Extron

UCS T 911 and UCS R 912

UCS T/R 910 Series Transmitter and Receiver

User Guide
Category

68-3803-01, Rev. A
03 26

Safety Instructions

Safety Instructions • English

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

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

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

تعليمات السلامة • العربية

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

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

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

Sicherheitsanweisungen • Deutsch

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

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

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

Instrucciones de seguridad • Español

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

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

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

Instructions de sécurité • Français

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

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

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

Istruzioni di sicurezza • Italiano

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

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

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

Instrukcje bezpieczeństwa • Polska

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

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

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

Инструкция по технике безопасности • Русский

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

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

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

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，產品機殼內存在著可能會導致觸電之風險的未絕緣危險電壓。

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 기호가 제품에 사용될 경우, 제품의 인클로저 내에 있는 접지되지 않은 위험한 전류로 인해 사용자가 감전될 위험이 있음을 경고합니다.

주의: 이 기호가 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.

Contents

Introduction

About this Guide

The UCS T 911 and UCS R 912 extend USB signals from USB 3.2, 2.0, and 1.1 peripheral devices up to 328 ft (100 meters) to a USB host computer over a single CAT 6A or higher twisted pair cable.

The transmitter features a USB Type-C connector. The receiver features a built-in two-port hub that supplies up to 900 mA for each port to power attached devices, and remotely powers the transmitter.

NOTE: This product supports USB data ONLY. DisplayPort Alt Mode and power delivery are NOT supported.

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.

Features

Point-to-point transmission — Extends USB peripherals up to 328 ft (100 meters) on one CAT 6A cable for point-to-point applications.

Supports USB 3.2, 2.0, and 1.1 devices — Supports bulk, control, interrupt, and isochronous transfers as defined by the USB specification.

Provides data transfer rates up to 5 Gbps — Allows for the use of USB 3.2 cameras and other USB conference room peripherals requiring high bandwidth support.

Integrated dual-port devices — The receiver has two integrated USB ports, which provide up to 900 mA on each port. This alllows simultaneous connection to multiple peripheral devices such as USB cameras, all-in-one conference systems, interactive displays, annotation devices, mass storage, keyboards, and mice in pro AV environments.

Real-time status LED indicators for troubleshooting and monitoring — Front panel LED indicators provide visual confirmation of active host and link status.

Rack and furniture mountable — Low-profile, 1-inch (2.5 cm) high, 6-inch deep (15.24 cm), and quarter rack wide metal enclosures enable discreet installation, such as beneath a table or behind a display. One ZipClip 100 and two ZipClip 200 mounting accessories are included.

Transmitter can be remotely powered via receiver — UCS T 911 transmitter can be powered by UCS R 912 receiver or optional external power supply.

External Extron Everlast power supply included for receiver — Provides worldwide power compatibility with high-demonstrated reliability and low power consumption (Extron Everlast Power Supply is covered by a 7-year parts and labor warranty).

Application Diagram

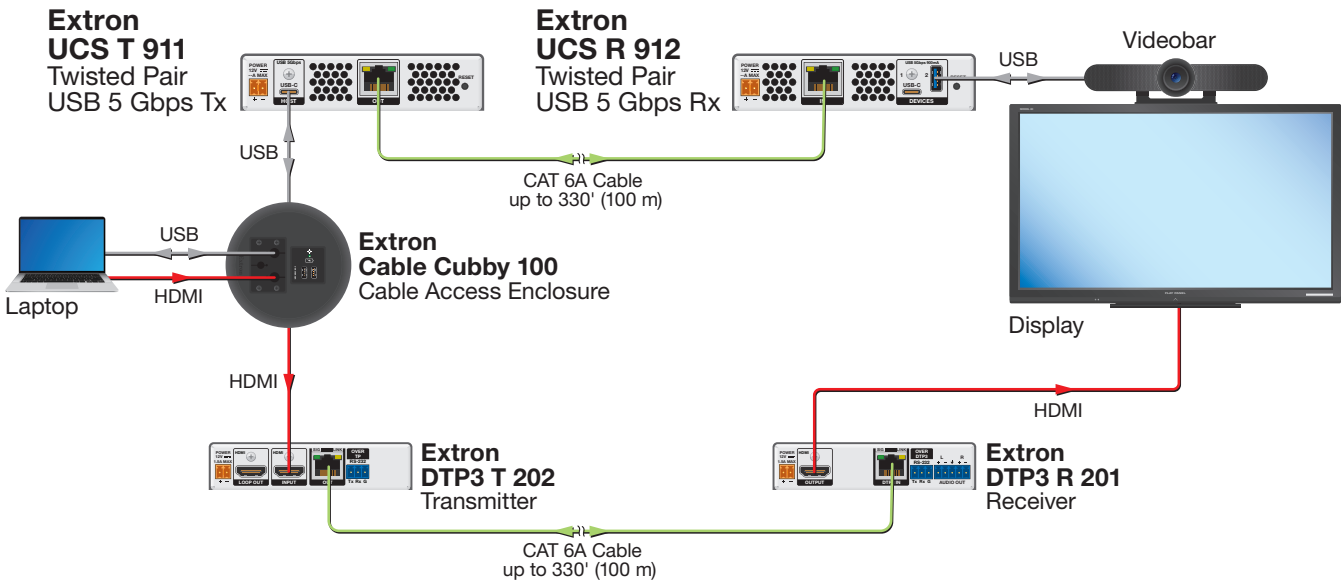


Figure 1. UCS T 911 and UCS R 912 Application Diagram

Installation and Operation

This section includes the following topics:

Rear Panel Features

UCS T 911

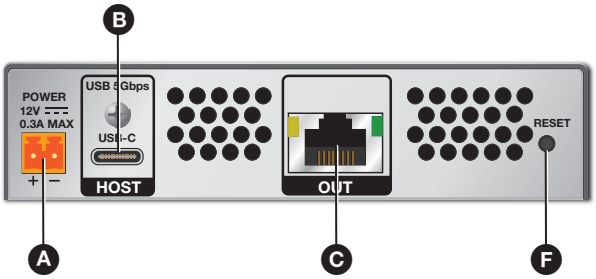


Figure 2. Transmitter Rear Panel

UCS R 912

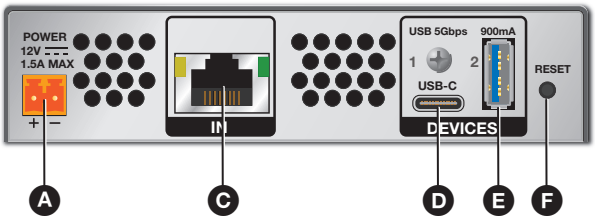


Figure 3. Receiver Rear Panel

A Power connector —

Transmitter — Connect the optional 12 V, 0.5 A max. external power supply to this 2-pole, 3.5 mm captive screw connector.

