden, sollten Sie alle Sicherheits- und Bedienungsanleitungen genau durchlesen und verstehen.

Aufbewahren der Anleitungen • Die Hinweise zur elektrischen Sicherheit des Produktes sollten Sie aufbewahren, damit Sie im Bedarfsfall darauf zurückgreifen können.

Befolgen der Warnhinweise • Befolgen Sie alle Warnhinweise und Anleitungen auf dem Gerät oder in der Benutzerdokumentation.

Keine Zusatzgeräte • Verwenden Sie keine Werkzeuge oder Zusatzgeräte, die nicht ausdrücklich vom Hersteller empfohlen wurden, da diese eine Gefahrenquelle darstellen können.

Instrucciones de seguridad • Español



Este símbolo se utiliza para advertir al usuario sobre instrucciones importantes de operación y mantenimiento (o cambio de partes) que se desean destacar en el contenido de la documentación suministrada con los equipos.



Este símbolo se utiliza para advertir al usuario sobre la presencia de elementos con voltaje peligroso sin protección aislante, que puedan encontrarse dentro de la caja o alojamiento del producto, y que puedan representar riesgo de electrocución.

Precaución

Leer las instrucciones • Leer y analizar todas las instrucciones de operación y seguridad, antes de usar el equipo.

Conservar las instrucciones • Conservar las instrucciones de seguridad para futura consulta.

Obedecer las advertencias • Todas las advertencias e instrucciones marcadas en el equipo o en la documentación del usuario, deben ser obedecidas.

Evitar el uso de accesorios • No usar herramientas o accesorios que no sean específicamente recomendados por el fabricante, ya que podrían implicar riesgos.

安全须知 • 中文



这个符号提示用户该设备用户手册中有重要的操作和维护说明。



这个符号警告用户该设备机壳内有暴露的危险电压，有触电危险。

注意

阅读说明书 • 用户使用该设备前必须阅读并理解所有安全和使用说明。

保存说明书 • 用户应保存安全说明书以备将来使用。

遵守警告 • 用户应遵守产品和用户指南上的所有安全和操作说明。

避免追加 • 不要使用该产品厂商没有推荐的工具或追加设备，以避免危险。

Warning

Power sources • This equipment should be operated only from the power source indicated on the product. This equipment is intended to be used with a main power system with a grounded (neutral) conductor. The third (grounding) pin is a safety feature, do not attempt to bypass or disable it.

Power disconnection • To remove power from the equipment safely, remove all power cords from the rear of the equipment, or the desktop power module (if detachable), or from the power source receptacle (wall plug).

Power cord protection • Power cords should be routed so that they are not likely to be stepped on or pinched by items placed upon or against them.

Servicing • Refer all servicing to qualified service personnel. There are no user-serviceable parts inside. To prevent the risk of shock, do not attempt to service this equipment yourself because opening or removing covers may expose you to dangerous voltage or other hazards.

Slots and openings • If the equipment has slots or holes in the enclosure, these are provided to prevent overheating of sensitive components inside. These openings must never be blocked by other objects.

Lithium battery • There is a danger of explosion if battery is incorrectly replaced. Replace it only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the instructions of the manufacturer.

Avertissement

Alimentations • Ne faire fonctionner ce matériel qu'avec la source d'alimentation indiquée sur l'appareil. Ce matériel doit être utilisé avec une alimentation principale comportant un fil de terre (neutre). Le troisième contact (de mise à la terre) constitue un dispositif de sécurité : n'essayez pas de la contourner ni de la désactiver.

Déconnexion de l'alimentation • Pour mettre le matériel hors tension sans danger, déconnectez tous les cordons d'alimentation de l'arrière de l'appareil ou du module d'alimentation de bureau (s'il est amovible) ou encore de la prise secteur.

Protection du cordon d'alimentation • Acheminer les cordons d'alimentation de manière à ce que personne ne risque de marcher dessus et à ce qu'ils ne soient pas écrasés ou pincés par des objets.

Réparation-maintenance • Faire exécuter toutes les interventions de réparation-maintenance par un technicien qualifié. Aucun des éléments internes ne peut être réparé par l'utilisateur. Afin d'éviter tout danger d'électrocution, l'utilisateur ne doit pas essayer de procéder lui-même à ces opérations car l'ouverture ou le retrait des couvercles risquent de l'exposer à de hautes tensions et autres dangers.

