



# USER MANUAL

## **MODEL:**

**RTBUS-25xl**

**Round Table Connection Bus**

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# Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

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## Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment.
- Review the contents of this user manual.



Go to [www.kramerav.com/downloads/RTBUS-25xl](http://www.kramerav.com/downloads/RTBUS-25xl) to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

## Achieving the Best Performance

- Use only good quality connection cables (we recommend Kramer high-performance, high-resolution cables) to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables).
- Do not secure the cables in tight bundles or roll the slack into tight coils.
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality.
- Position your Kramer **RTBUS-25xl** away from moisture, excessive sunlight and dust.



This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.

## Safety Instructions



**Caution:** There are no operator serviceable parts inside the unit.

**Warning:** Do not open the unit. High voltages can cause electrical shock! Servicing by qualified personnel only.

**Warning:** Disconnect the power and unplug the unit before installing.

## Recycling Kramer Products

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer's recycling arrangements in your particular country go to our recycling pages at [www.kramerav.com/support/recycling](http://www.kramerav.com/support/recycling).

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## Overview

Congratulations on purchasing your Kramer **RTBUS-25xl Round Table Connection Bus**.

The **RTBUS-25xl** is an elegant furniture-mounted, round connection bus. The **RTBUS-25xl** features a pneumatic mechanism for pneumatic lifting and smooth closing of its lid. It is easily installed into a table or podium top, and its **interface** enables you to connect any equipment to systems installed in a room via the following pass-through connectors:

- 1 PC on a 15-pin HD connector.
- 1 USB connector.
- 1 stereo audio on a 3.5mm connector.
- 1 HDMI™ connector.
- 1 Ethernet port on an RJ-45 connector.

The **RTBUS-25xl** supports HDMI with Deep Color, x.v.Color™, Lip Sync, HDMI Uncompressed Audio Channels, Dolby TrueHD, DTS-HD, and CEC.