Receiver (with remote power to Transmitter) — Connect the provided 12 V, 2.0 A external power supply to the 2-pole, 3.5 mm captive screw connector once the twisted pair cable is connected between the units. The transmitter cannot remotely power the receiver.

ATTENTION:

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

- Do not mount the power supply in air handling spaces or in wall cavities.
- Ne pas installer la source d'alimentation dans des espaces d'aération ou dans des cavités murales.

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

- The power supply must be located within the same vicinity as the Extron AV processing equipment in an ordinary location, Pollution Degree 2, secured to a podium, a desk, or an equipment rack within a dedicated closet.
- La source d'alimentation doit être située à proximité de l'équipement audiovisuel Extron dans un emplacement habituel, avec un degré de pollution 2, fixée à une estrade, un bureau, ou dans une baie technique à l'intérieur d'un placard dédié.

ATTENTION:

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

- 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, minimum 2.0 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 2,0 A minimum.

B **Host connector** (see **figure 2** on page 3) — Connect a USB Type A-to-C or Type C-to-C cable between this USB-C port and a USB 3.2 port of a host device.

C **Twisted pair connectors** —

Transmitter — Connect a CAT 6A or better twisted pair cable from the RJ-45 Input connector of the receiver (see **figure 3**, **C** on page 3) to this Output connector.

Receiver — Connect a CAT 6A or better twisted pair cable from the RJ-45 Output connector of the transmitter (see **figure 2**, **C**) to this Input connector.

NOTE: The Extron XTP DTP 22 twisted pair cable can also be used in place of CAT 6A.

D **Devices** —

Port 1 (USB Type-C) — Connects a USB Type A-to-C or USB Type C-to-C cable between this USB-C port and a USB peripheral device.

Port 2 (USB Type-A) — Connects a USB Type A-to-B or USB Type C-to-A cable between this USB-A port and a USB peripheral device.

E **Reset button** — Press and hold for factory reset. See **Resetting Firmware to the Factory Default Version** on page 15 for more information.

Cabling and Setup

Figure 4 shows connections for the UCS T 911 and UCS R 912.

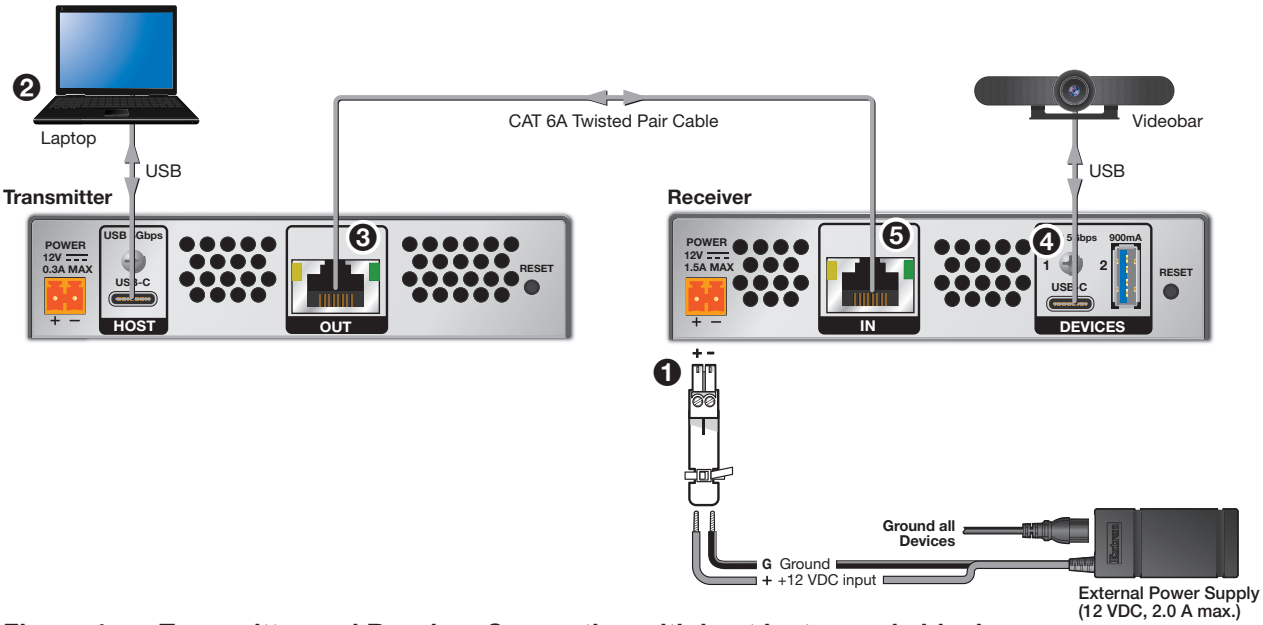


Figure 4. Transmitter and Receiver Connection with host laptop and videobar

Installation Procedure

ATTENTION:

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

To ensure proper operation, the transmitter, receiver, USB host, and USB peripherals must be connected properly and in the sequence described here (see **figure 4** on page 4).