Fentes et orifices • Si le boîtier de l'appareil comporte des fentes ou des orifices, ceux-ci servent à empêcher les composants internes sensibles de surchauffer. Ces ouvertures ne doivent jamais être bloquées par des objets.

Lithium Batterie • Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

Vorsicht

Stromquellen • Dieses Gerät sollte nur über die auf dem Produkt angegebene Stromquelle betrieben werden.

Dieses Gerät wurde für eine Verwendung mit einer Hauptstromleitung mit einem geerdeten (neutralen) Leiter konzipiert. Der dritte Kontakt ist für einen Erdschluß, und stellt eine Sicherheitsfunktion dar. Diese sollte nicht umgangen oder außer Betrieb gesetzt werden.

Stromunterbrechung • Um das Gerät auf sichere Weise vom Netz zu trennen, sollten Sie alle Netzkabel aus der Rückseite des Gerätes, aus der externen Stromversorgung (falls dies möglich ist) oder aus der Wandsteckdose ziehen.

Schutz des Netzkabels • Netzkabel sollten stets so verlegt werden, daß sie nicht im Weg liegen und niemand darauf treten kann oder Objekte darauf- oder unmittelbar dagegengestellt werden können.

Wartung • Alle Wartungsmaßnahmen sollten nur von qualifiziertem Servicepersonal durchgeführt werden. Die internen Komponenten des Gerätes sind wartungsfrei. Zur Vermeidung eines elektrischen Schocks versuchen Sie in keinem Fall, dieses Gerät selbst öffnen, da beim Entfernen der Abdeckungen die Gefahr eines elektrischen Schlags und/oder andere Gefahren bestehen.

Schlitze und Öffnungen • Wenn das Gerät Schlitze oder Löcher im Gehäuse aufweist, dienen diese zur Vermeidung einer Überhitzung der empfindlichen Teile im Inneren. Diese Öffnungen dürfen niemals von anderen Objekten blockiert werden.

Lithium-Batterie • Explosionsgefahr, falls die Batterie nicht richtig ersetzt wird. Ersetzen Sie verbrauchte Batterien nur durch den gleichen oder einen vergleichbaren Batterietyp, der auch vom Hersteller empfohlen wird. Entsorgen Sie verbrauchte Batterien bitte gemäß den Herstelleranweisungen.

Advertencia

Alimentación eléctrica • Este equipo debe conectarse únicamente a la fuente/tipo de alimentación eléctrica indicada en el mismo. La alimentación eléctrica de este equipo debe provenir de un sistema de distribución general con conductor neutro a tierra. La tercera pata (puesta a tierra) es una medida de seguridad, no puentearla ni eliminarla.

Desconexión de alimentación eléctrica • Para desconectar con seguridad la acometida de alimentación eléctrica al equipo, desenchufar todos los cables de alimentación en el panel trasero del equipo, o desenchufar el módulo de alimentación (si fuera independiente), o desenchufar el cable del receptáculo de la pared.

Protección del cables de alimentación • Los cables de alimentación eléctrica se deben instalar en lugares donde no sean pisados ni apretados por objetos que se puedan apoyar sobre ellos.

Reparaciones/mantenimiento • Solicitar siempre los servicios técnicos de personal calificado. En el interior no hay partes a las que el usuario deba acceder. Para evitar riesgo de electrocución, no intentar personalmente la reparación/mantenimiento de este equipo, ya que al abrir o extraer las tapas puede quedar expuesto a voltajes peligrosos u otros riesgos.

Ranuras y aberturas • Si el equipo posee ranuras o orificios en su caja/alojamiento, es para evitar el sobrecalentamiento de componentes internos sensibles. Estas aberturas nunca se deben obstruir con otros objetos.

Batería de litio • Existe riesgo de explosión si esta batería se coloca en la posición incorrecta. Cambiar esta batería únicamente con el mismo tipo (o su equivalente) recomendado por el fabricante. Desachar las baterías usadas siguiendo las instrucciones del fabricante.