# Defining the RTBUS-25xl

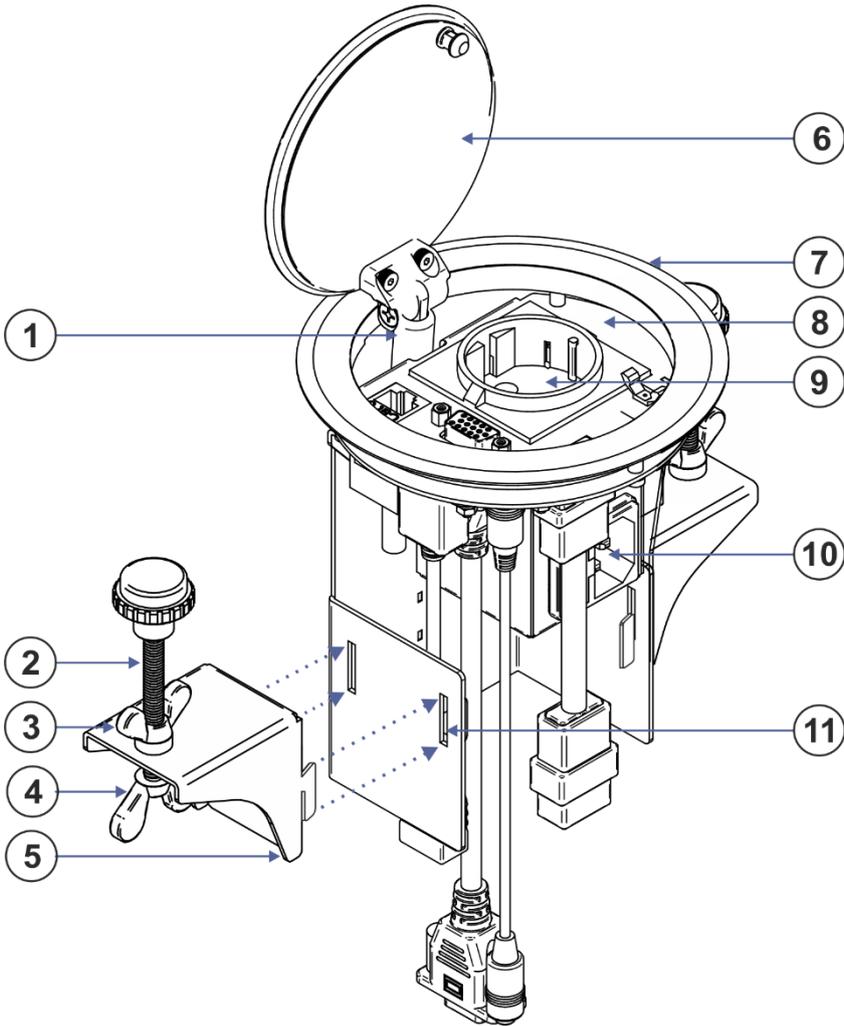


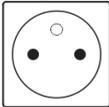
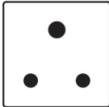
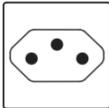
Figure 1: View

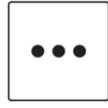
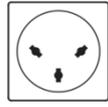
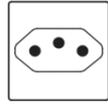
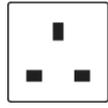
#	Feature	Function
①	Pneumatic Mechanism	Enables automatic lifting and smooth closing of the lid
②	Mounting Screws	For securing the RTBUS-25xl to the table (2)
③	Locking Butterfly Nuts	Tighten to lock the mounting butterfly screw (2)
④	Mounting Butterfly Nuts	Tighten to secure the unit to the table surface (2)
⑤	Mounting Brackets (2 units)	Place in the bracket slits after inserting the enclosure into the table – for securing the unit to the table surface
⑥	Black anodized or brushed aluminum semi-automatic lid	Covers the connecting surface, leaving the table surface neat and tidy
⑦	Outer Rim	Fits over the table surface
⑧	Connecting Surface	See <a href="#">Figure 2</a>
⑨	Power Socket Opening	For installing a power socket (can be purchased separately).
⑩	IEC socket	Connect to an IEC power cord (can be purchased separately)
⑪	Mounting Bracket Slits (two sets on each side)	Insert the mounting brackets to the slits when installing the RTBUS-25xl (see <a href="#">Mounting the RTBUS-25xl in the Table</a> on page 7).

## Power Socket Options

A choice of power sockets is available for purchase in several versions, including power sockets for the USA, Brazil, Germany (the Europlug), UK, Switzerland, Belgium-France, Italy, South Africa, Israel and Australia. A “Universal” socket for general use is also available (see the compatibility restrictions in the table below). Note that the photos below are for illustration purposes only.

Power Socket Type	Power Specs	Description
Universal: 	<b>TS-201U (80-000043)</b> 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet	<b>Fully compatible</b> with power plugs in the UK, India, Italy and Denmark, as well as with the 2-prong Europlug. <b>Partially compatible</b> (if the polarity is reversed) with plugs in China, Switzerland, Israel and the USA. The universal socket does not supply grounding to plugs in Central Europe and France and so you should order country specific sockets instead. <b>Not compatible</b> with South African plugs.

Power Socket Type	Power Specs
USA: 	<b>TS-201US (80-000046)</b> 100-125V AC, 50/60Hz, 5A Maximum 5A per power outlet
Germany and EU: 	<b>TS-201DE (80-000044)</b> 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet
Belgium and France: 	<b>TS-201FR (80-000045)</b> 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet
South Africa 	<b>TS-201ZA (80-000052)</b> 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet
Switzerland 	<b>TS-201CH (80-000049)</b> 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet

Power Socket Type	Power Specs
Italy: 	<b>TS-201IT (80-000047)</b> 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet
Australia: 	<b>TS-201AU (80-000050)</b> 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet
Israel: 	<b>TS-201IL (80-000053)</b> 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet
Brazil 	<b>TS-201BR (80-000051)</b> 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet
England 	<b>TS-201GB (80-000048)</b> 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet

## The RTBUS-25xl Connecting Surface

[Figure 2](#) defines the connecting surface (note that although 'RTBUS-21' is printed on the panel, the name of the modular product is **RTBUS-25xl**).