1. Mount the transmitter and receiver in their desired locations
2. Connect a twisted pair cable from the Output port of the transmitter to the Input port of the receiver (see **figure 4**, ❺). The transmitter and receiver front panel LINK LEDs will light steadily (see **figure 6** and **7**, Ⓒ, on page 6).
3. Connect USB peripheral device (for example: USB cameras, keyboard, mouse) to the device ports of the receiver.
4. Wire the provided power supply to the 2-pole captive screw connector (see figure 5).

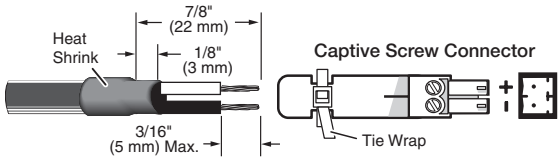


Figure 5. Wiring the Power Connector for the UCS T 911 and R 912

NOTE: The UCS T 911 (transmitter) can also be powered by the receiver, without the need for the external power supply.

5. Plug the two power supply connectors into their respective transmitter or receiver rear panel connectors (see **figure 4**, ❶). If the transmitter is going to be remotely powered by the receiver from one power supply, connect the 12 V, 2.0 A power supply to the receiver.
6. The green Power LEDs on the Transmitter and Receiver (see **figure 6** and **7**, Ⓐ) light when each device is powered on.
7. Connect a USB-C cable from the host device (see **figure 4**, ❷) to the transmitter HOST input. The Host LED (see **figure 6**, Ⓓ) lights, indicating that communication between the transmitter and host device has been established.
8. If appropriate, choose a location and mount the transmitter and receiver
   - For rack mounting, fasten the enclosure to the rack or rack shelf.
   - For furniture mounting, see **ZipClip 200 Installation and Mounting** on page 17.
   - For table mounting, attach the provided four rubber feet to the bottom of the unit and place it where desired.
9. Power on the host computer. On the transmitter, the HOST and LINK LEDs (see **figure 6** and **7**, Ⓒ, Ⓓ, and Ⓔ) light when the computer recognizes the transmitter, and when the transmitter and receiver are connected with each other.
10. Connect up to two USB peripheral devices (such as a camera, keyboard, touchpanel or printer) to the receiver USB devices ports (see **figure 4**, ❹).

The system is now ready to operate.

Front Panel Features

UCS T 911

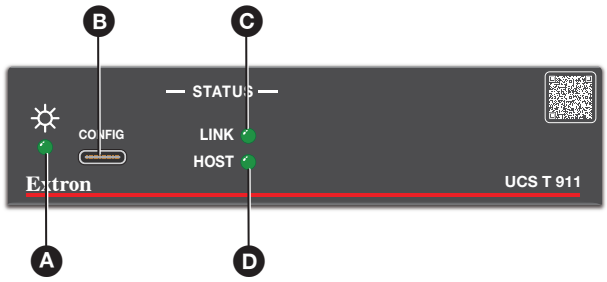


Figure 6. Transmitter Front Panel

UCS R 912

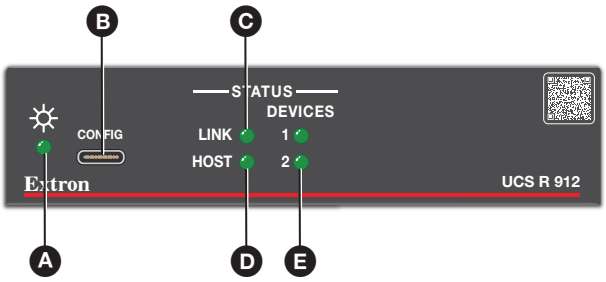


Figure 7. Receiver Front Panel

- **A Power LED** — This green LED lights to indicate that the transmitter or receiver unit is receiving power.
- **B USB-C Configuration port** — Connect a USB port on the computer to this USB-C connector via a USB-C cable. Use this port for configuring or upgrading firmware on the unit.
- **C Link LED** — This green LED lights when the transmitter and receiver are connected with a twisted pair cable, receiving power and communicating with the host PC.
- **D Host LED** — This green LED lights when the transmitter is powered and is communicating with the active host PC.
- **E Receiver Device LEDs (1 and 2)** — One or both of these green LEDs light when their respective rear devices ports (1 and 2) are connected to a USB device (**figure 4**, 4 on page 4).

Remote Configuration and Control

This section describes the connection through which the UCS 910 Series devices can be configured and controlled remotely via SIS commands, and describes the commands that are available. Topics include:

- **SIS Commands**
- **Using the Command and Response Table**
- **Command and Response Table for SIS Commands**

SIS Commands

Using SIS commands, you can remotely set up and control the UCS 910 Series devices via a host computer or other device (such as a control system) that is attached to the Config port. You can issue SIS commands to the UCS devices using a communication software program, such as Extron DataViewer.

NOTE: The SIS command for resetting must be issued to both the UCS T 911 transmitter and the UCS R 912 receiver. Do not reset one unit without resetting the other.

SIS commands consist of one or more characters per field. No special characters are required to begin or end a command sequence. When UCS 910 Series devices determine that a command that was entered is valid, it executes the command and sends a response to the host device.

Responses from UCS 910 Series devices 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.

Extender-initiated Message

When power is applied to the UCS 910 Series devices or after the units have been reset via SIS, they send one of the following copyright messages:

For the UCS T 911 — (C)Copyright 20*nn*, Extron Electronics, UCS T 911, V*n.nn*, 60-*nnnn-nn* ↵

For the UCS R 912 — (C)Copyright 20*nn*, Extron Electronics, UCS R 912, V*n.nn*, 60-*nnnn-nn* ↵

- V*n.nn* is the firmware version number
- 60-*nnnn-nn* is the unit part number

NOTE: This message is displayed only when power is applied to UCS 910 Series devices while they are connected to the computer via the Config port.

Using the Command and Response Table

The **Command and Response Table for SIS Commands** on the next page lists valid ASCII command codes, the responses of the extender to the host, and descriptions of the command functions or the results of executing the commands.

ASCII to Hexadecimal Conversion

The ASCII to Hex Conversion Table below is for use with the command and response table.