警告

电源 • 该设备只能使用产品上标明的电源。设备必须使用有地线的供电系统供电。第三条线（地线）是安全设施，不能不用或跳过。

拔掉电源 • 为安全地从设备拔掉电源，请拔掉所有设备后或桌面电源的电源线，或任何接到市电系统的电源线。

电源线保护 • 妥善布线，避免被踩踏，或重物挤压。

维护 • 所有维修必须由认证的维修人员进行。设备内部没有用户可以更换的零件。为避免出现触电危险不要自己试图打开设备盖子维修该设备。

通风孔 • 有些设备机壳上有通风槽或孔，它们是用来防止机内敏感元件过热。不要用任何东西挡住通风孔。

锂电池 • 不正确的更换电池会有爆炸的危险。必须使用与厂家推荐的相同或相近型号的电池。按照生产厂的建议处理废弃电池。

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. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

The Class A limits are designed to 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 user guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

NOTE: This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to ensure compliance with FCC emissions limits.

For more information on safety guidelines, regulatory compliances, EMI/EMF compliance, accessibility, and related topics, [click here](#).

Conventions Used in this Guide

In this user guide, the following are used:

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

NOTE: A note draws attention to important information.

CAUTION: A caution indicates a potential hazard to equipment or data.

WARNING: A warning warns of things or actions that might cause injury, death, or other severe consequences.

Commands are written in the fonts shown here:

```
^ARMerge Scene , ,Op1 scene 1,1 ^B 51 ^W ^C  
[ 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 mentioned in this guide, the character “0” is used for the number zero and “O” represents 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 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.
```

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Introduction

This user guide contains information about the Extron HDMI 101 Plus cable equalizer and describes the procedures for connecting and operating it.

In this manual, the term “equalizer” refers to the HDMI 101 Plus cable equalizer.

About the HDMI 101 Plus

The HDMI 101 Plus is a compact, economical cable equalizer. It is fully compliant with High Definition Multimedia Interface (HDMI®) and extends digital video, multi-channel audio, and control signals from HDMI-equipped devices beyond the specified cable limit of 45 feet (14 m).

The HDMI 101 Plus attaches to the end of a long cable run of up to 250 feet (76 m) and automatically provides the necessary active equalization to ensure optimal image quality with HDTV 1080p and high resolution computer video signals up to 1920x1200. It is ideal for both temporary applications and permanent installations with long DVI or HDMI cable runs.

The HDMI 101 Plus also passes Extended Display Identification Data (EDID) information and supports the long distance transmission of HDTV signals with High-bandwidth Digital Content Protection (HDCP) for copy protection of digital television broadcasts and high resolution digital video output from DVD, HD DVD, and Blu-rayDisc™ players.

With the appropriate adapters from Extron, the HDMI 101 Plus is fully compatible with the DVI digital video, audio, and control standard for audio and video products.

At shorter distances, the HDMI 101 Plus can be powered by the source device via the HDMI cable, eliminating the external power supply. See the table in the “[Input Cable Lengths](#)” section on page 4 for these distances.

Features

Support for pixel clocks up to 225 MHz — The HDMI 101 Plus handles 10-bit and 12-bit color depths (deep color) to ensure compatibility with HDMI 1.3.

Power and signal indicator — The LED on the front panel lights green to indicate source signal presence and amber to indicate power on.

Source-powering at short distances — The unit can receive power from an attached input source device, eliminating the need for power supply installation (see the [table](#) on page 4).

DDC and HDCP copy protection transmission support — Display Data Channel (DDC) allows pass-through of EDID and HDCP information between source and display.

DDC buffer — Allows the user to buffer the DDC signal by configuring the internal jumper settings.

Enclosure — Compact 1 inch (2.5 cm) high, 1/8 rack wide metal enclosure

Rack and furniture mounting — The equalizer can be mounted on a rack shelf or under a desk or podium.

Power supply — An external international power supply with a two-pin captive screw connector accepts 100 to 240 VAC.

Application Diagram

The following diagram shows a typical application for the HDMI 101 Plus.

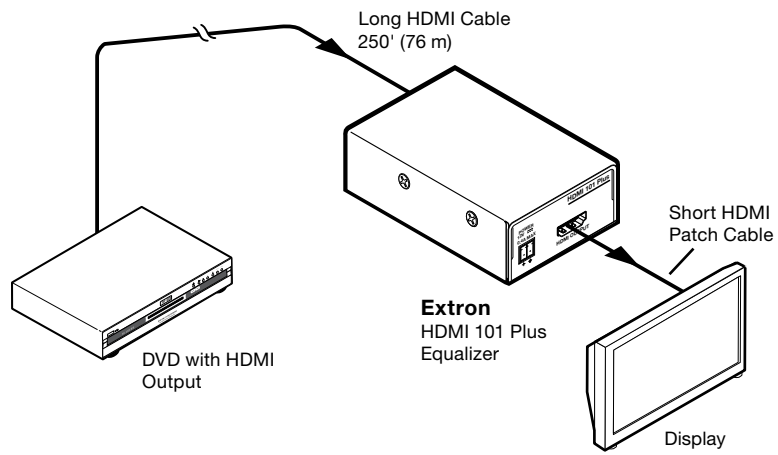


Figure 1. HDMI 101 Plus Application Diagram

Panel Features, Connections, and Setup

This section describes the features and connections of the front and rear panels of the HDMI 101 Plus and how to set up the unit.