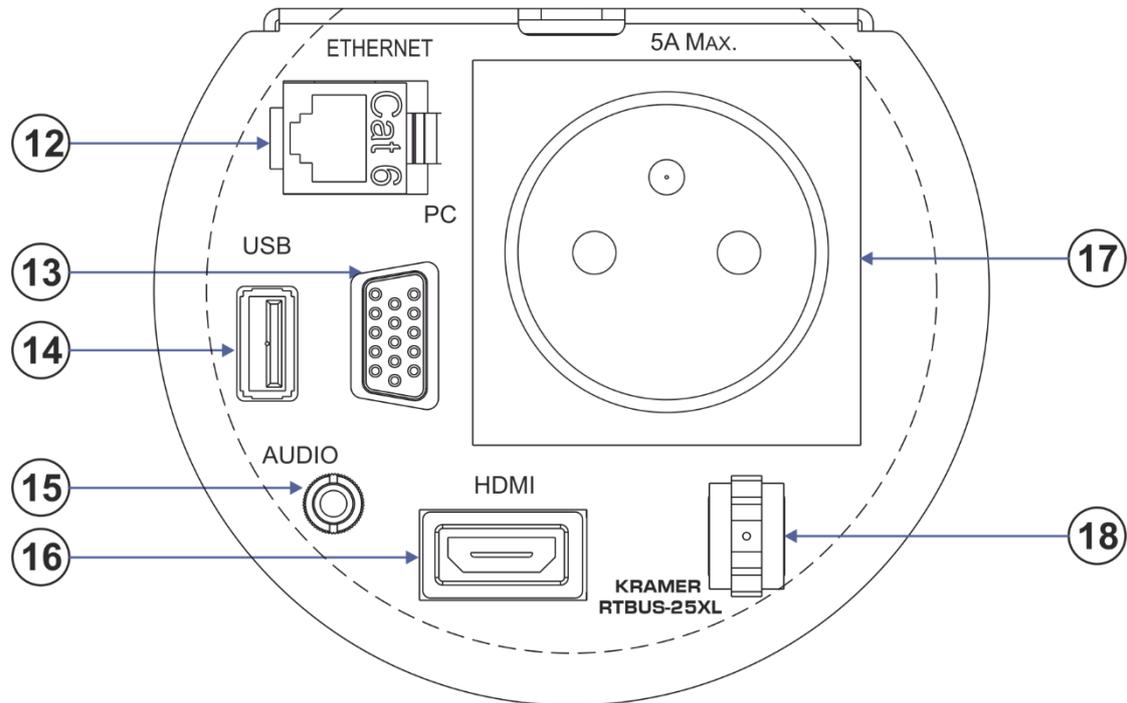


Figure 2: RTBUS-25xl Connecting Surface

#	Feature	Function
12	ETHERNET RJ-45 Connector	Connect to a network
13	PC 15-pin HD Connector	Connects to a VGA source
14	USB Connector	Connects to a USB source
15	AUDIO 3.5mm Mini Jack	Connects to an unbalanced stereo audio source
16	HDMI™ Connector	Connect to HDMI source
17	5A MAX. Power Socket	Connects to 90-240V AC power consuming device
18	Lid Latch	For safely closing the lid

# Installing the RTBUS-25xl

To install the RTBUS-25xl perform the following steps:

1. Drill a hole in the table (see [Drilling a Hole in the Table](#) on page 6).
2. Install the power socket (see [Installing the Power Socket](#) on page 6).
3. Secure the unit to the table (see [Mounting the RTBUS-25xl in the Table](#) on page 7).
4. Connect the cables (see [Connecting the Cables and Wires](#) on page 8).

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## Drilling a Hole in the Table

To drill an opening in the table:

1. Using any standard cup bit drill with a diameter ranging from 111mm to 114mm (4.37in to 4.49in), drill a hole in the table in the desired location.