ASCII to HEX Conversion Table										Esc	1B	CR	ØD	LF	ØA
Space	2Ø	!	21	"	22	#	23	$	24	%	25	&	26	'	27
(	28	)	29	*	2A	+	2B	,	2C	-	2D	.	2E	/	2F
Ø	3Ø	1	31	2	32	3	33	4	34	5	35	6	36	7	37
8	38	9	39	:	3A	;	3B	<	3C	=	3D	>	3E	?	3F
@	4Ø	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	5Ø	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
`	6Ø	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	7Ø	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

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

Error Responses

When the SMP is unable to execute the command, it returns an error response to the host. The error response codes and their descriptions are as follows —

E10 – Unrecognized command	E18 – System timed out
E12 – Invalid port number	E22 – Busy
E13 – Invalid parameter (number is out of range)	E24 – Privilege violation
E14 – Not valid for this configuration	E26 – Maximum connections exceeded
E17 – Invalid command for signal type	E28 – Bad file name or file not found

System Definitions

Common Symbol Definitions		
↵	=	CR/LF (carriage return/line feed, (hex 0D 0A)
←	=	Carriage return with no line feed (no line feed, hex 0D) (for URL-encoded commands, use the pipe character, | , instead)
|	=	Pipe (vertical bar) character (URL equivalent to carriage return)
Esc	=	Escape key, or hex 1B (use W instead of Esc for web browsers, or at any time)
•	=	Space
*	=	Asterisk character (which is a command character, not a variable)

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."

Command and Response Table for SIS Commands

Command Function	SIS Command (Host to Device)	Response (Device to Host)	Additional Description
USB Signal Host Status			
View input host status	Esc I USBC ←	X1 ↵ USB I X1 ↵	
USB Signal Device Status			
View USB device status	Esc O USBC ←	X1 • X1 ↵ Usbc O X1 • X1 ↵	Verbose mode 2/3
Remote Power (Rx only)			
Set remote power	Esc I X1 RpwrI ←	RpwrI X1 ↵	
View remote power	Esc I RpwrI ←	X1 ↵ RpwrI X1 ↵	Verbose mode 2/3
Query model name	1I	UCS • T • 911 or UCS • R • 912 ↵ Inf02* UCS • T • 911 or UCS • R • 912 ↵	Verbose mode 2/3
Query model description	2I	UCS • EXTENDER ↵ Inf02* UCS • EXTENDER ↵	Verbose mode 2/3
Request part number	N	60-2043-12 or 60-2043-13 ↵	
Query firmwware version	Q	x.xx ↵	
Query firmware and build version	Q*	x.xx.xx ↵	
Set unit name	Esc X2 CN ←	Ipn • X2 ↵	Up to 24 alphanumeric characters including "-"
Set unit name to default	Esc • CN ←	Ipn • UCS • T • 911 or UCS • R • 912 ↵	
View unit name	Esc CN ←	X2 ↵ Ipn • X2 ↵	verbose mode 2/3
Set verbose mode	Esc X3 CV ←	Vrb X3 ↵	X3 = default; 1 verbose mode
View verbose mode	Esc CV ←	X3 ↵	
NOTE: If tagged responses is enabled, all read commands return the data, the same as setting the value does.			
Reset	Esc ZXXX ←	Zpx ↵	Resets box
Upload Firmware	Esc Upload ←	…go Upl ↵	(after upload is complete) Only for Microcontroller

KEY:

X1 = On and off (enable and disable) — Ø = Off or disabled 1 = On or enabled

X2 = Text string of up to 24 alphanumeric characters and hyphen (-). No spaces allowed, and no distinction between upper and lower case. First character must be a letter and the last must not be a hyphen. **Default is UCS T 911 or UCS R 912 (depending on model)**

X3 = Verbose mode

```
0 = clear/none
1 = default; Verbose mode
2 = Tagged responses for queries
3 = Verbose mode and tagged responses for queries
```

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 upper letter "o".

Updating Firmware

Updates to the UCS T 911 and UCS R 912 firmware are released periodically on the Extron website. You can find the version that is currently loaded on your UCS 910 Series devices using SIS commands. Compare your firmware version with the latest release on the Extron website and decide whether to update your firmware.

TIP: Read the release notes provided on the website with the latest firmware to determine whether you need the latest version.

This chapter describes how to update firmware for the UCS T 911 and UCS R 912:

- **Downloading and Installing Firmware Loader**
- **Downloading UCS T 911 and UCS R 912 Firmware**
- **Loading the Firmware to the UCS T 911 and UCS R 912**
- **Resetting Firmware to the Factory Default Version**

Downloading and Installing Firmware Loader

Extron recommends using the Firmware Loader software to update the firmware on Extron products. If you do not already have Firmware Loader installed on your computer, download it as follows:

1. Go to the Extron website at **www.extron.com** and click the **Download** tab from the top of the page.
2. On the Download Center screen, click the **Software** link on the main menu.
3. Locate Firmware Loader and click **Download** (❶).

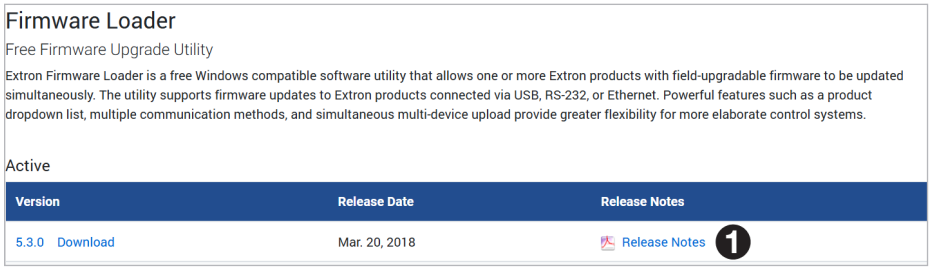


Figure 8. Firmware Loader Download Link

4. On the next screen, enter the requested information, then click **Download fw_loader_vnxnx*n*.exe** (where *n* is the Firmware Loader version number).
5. Follow the instructions on the rest of the download screens to save the executable Firmware Loader installer file to your computer. Note the folder in which the file was saved.
6. Navigate to the downloaded executable installer file and double-click to open it.
7. Follow the instructions on the Installation Wizard screens to install Firmware Loader on your computer. Unless you specify otherwise, the installer program places the Firmware Loader file, FWLoader.exe, at C:\Program Files\Extron\FWLoader or C:\Program Files (x86)\Extron\FWLoader.