HDMI 101 Plus Front and Rear Panel Features and Connections

Front Panel Features and Connections

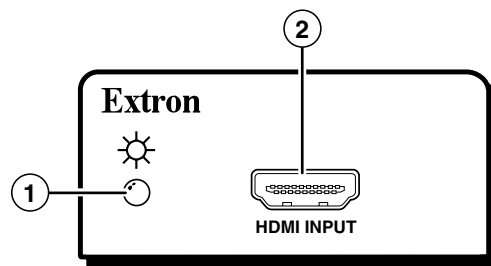


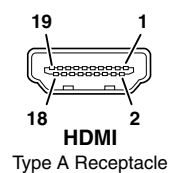
Figure 2. HDMI 101 Plus Front Panel

- ① **Power and signal status LED** — This LED is dual colored. It lights amber when power is connected and lights green when there is an active HDMI input.

NOTE: If power is provided by the source device, the LED will light amber.

- ② **HDMI Input** — Plug the cable from the input source device into this female HDMI type A connector. Secure the HDMI connector to the HDMI 101 Plus with the LockIt™ HDMI lacing bracket provided (see the *LockIt HDMI Lacing Bracket Installation Guide* at www.extron.com).

The wiring of the connector follows the HDMI single link format. The diagram to the right and the table below show the HDMI pin configuration.



Pin	Signal	Pin	Signal	Pin	Signal
1	TMDS data 2+	7	TMDS data 0+	13	CE control
2	TMDS data 2 shield	8	TMDS data 0 shield	14	Reserved (NC)
3	TMDS data 2-	9	TMDS data 0-	15	SCL
4	TMDS data 1+	10	TMDS clock+	16	SDA
5	TMDS data 1 shield	11	TMDS clock shield	17	DDC/CEC ground
6	TMDS data 1-	12	TMDS clock-	18	+5 V power
				19	Hot plug detect

Input cable lengths

The maximum input cable length is 250 feet (76 m) for a transmission rate of 165 MHz; a cable length of up to 200 feet (61 m) can be used for a transmission rate of 225 MHz. Longer cables may be used with a lower rate. High quality cable can increase the distance and rate of transmission. Other factors affecting the maximum transmission distance and frequency include the sensitivity of the input source and the display device.

NOTE: Avoid using couplers and adapters between cables, as this can result in signal degradation.

This table shows the maximum cable lengths recommended for each resolution.

Video Resolution	Maximum Distance (powered by source)	Maximum Distance (powered by external power supply)
720p	150 feet (46 m)	250 feet (76 m)
1080i	150 feet (46 m)	250 feet (76 m)
1080p 8 bit	150 feet (46 m)	200 feet (61 m)
1080p 10 bit	150 feet (46 m)	175 feet (53 m)
1080p 12 bit	125 feet (38 m)	150 feet (46 m)
1024x768 (60 Hz)	150 feet (46 m)	250 feet (76 m)
1280x1024 (60 Hz)	150 feet (46 m)	250 feet (76 m)
1600x1200 (60 Hz)	125 feet (38 m)	200 feet (61 m)
1920x1200 (60 Hz)	125 feet (38 m)	200 feet (61 m)

NOTE: When the source is a PC, Extron recommends the HDMI 101 Plus be powered by an external power supply.

Rear Panel Connections

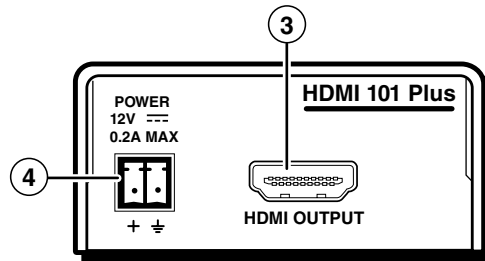


Figure 3. HDMI 101 Plus Rear Panel

③ **HDMI Output** — Plug an HDMI cable from an output device into this female HDMI Type A connector, following the pin configuration shown in the [table](#) on page 3.