The thickness of the table should be 3in (76mm) or less.

2. Clean the table surface.



Take care not to damage the table. Kramer Electronics is not responsible for any damage caused to the table.

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## Installing the Power Socket

[Figure 3](#) shows an example of the Universal power socket housing which is one of the optional power sockets for the RTBUS-25xl, see [Power Socket Options](#) on page 4.

To install the power socket (purchased separately):

1. Close the RTBUS-25xl lid.
2. Carefully insert the power socket housing so that the power socket fits into the power socket opening on the connecting surface and the four standoffs fit the four screw holes on the RTBUS-25xl.

When positioned correctly, the IEC socket faces downwards.

3. Screw the four screws included in the power socket kit into the designated holes to fix the power socket housing in place.
4. Unscrew the power connector lock.
5. Connect the IEC power cord to the IEC socket.

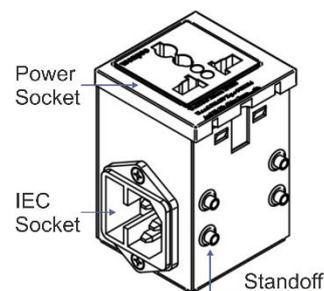
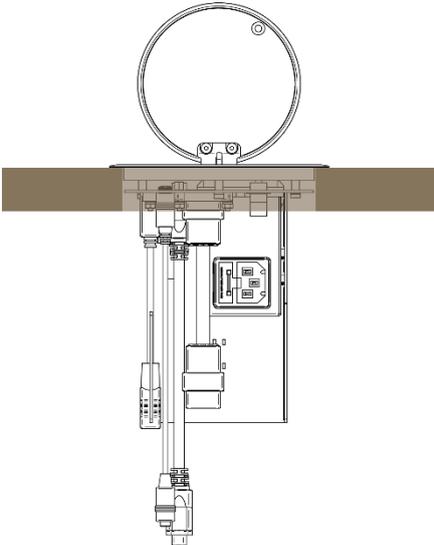


Figure 3: RTBUS-25xl Universal Power Socket Housing

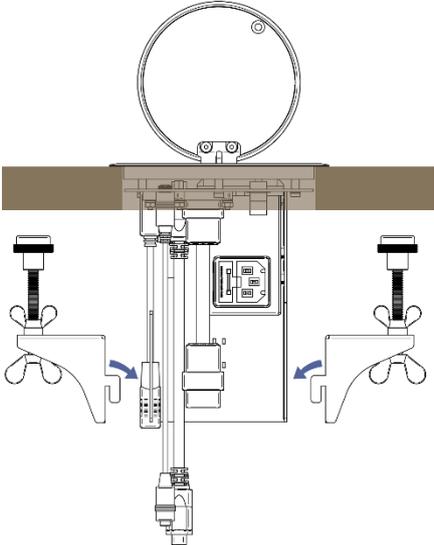
# Mounting the RTBUS-25xl in the Table

To mount the unit, follow these steps:

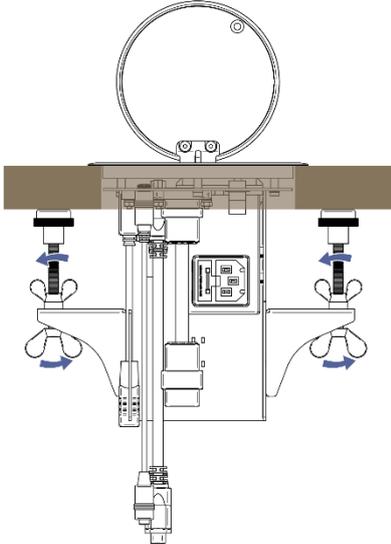
**Step 1:** Insert the RTBUS-25xl into the hole cut into the table making sure the outer rim is firm against the surface of the table.