Downloading UCS T 911 and UCS R 912 Firmware

To obtain the latest version of firmware for your UCS T 911 and UCS R 912:

1. Visit the Extron website (**www.extron.com**), click **Download** (see figure 9, ❶) at the top of the page, then click the **Firmware** link (❷) from the menu options.

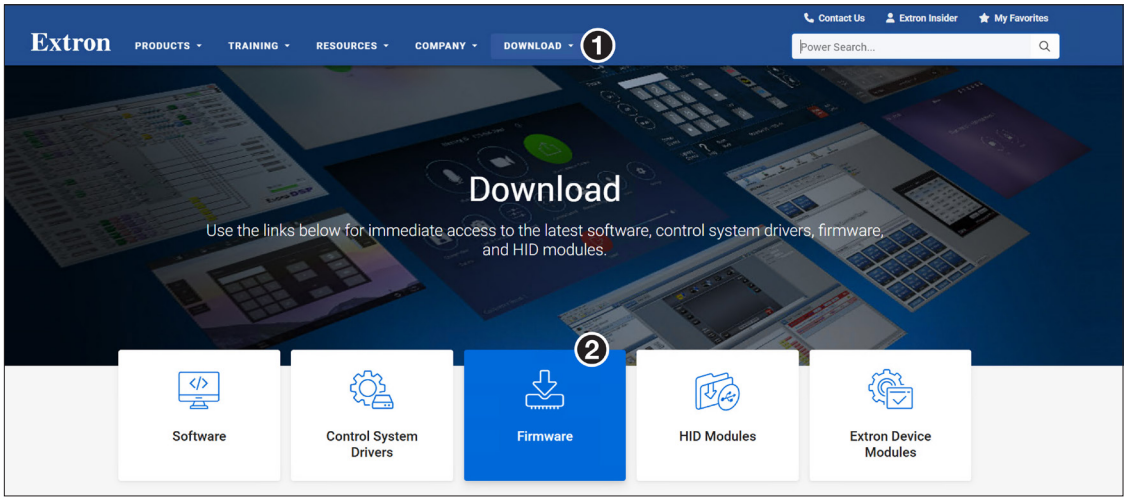


Figure 9. Firmware Link on the Download Tab

2. Search for the UCS T 911 and UCS R 912 firmware.

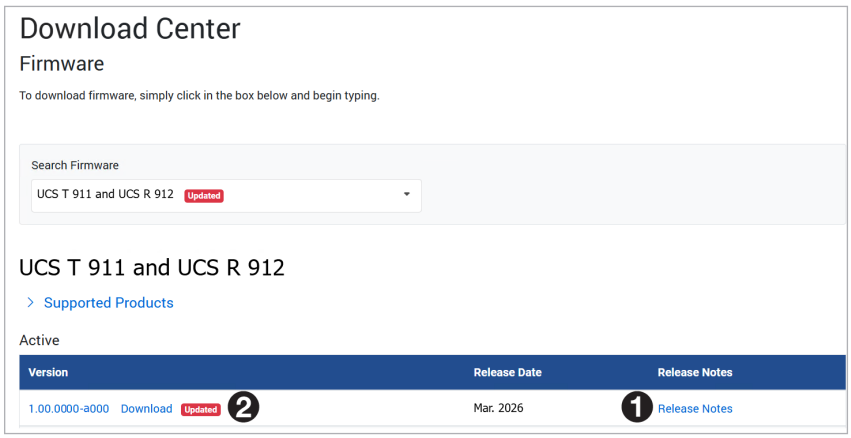


Figure 10. Firmware for the UCS 910 Series

3. (Optional) click **Release Notes** (see figure 10, ❶). These notes show the issues that have been addressed by the latest update. If these issues do not affect you, you may decide not to upgrade the firmware.
4. Click the UCS T 911 and UCS R 912 **Download** link (❷).
5. On the next screen, enter the requested user information, and then click **Download**.
6. Follow the instructions on the rest of the download screens to save the executable firmware file to your computer. Note the folder in which the file was saved.
7. Locate the downloaded executable file. Double-click it to open it.
8. Follow the instructions on the Installation Wizard screens to install the new firmware on your computer. A release notes file, providing information on what has changed in the new firmware version, and a set of instructions for updating the firmware are also loaded.

Loading the Firmware to the UCS T 911 and UCS R 912

To load a new version of firmware to the switcher using Firmware Loader:

1. Download and install the Firmware Loader executable installer file to your computer (see **Downloading and Installing Firmware Loader** on page 10).
2. If necessary, download the latest version of UCS T 911 and UCS R 912 firmware and install it on your computer (see **Downloading UCS T 911 and UCS R 912 Firmware** on page 11).
3. Open Firmware Loader via your desktop `Start` menu by making the following selections:

   `Start > All Programs > Extron Electronics > Firmware Loader > Firmware Loader`

   Firmware Loader opens with the `Add Device` window displayed in front of it.