Secure the HDMI connector to the HDMI 101 Plus with the LockIt™ HDMI lacing bracket provided (see the LockIt HDMI Lacing Bracket Installation Guide at www.extron.com).

NOTE: Use cables that are 15 feet (5 m) or less for the output.

- ④ **Power Connector** — Plug the external 12 V power supply (provided with the unit) into this 2-pole captive screw connector.

NOTE: The HDMI 101 Plus can draw power from the external power supply or, via the HDMI cable, from the input device (see “[Powering Via the Input Source](#)” on page 6). For optimum performance, Extron recommends that the power is taken from the external power supply.

The figure below shows how to wire the connector.

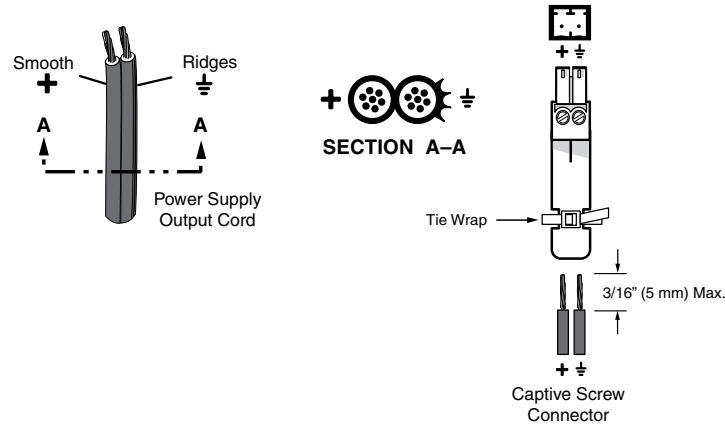


Figure 4. Wiring the Power Connector

- CAUTION:**
- Power supply voltage polarity is critical. Incorrect voltage polarity can damage the power supply, the transmitter, the receiver, or both. Identify the ground (≡) lead by the ridges on the side of the cord (see the figure above).
 - 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.
 - 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 A/V processing equipment in an ordinary location, Pollution Degree 2, secured to the equipment rack within the dedicated closet, podium, or desk.
 - The installation must always be in accordance with the applicable provisions of National Electrical Code ANSI/NFPA 70, Article 75 and the Canadian Electrical Code part 1, Section 16. The power supply shall not be permanently fixed to the building structure or a similar structure.

- NOTES:**
- The ideal length of exposed wire in the stripping process is 3/16 inch (5 mm). If longer than 3/16 inch, the exposed wires may touch, causing a short circuit. If shorter than 3/16 inch, the wires can be easily pulled out even if tightly fastened.
 - Do not tin the wires. Tinned wire does not hold its shape and comes loose over time.

Powering Via the Input Source

For shorter distances, the HDMI 101 Plus can receive power from the input device via the 5 VDC signal on pin 18 of the HDMI cable (see the [table](#) on page 3). This eliminates the external power supply. However, for best unit performance, Extron recommends using the external supply.

- NOTES:**
- If the source does not adequately supply the +5 V power, an external power supply must be used.
 - To verify if the source is providing power, connect a short HDMI cable from the input device to the input of the equalizer. If the HDMI 101 Plus front panel LED lights amber, the source is supplying power.

Setup

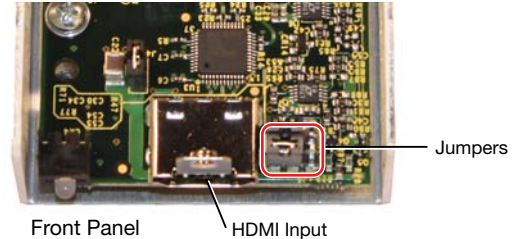
DDC Buffer

By default, the DDC buffer is bypassed. Some applications require that the DDC be buffered when there is no picture on the display. This is not always an issue as it depends on a combination of the source, display and cable length. To buffer the DDC, follow these instructions.

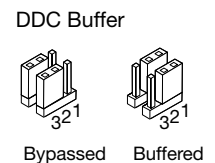
1. Remove and keep the screws holding the cover to the base. There is one screw on the front panel and two screws on each side. Set aside the cover and retain the screws.

CAUTION: Do not remove the screw on the back panel. This secures the internal circuit board and does not attach the base to the cover.