**Step 2:** From underneath the table, slide the mounting brackets into the appropriate slots.



**Step 3:** Tighten the butterfly mounting screws securely upward against the table.  
**Step 4:** Lock the mounting screws into position with the locking butterfly screws.



## Connecting the Cables and Wires

[Figure 4](#) illustrates how to connect the cables to the underside of the unit:

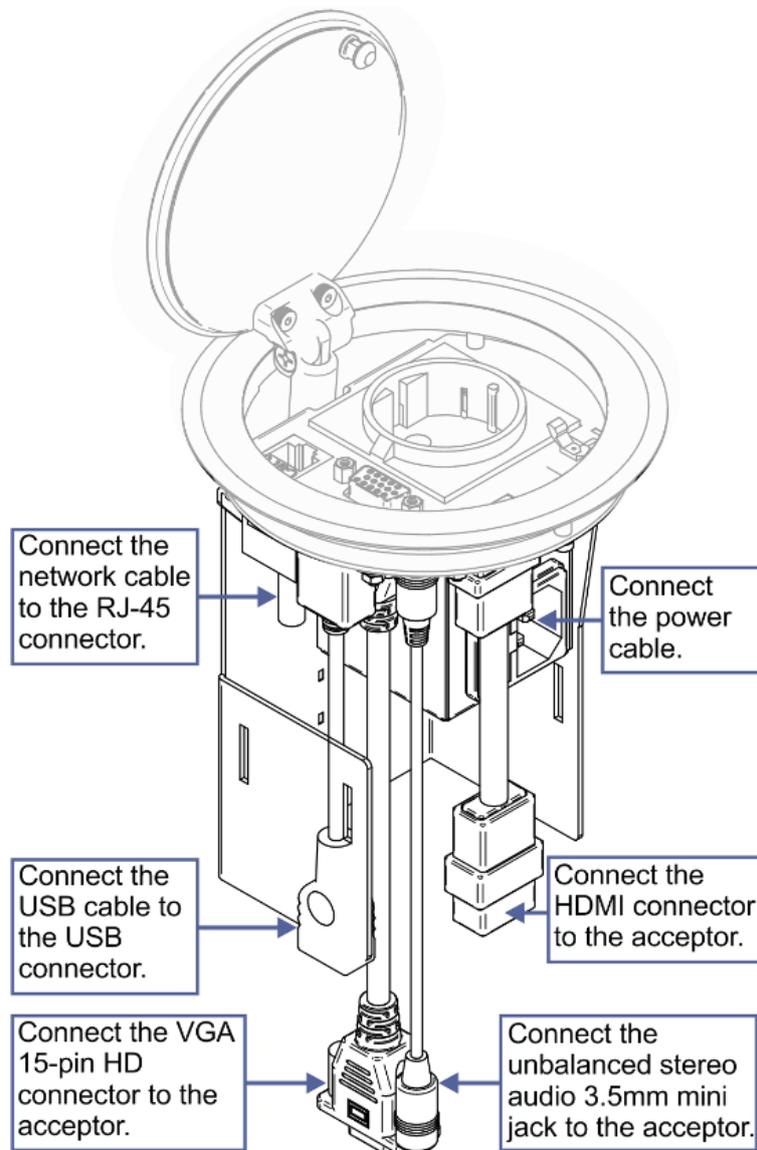


Figure 4: Connecting the Cables



Note that the cables shown in [Figure 4](#) are 50cm long and have a MALE connector at the free end so they can be plugged directly into the acceptors. You can extend these cables if required.

Note that the connecting surface is an integral part of the **RTBUS-25xl** enclosure and cannot be detached.

We recommend that you use the Kramer **C-AC** AC Power Cord series to power the unit.

# Using the RTBUS-25xl

Once the RTBUS-25xl is installed, you can easily customize it to your own needs by directly plugging in the required AV equipment, as illustrated in [Figure 5](#).