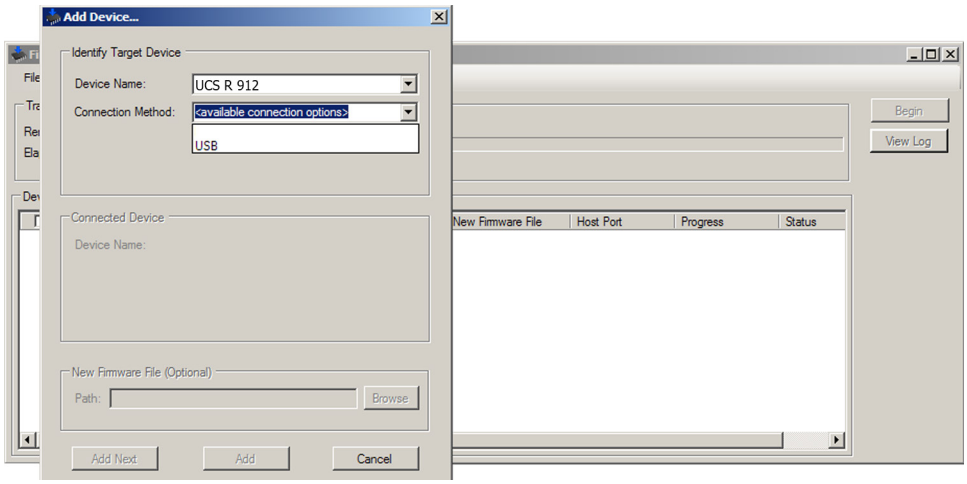


Figure 11. Opening Firmware Loader

4. Select **`UCS T 911`** or **`UCS R 912`** from the **`Device Name`** drop-down list.
5. From the **`Connection Method`** drop-down list, select **`USB`**.
6. Depending on the connection method that you selected, additional options appear. Make the appropriate selections for your connection method.
   - **`USB`**: Only the **`Extron USB Device_0`** option is available in the `Available Devices` menu. Make sure that it is selected.
7. Click **`Connect`**. If the connection is successful, UCS T 911 or UCS R 912 is displayed in green in the Connected Device panel, followed by a green check mark.

8. Click **Browse** in the New Firmware File panel (optional).
9. Navigate to the new firmware file, which has an S19 extension, and double-click it.

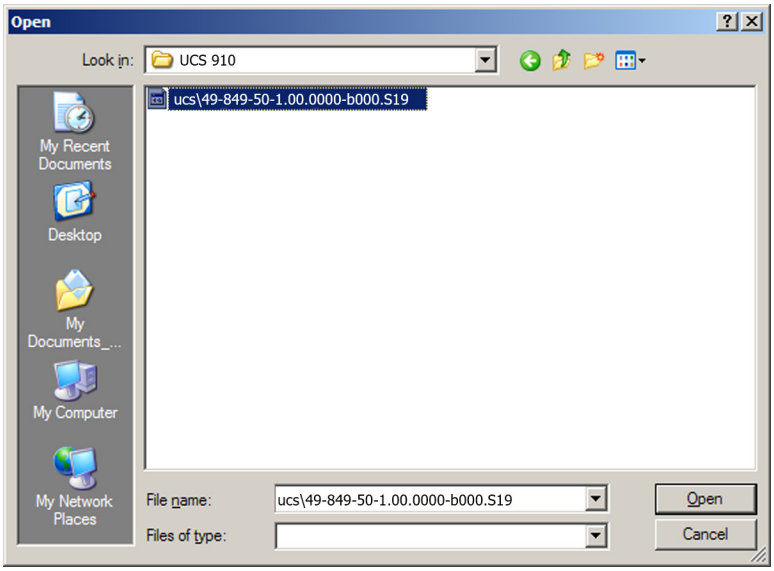


Figure 12. Open Window for Firmware File Selection

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 switcher 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.

NOTES:

- The original factory-installed firmware is permanently available on both the UCS T 911 and UCS R 912 units. If the attempted firmware upload fails for any reason, the UCS T 911 and UCS R 912 revert to the factory version firnware.
- When downloaded from the Extron website, by default the firmware is placed in a folder at `C:\Program Files\Extron\Firmware\UCS_910 (Windows XP) or C:\Program Files (x86)\Extron\Firmware\UCS_910 (Windows 7 and later).`

10. In the Add Device dialog, the path to the new firmware file is displayed in the **Path** field.

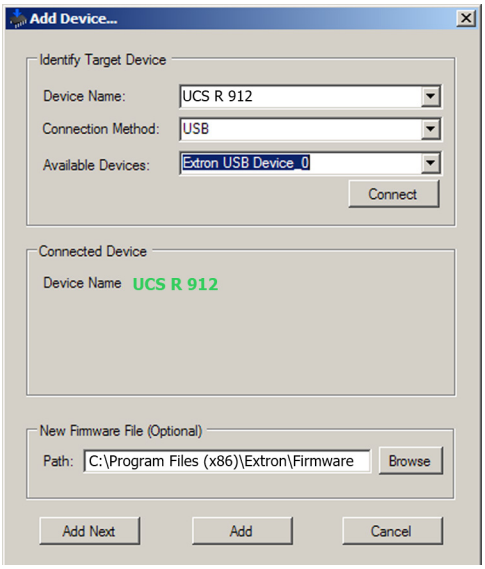


Figure 13. Path to the New Firmware File on the Add Device Window

11. **If this is the only device to which you are uploading firmware**, click **Add**. The UCS 910 information is added to the Devices panel of Firmware Loader and the Add Device dialog closes.

    If you will be uploading the firmware to multiple UCS 910 units that are connected to your computer, do the following:

    a. Click **Add Next**. Your first device is added to the Devices section of Firmware Loader, and the Add Device dialog remains open.

    b. For each additional device you want to add to Firmware Loader, repeat steps **5** through **10**, then click **Add Next**.

    c. For the last device, click **Add** (instead of **Add Next**) to add the device and to close the Add Device window.