2. Locate the two sets of jumpers next to the HDMI input (shown in the figure to the right).



3. By default, both sets of jumpers connect pins 2 and 3 (closest to the HDMI input), bypassing the DDC buffer (see the diagram to the right). To buffer the DDC, connect pins 1 and 2 (closest to the side of the unit) on both jumpers.



4. Replace the cover, using the screws that were removed in step 1.

NOTE: When DDC channels are buffered, use an external power supply for best results.

Connecting for Long Cable Runs

To use the HDMI 101 Plus effectively, follow the recommendations in figure 5 for cable lengths between the source device and HDMI 101 Plus and between the HDMI 101 Plus and the display device. Position the HDMI 101 Plus at the end of the cable closest to the display.

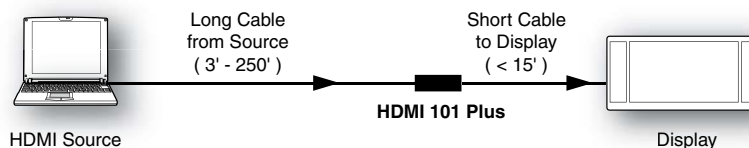


Figure 5. Optimum Cable Lengths between the Source, HDMI 101 Plus, and Display

Reference Information

Specifications

NOTE: *Appropriate HDMI to DVI-D cables or adapters are required for DVI signal input/output.

Video

Maximum data rate.....	6.75 Gbps (2.25 Gbps per color)
Maximum pixel clock.....	225 MHz
Resolution range	Up to 1920x1200 or 1080p @ 60 Hz
Formats.....	RGB and YCbCr digital video
Standards.....	DVI 1.0, HDMI 1.3
Impedance	100 ohms
Input video signal.....	1.2 Vp-p (TMDS)
ID bits	5 Vp-p (TTL)

Video input

Number/signal type	1 single link HDMI (or DVI-D*)
Connectors	1 female HDMI type A
Equalization	Automatic for up to -40 dB of cable loss
Input cable length	Up to 150' (46 m) at 1080p / 12 bit @ 60 Hz Up to 175' (53 m) at 1080p / 10 bit @ 60 Hz Up to 200' (61 m) at 1920x1200, 1600x1200, or 1080p / 8 bit @ 60 Hz Up to 250' (76 m) at 720p, 1080i, 1024x768, or 1280x1024 @ 60 Hz Longer distances are possible with lower rates and/or high quality cable.

NOTE: The transmission distance varies greatly depending on the signal resolution and on the type of cable, source, and display used in the system.

Video output

Number/signal type	1 single link HDMI (or DVI-D*)
Connectors	1 female HDMI type A
Output cable length	Up to 15' (5 m)

General

Power	Supplied by an external power supply or by the 5 V signal from an HDMI source (pin 18) or a DVI source (pin 14)
External power supply	100 VAC to 240 VAC, 50-60 Hz, external; to 12 VDC, 1 A, regulated
Power input requirements	12 VDC, 0.2 A from an external power supply or 5 VDC, 0.05 A from an HDMI or DVI source
Temperature/humidity	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Cooling	Convection, no vents

Mounting.....	Rack mountable with optional rack shelf kit
Enclosure type.....	Metal
Enclosure dimensions	1.0" H x 2.2" W x 3.0" D (1/8 rack wide) (2.5 cm H x 5.6 cm W x 7.6 cm D) (Depth excludes connectors.)
Product weight.....	0.4 lbs (0.2 kg)
Shipping weight.....	2 lbs (1 kg)
Vibration.....	ISTA 1A in carton (International Safe Transit Association)
Regulatory compliance	
Safety.....	CE, CUL, UL
EMI/EMC	CE, C-tick, FCC Class A, ICES, VCCI
MTBF	30,000 hours
Warranty.....	3 years parts and labor

- NOTE:**
- All nominal levels are at $\pm 10\%$.
 - Specifications are subject to change without notice.