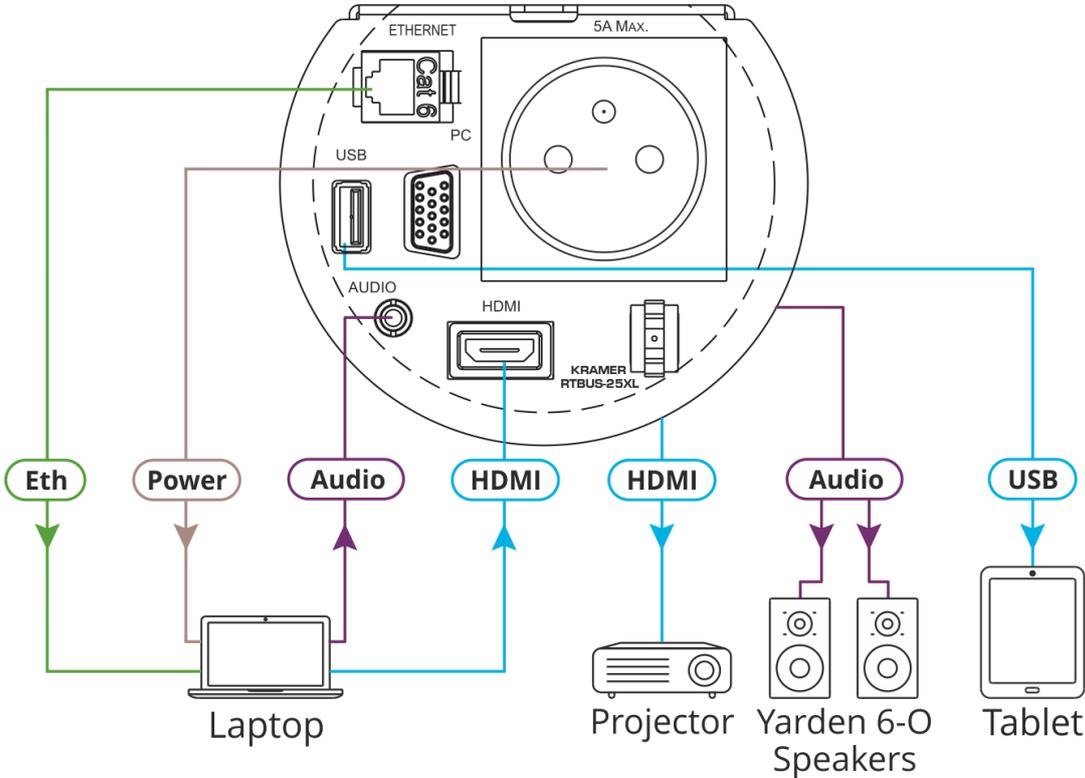


Figure 5: RTBUS-25xl Boardroom Installation

# Technical Specifications

Ports	HDMI	On a female HDMI connector for HDMI link extension
	USB	On a USB-A connector
	PC	On a 15-pin HD connector
	Audio	On a 3.5mm mini jack
	Ethernet	On an RJ-45 connector
Power	Power socket assemblies:	Universal, 100–240V AC, 50/60Hz, 5A; maximum 5A per power outlet Fully compatible with power plugs in the UK, India, Italy and Denmark, as well as with the 2-prong Europlug Partially compatible (if the polarity is reversed) with plugs in China, Switzerland, Israel and the USA. The universal socket does not supply grounding to plugs in Central Europe and France (you should order country specific sockets instead). Not compatible with South African plugs
		USA — 100–240V AC, 50/60Hz, 5A, maximum 5A per power outlet
		Germany and EU — 100–240V AC, 50/60Hz, 5A, maximum 5A per power outlet
		Belgium and France — 100–240V AC, 50/60Hz, 5A, maximum 5A per power outlet
		Italy — 100–240V AC, 50/60Hz, 5A, maximum 5A per power outlet
		Australia — 100–240V AC, 50/60Hz, 5A, maximum 5A per power outlet
		Israel — 220V AC, 50/60Hz, 5A, maximum 5A per power outlet
		South Africa — 220V AC, 50/60Hz, 5A, maximum 5A per power outlet
		Switzerland — 220V AC, 50/60Hz, 5A, maximum 5A per power outlet
		England — 220V AC, 50/60Hz, 5A, maximum 5A per power outlet
		Brazil — 220V AC, 50/60Hz, 5A, maximum 5A per power outlet
	Fuse Rating	T 6.3A 250V
Options	TBUS AC Power Cord (C-AC/POWERCORD) power socket kits	
Environmental Conditions	Operating Temperature	0° to +40°C (32° to 104°F)
	Storage Temperature	-40° to +70°C (-40° to 158°F)
	Humidity	10% to 90%, RHL non-condensing
Regulatory Compliance	Safety	CE, UL
	Environmental	RoHs, WEEE
General	Net Dimensions (W, D, H)	15.7cm x 12.8 cm x 15.4cm (6.18" x 5.04" x 6.04")
	Shipping Dimensions (W, D, H)	36.5cm x 17cm x 17cm (14.4" x 6.7" x 6.7")
	Net Weight	0.85kg (1.9lbs) approx.
	Shipping Weight	1.2kg (2.6lbs) approx. with mounting brackets
Specifications are subject to change without notice at <a href="http://www.kramerav.com">www.kramerav.com</a>		