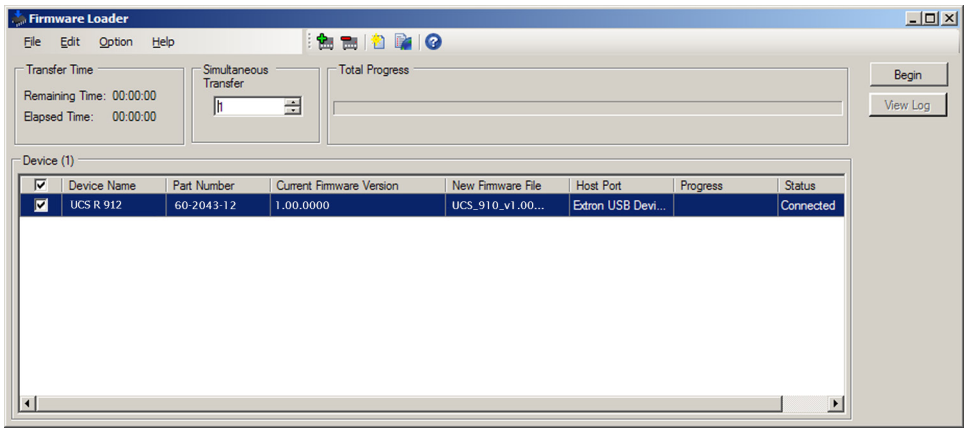


Figure 14. Firmware Loader Screen with a UCS 910 Device Added

12. If you want to remove a device from the Devices section, do the following:

    a. Click the names of the devices to be deleted, to highlight them.

    b. Select **Remove Selected Device(s)** from the **Edit** menu.

    c. In the Remove Device(s) window, select or deselect any devices on the list as desired, then click **Remove**.

    To remove **all** devices, select **Remove All Devices** from the **Edit** menu.

13. Click **Begin**. The following indicators show the progress of the update:
    - The Transfer Time panel shows the amounts of remaining and elapsed time for the update.
    - Total Progress displays a progress bar with Uploading... above it.
    - In the Devices panel, the Progress column displays an incrementing percentage and another progress bar. The Status column displays Uploading.
14. The upload is complete when the Remaining Time field 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 window.

Resetting Firmware to the Factory Default Version

Occasionally the newly installed firmware may conflict with the system. If that occurs, it is necessary to restore the original (factory-installed) firmware using the reset button, which is located in a recess on the rear panel (see figure 15).

Use a small screwdriver to press the reset button for 10 seconds while powering on the UCS T 911 or UCS R 912. The front panel power LED blinks amber three times, then lights solid amber, and finally blinks amber three more times while the reset occurs. When the reset is complete, the power LED lights green steadily.

Figure 15. Firmware Reset Button on the UCS T 911 and UCS R 912 rear panels

Reference

This section contains the following topics:

UL Guidelines for Rack Mounting

The following Underwriters Laboratories (UL) guidelines pertain to the installation of the UCS 910 units:

CAUTION: Risk of minor personal injury:

- **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. Therefore, consider installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by Extron.
- **Reduced air flow** — Install the equipment in the rack so that the amount of air flow required for safe operation of the equipment is not compromised.
- **Mechanical loading** — Mount the equipment in the rack so that uneven mechanical loading does not create a hazardous condition.
- **Circuit overloading** — When connecting the equipment to the supply circuit, consider the connection of the equipment to the supply circuit and 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 (such as the use of power strips).

Consignes UL pour le Montage en Rack

Les consignes UL (« Underwriters Laboratories ») suivantes concernent l'installation de UCS 910:

ATTENTION : Risque de blessure mineure :

- **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).

ZipClip 200 Installation and Mounting

Both the UCS T 911 and UCS R 912 can be mounted under a desk, onto a wall or other furniture using the two ZipClip 200 (included). The Receiver power supply can also be mounted, using the ZipClip 100 (included). See ZipClip mounting options at **www.extron.com**.

1. Mount the ZipClip 200 onto a rack rail or an under-desk mounting surface, using the four included mounting screws (see figure on the right).

   For the receiver power supply, mount the ZipClip 100.

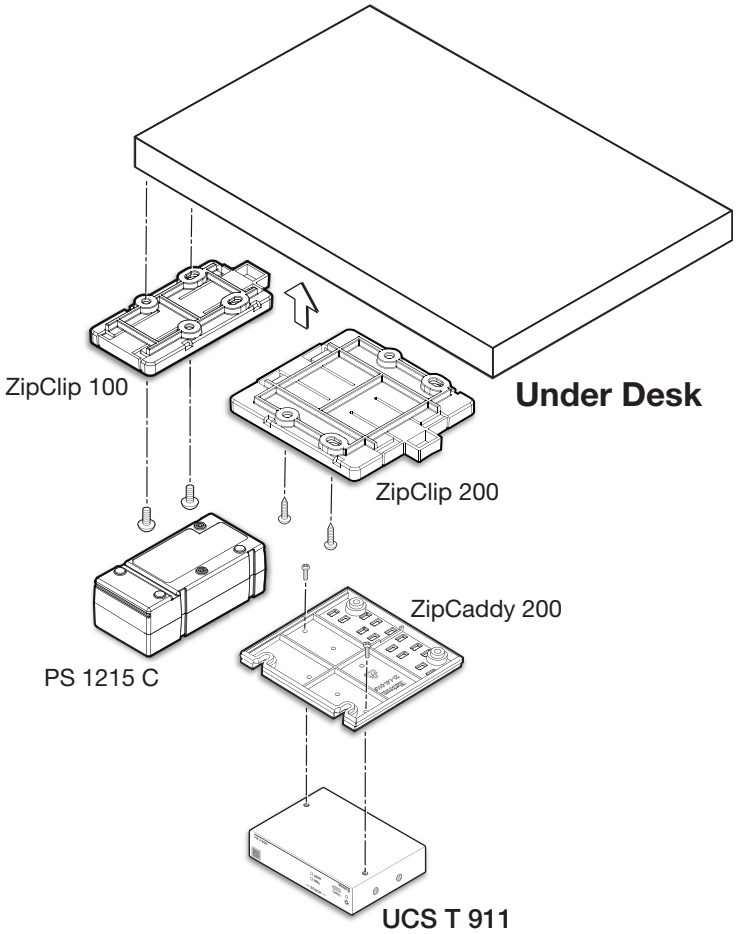
2. Mount the UCS transmitter or receiver to the ZipCaddy 200.

   a. Align the mounting holes on the bottom of the UCS unit with the mounting holes on the ZipCaddy (see figure on the right), and fasten with supplied screws.

   b. Attach the ZipCaddy-mounted unit onto the ZipClip 200.