Included Parts

Description	Part Number
HDMI 101 Plus	60-872-02
PS 1210 12 VDC, 1 A external power supply	70-775-01
(1) IEC power cord	
(4) Rubber feet	
(2) Velcro strips (2 inches x 1 inch)	
(1) 3.5 mm, 2-pole captive screw connector with tail	
(2) LockIt HDMI Lacing Brackets	
(1) Tweaker (small screwdriver)	
<i>HDMI 101 Plus Setup Guide</i>	

Optional Parts

Description	Part Number
MBU 125 Under-desk Mount Kit	70-077-01
MBU 129 Through-desk Mount Kit	70-077-02
RSU 129 1U, 9.5 inch deep, universal rack shelf kit	60-190-01
RSB 129 1U, 9.5 inch deep, basic rack shelf	60-604-02
RSU 126 1U, 6 inch deep, universal rack shelf kit	60-190-10
RSB 126 1U, 6 inch deep, basic rack shelf	60-604-11
RSF 123 1U, 3.5 inch deep, rack shelf kit	60-190-20
RSB 123 1U, 3.5 inch deep, basic rack shelf	60-604-21
HDMI M-M Pro terminated HDMI cables (in lengths from 3 - 200 feet)	26-650-03 to 26-650-200

Mounting

This section outlines the various options for mounting the HDMI 101 Plus.

- Tabletop mounting
- Rack mounting
- Under-desk mounting
- Through-desk mounting

Tabletop Mounting

Attach the four provided rubber feet to the bottom of the unit and place it in any convenient location.

Rack Mounting

Underwriters Laboratories Guidelines for Rack Mounting

The following Underwriters Laboratories (UL) guidelines are relevant to the safe installation of these products in a rack:

Elevated operating ambient temperature — If the unit 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 (T_{ma}: +122 °F, +45 °C) specified by Extron.

Reduced air flow — Install the equipment in the rack so that the equipment gets adequate air flow for safe operation.

Mechanical loading — Mount the equipment in the rack so that uneven mechanical loading does not create a hazardous condition.

Circuit overloading — Connect the equipment to the supply circuit and consider the effect that circuit overloading might have on overcurrent protection and supply wiring. Give appropriate consideration to the 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 (such as the use of power strips).

Rack Mounting the HDMI 101 Plus

The HDMI 101 Plus can be mounted on any of these optional Extron rack systems:

RSF 123 — 3.5 inch deep, 1U universal rack shelf kit (part number **60-190-20**)

RSB 123 — 3.5 inch deep, 1U basic rack shelf (part number **60-604-21**)

RSU 126 — 6 inch deep, 1U universal rack shelf kit (part number **60-190-10**)

RSB 126 — 6 inch deep, 1U basic rack shelf (part number **60-604-11**)

RSU 129 — 9.5 inch deep, 1U universal rack shelf kit (part number **60-190-01**)

RSB 129 — 9.5 inch deep, 1U basic rack shelf (part number **60-604-02**)

To mount the unit on a rack shelf, follow the instructions provided with the shelf accessories.

Under-desk Mounting

Mount the unit under a desk or podium, using the optional Extron MBU 125 under-desk mounting kit (part number **70-077-01**) by following the instructions provided with the MBU 125 kit.

Through-desk Mounting

Mount the unit through a desk or podium using the optional Extron MBD 129 through-desk mounting kit (part number **70-077-02**) by following the instructions provided with the MBD 129 kit.

Extron® Warranty

Extron Electronics 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 Electronics 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 Electronics
1001 East Ball Road
Anaheim, CA 92805
U.S.A.

Japan:

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

Europe, Africa, and the Middle East:

Extron Europe
Hanzeboulevard 10
3825 PH Amersfoort
The Netherlands

China:

Extron China
686 Ronghua Road
Songjiang District
Shanghai 201611
China

Asia:

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

Middle East:

Extron Middle East
Dubai Airport Free Zone
F12, PO Box 293666
United Arab Emirates, Dubai

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 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

Asia: 65.6383.4400

Europe: 31.33.453.4040

Japan: 81.3.3511.7655

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 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.

Extron USA - West Headquarters +800.633.9876 Inside USA/Canada Only +1.714.491.1500 +1.714.491.1517 FAX	Extron USA - East +800.633.9876 Inside USA/Canada Only +1.919.863.1794 +1.919.863.1797 FAX	Extron Europe +800.3987.6673 Inside Europe Only +31.33.453.4040 +31.33.453.4050 FAX	Extron Asia +800.7339.8766 Inside Asia Only +65.6383.4400 +65.6383.4664 FAX	Extron Japan +81.3.3511.7655 +81.3.3511.7656 FAX	Extron China +400.883.1568 Inside China Only +86.21.3760.1568 +86.21.3760.1566 FAX	Extron Middle East +971.4.2991800 +971.4.2991880 FAX
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