The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

The warranty obligations of Kramer Electronics Inc. ("Kramer Electronics") for this product are limited to the terms set forth below:

#### **What is Covered**

This limited warranty covers defects in materials and workmanship in this product.

#### **What is Not Covered**

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product.

Without limiting any other exclusion herein, Kramer Electronics does not warrant that the product covered hereby, including, without limitation, the technology and/or integrated circuit(s) included in the product, will not become obsolete or that such items are or will remain compatible with any other product or technology with which the product may be used.

#### **How Long this Coverage Lasts**

The standard limited warranty for Kramer products is seven (7) years from the date of original purchase, with the following exceptions:

1. All Kramer VIA hardware products are covered by a standard three (3) year warranty for the VIA hardware and a standard three (3) year warranty for firmware and software updates.
2. All Kramer fiber optic cables, adapter-size fiber optic extenders, active cables, cable retractors, all Kramer speakers and Kramer touch panels are covered by a standard one (1) year warranty.
3. All Kramer Cobra products, all Kramer Calibre products, all Kramer Minicom digital signage products, all HighSecLabs products, all streaming, and all wireless products are covered by a standard three (3) year warranty.
4. All Sierra Video MultiViewers are covered by a standard five (5) year warranty.
5. Sierra switchers & control panels are covered by a standard seven (7) year warranty (excluding power supplies and fans that are covered for three (3) years).
6. K-Touch software is covered by a standard one (1) year warranty for software updates.
7. All Kramer passive cables are covered by a ten (10) year warranty.

#### **Who is Covered**

Only the original purchaser of this product is covered under this limited warranty. This limited warranty is not transferable to subsequent purchasers or owners of this product.

#### **What Kramer Electronics Will Do**

Kramer Electronics will, at its sole option, provide one of the following three remedies to whatever extent it shall deem necessary to satisfy a proper claim under this limited warranty:

1. Elect to repair or facilitate the repair of any defective parts within a reasonable period of time, free of any charge for the necessary parts and labor to complete the repair and restore this product to its proper operating condition. Kramer Electronics will also pay the shipping costs necessary to return this product once the repair is complete.
2. Replace this product with a direct replacement or with a similar product deemed by Kramer Electronics to perform substantially the same function as the original product.
3. Issue a refund of the original purchase price less depreciation to be determined based on the age of the product at the time remedy is sought under this limited warranty.

#### **What Kramer Electronics Will Not Do Under This Limited Warranty**

If this product is returned to Kramer Electronics or the authorized dealer from which it was purchased or any other party authorized to repair Kramer Electronics products, this product must be insured during shipment, with the insurance and shipping charges prepaid by you. If this product is returned uninsured, you assume all risks of loss or damage during shipment. Kramer Electronics will not be responsible for any costs related to the removal or re-installation of this product from or into any installation. Kramer Electronics will not be responsible for any costs related to any setting up this product, any adjustment of user controls or any programming required for a specific installation of this product.