      Attach the receiver power supply directly onto the ZipClip 100 (no ZipCaddy necessary).

      Easily detach the ZipCaddy or power supply from their respective ZipClips by using the quick-release tab (see figure below).



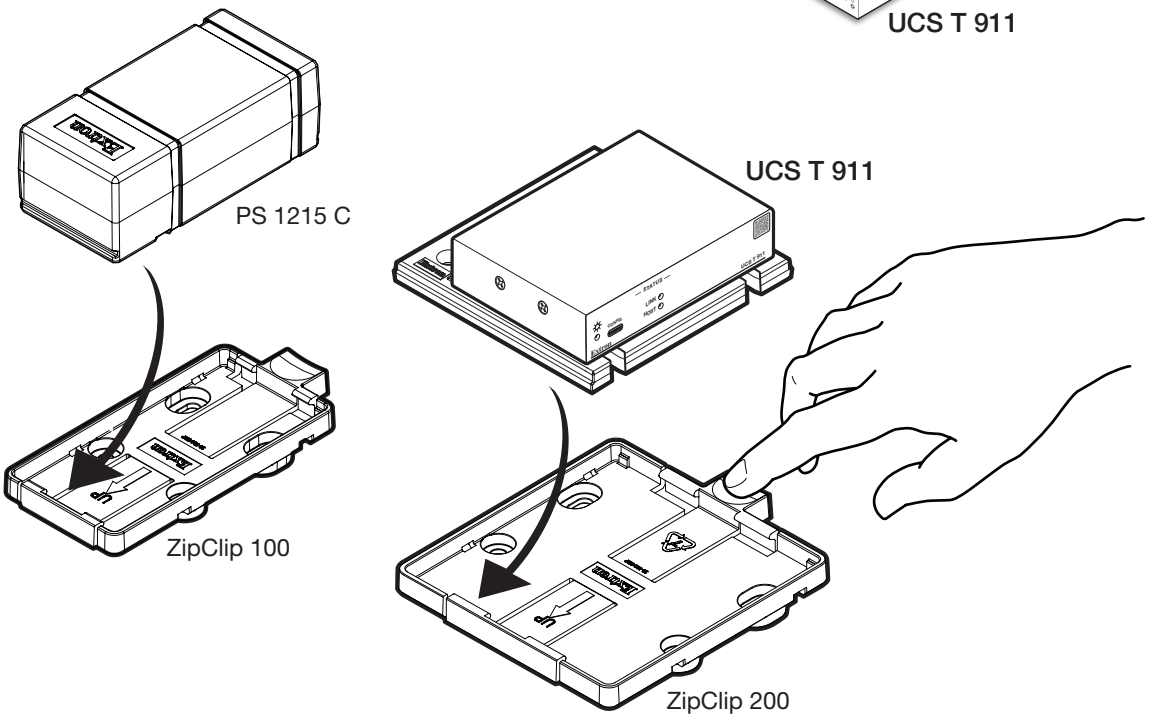


Figure 16. ZipClip 200 Installation and Mounting

System Operation

No drivers are required for a host PC to function with the UCS T 911 and UCS R 912. The transmitter is detected by the operating system, and appropriate USB drivers are loaded. Certain USB peripherals, such as gaming keyboards, USB interactive white boards, scanners, printers, and similar devices, require specific drivers installed on the PC. To obtain drivers, see the USB device installation instructions or the peripheral device manufacturer website.

The system is fully operational when the transmitter, receiver, PC or USB host, and peripherals are connected and powered. If problems are encountered, ensure that all cables are routed and connected properly, and that the latest drivers for each peripheral are installed.

Troubleshooting

USB signals are generally reliable, but are susceptible to bad connections or signal loss from cables that are too long. The twisted pair cables can have the same issues. To avoid loss of data and communication, follow these guidelines:

The USB cables that connect the transmitter to the host, or the receiver to peripheral devices, should not exceed 6 feet (1.8 meters).

When connecting the host or peripherals, use only cables designed for USB signals.

Avoid or limit the use of adapters.

The UCS T 911 and UCS R 912 work as described in point-to-point applications. Do not use additional adapters, patch panels, or couplers with USB cables or twisted pair cables. Additional links in the signal chain can result in reduction of signal integrity and overall system performance.

When properly connected and operating, the transmitter and receiver Power LEDs, Link and Host LEDs are lit. Status LEDs are also useful for troubleshooting. The following table outlines the status indicated by each LED:

	Transmitter		**Receiver**	
LED Indicator	On	Off	On	Off
Power	Transmitter is connected to the receiver or 12 VDC power supply, and is operating properly.	Transmitter is NOT connected to the receiver or 12 VDC power supply, or is defective.	12 VDC power supply is connected and operating properly.	12 VDC power supply is not connected, or is defective.
Link	Both transmitter and receiver have power, and are connected properly by a twisted pair cable.	If both Power LEDs are on, the twisted pair cable is not connected or is improperly wired. If either Power LED is off, see the Power LED troubleshooting instructions above.	Both transmitter and receiver have power, and are connected properly by a twisted pair cable.	If both Power LEDs are on, the twisted pair cable is not connected or is improperly wired. If either Power LED is off, see the Power LED troubleshooting instructions above.
Host	When transmitter power LED is on, this Host LED lights when communication with host PC is established.	If transmitter power LED is on, USB cable is not connected.	When receiver power LED is on, this Host LED lights when communication with host PC is established.	Host USB port is not connected or host is not communicating
Hub	N/A	N/A	Lights when a connected peripheral is recognized by the host PC.	A peripheral device connected to the USB port has not been recognized or is improperly connected.

Extron Warranty

Extron warrants its powered products against defects in materials and workmanship for a period of three years from the date of invoice. In the event of malfunction during the warranty period, Extron will repair or replace a product to whatever extent it shall deem necessary to restore the product to proper operating condition.

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.

Powered Warranty Exception

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 Warranty Exception

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.

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