#### **How to Obtain a Remedy Under This Limited Warranty**

To obtain a remedy under this limited warranty, you must contact either the authorized Kramer Electronics reseller from whom you purchased this product or the Kramer Electronics office nearest you. For a list of authorized Kramer Electronics resellers and/or Kramer Electronics authorized service providers, visit our web site at [www.kramerav.com](http://www.kramerav.com) or contact the Kramer Electronics office nearest you.

In order to pursue any remedy under this limited warranty, you must possess an original, dated receipt as proof of purchase from an authorized Kramer Electronics reseller. If this product is returned under this limited warranty, a return authorization number, obtained from Kramer Electronics, will be required (RMA number). You may also be directed to an authorized reseller or a person authorized by Kramer Electronics to repair the product.

If it is decided that this product should be returned directly to Kramer Electronics, this product should be properly packed, preferably in the original carton, for shipping. Cartons not bearing a return authorization number will be refused.

#### **Limitation of Liability**

THE MAXIMUM LIABILITY OF KRAMER ELECTRONICS UNDER THIS LIMITED WARRANTY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID FOR THE PRODUCT. TO THE MAXIMUM EXTENT PERMITTED BY LAW, KRAMER ELECTRONICS IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY. Some countries, districts or states do not allow the exclusion or limitation of relief, special, incidental, consequential or indirect damages, or the limitation of liability to specified amounts, so the above limitations or exclusions may not apply to you.

#### **Exclusive Remedy**

TO THE MAXIMUM EXTENT PERMITTED BY LAW, THIS LIMITED WARRANTY AND THE REMEDIES SET FORTH ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, REMEDIES AND CONDITIONS, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED. TO THE MAXIMUM EXTENT PERMITTED BY LAW, KRAMER ELECTRONICS SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF KRAMER ELECTRONICS CANNOT LAWFULLY DISCLAIM OR EXCLUDE IMPLIED WARRANTIES UNDER APPLICABLE LAW, THEN ALL IMPLIED WARRANTIES COVERING THIS PRODUCT, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL APPLY TO THIS PRODUCT AS PROVIDED UNDER APPLICABLE LAW. IF ANY PRODUCT TO WHICH THIS LIMITED WARRANTY APPLIES IS A "CONSUMER PRODUCT" UNDER THE MAGNUSON-MOSS WARRANTY ACT (15 U.S.C.A. §2301, ET SEQ.) OR OTHER APPLICABLE LAW, THE FOREGOING DISCLAIMER OF IMPLIED WARRANTIES SHALL NOT APPLY TO YOU, AND ALL IMPLIED WARRANTIES ON THIS PRODUCT, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR THE PARTICULAR PURPOSE, SHALL APPLY AS PROVIDED UNDER APPLICABLE LAW.

#### **Other Conditions**

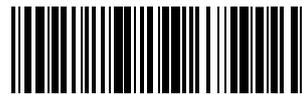
This limited warranty gives you specific legal rights, and you may have other rights which vary from country to country or state to state.

This limited warranty is void if (i) the label bearing the serial number of this product has been removed or defaced, (ii) the product is not distributed by Kramer Electronics or (iii) this product is not purchased from an authorized Kramer Electronics reseller. If you are unsure whether a reseller is an authorized Kramer Electronics reseller, visit our web site at [www.kramerav.com](http://www.kramerav.com) or contact a Kramer Electronics office from the list at the end of this document.

Your rights under this limited warranty are not diminished if you do not complete and return the product registration form or complete and submit the online product registration form. Kramer Electronics thanks you for purchasing a Kramer Electronics product. We hope it will give you years of satisfaction.



P/N:



2900-301160

Rev:



1



## SAFETY WARNING

Disconnect the unit from the power supply before opening and servicing

For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found.

We welcome your questions, comments, and feedback.