HARMAN
A SAMSUNG COMPANY

DESIGN GUIDE

IT MANAGER'S GUIDE FOR BYOD IN THE MEETING SPACE

AKG AMX BSS crown dbx JBL PROFESSIONAL lexicon Martin Soundcraft STUDER

MEETING SPACES THAT ARE VISITING DEVICE FRIENDLY

Bring your own device (BYOD), or visiting devices are defined as any device such as a laptop, tablet, or mobile phone, that a meeting attendee brings with them to present, share, or participate in meetings. Making meeting spaces as friendly as possible for visiting devices supports the flow of business by allowing staff and visitors to run their meetings and contribute in a way they are comfortable with. In other words, get technology out of the way, so business can get underway. Outlining exactly how each individual staff member and visitor will use a given meeting space in order to design around all possible scenarios is a daunting task. There are many considerations. What types of devices are brought to the room? What do users hope to accomplish with their devices? How can good technology minimize service calls? What's the budget? All of these questions lead to some important technology topics to consider in the planning phase for the space.

This guide outlines the high-level considerations for choosing wired, wireless, or hybrid technologies to support a wide range of visiting devices and user skill sets.

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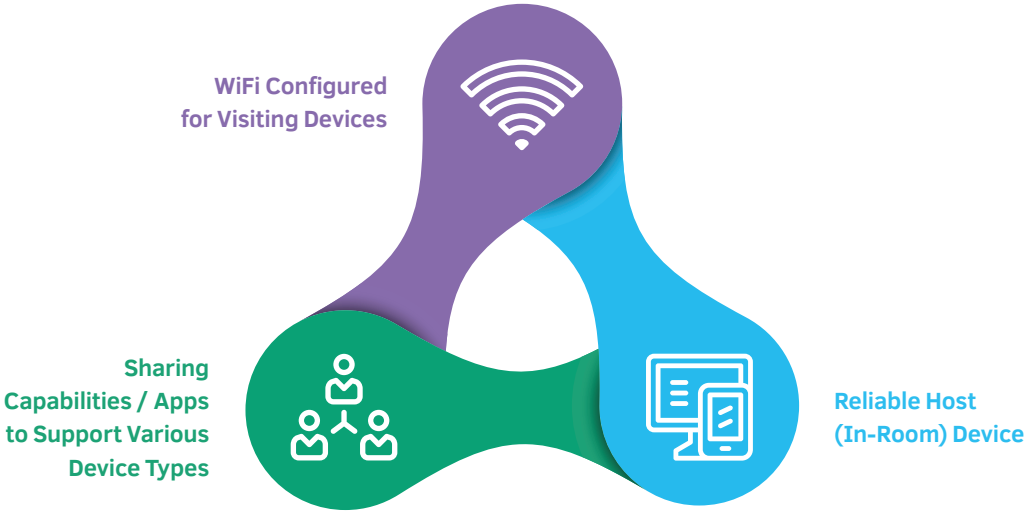
WIRELESS CONTENT SHARING CONSIDERATIONS

Most of today's visiting devices have built-in wireless sharing capabilities. AirPlay is included in Apple devices, Windows 10 laptops come equipped with Miracast, Android devices support Google Cast, and in some cases support Miracast (sometimes under another name, such as Smart View by Samsung). It's not likely that a device will enter a meeting space that doesn't have some form of wireless sharing capability. To support these devices, the meeting space requires Wi-Fi that is configured for visiting devices, a reliable host (in-room) device to accept content, and a range of sharing capabilities and applications to support various device types.



- **Wi-Fi Configured for Visiting Devices** – Typically this includes a corporate wireless network for staff in addition to a separate guest network for visitors.

- **Reliable Host (in-room) Device Connected to Corporate and Guest Networks** – An in-room host device or smart display that is available to visiting devices on both the guest and corporate networks requires configuration of network access points to ensure the host device is available on both networks. It is also important to name the device so that it can be easily identified by a visiting device user. AMX by HARMAN offers two host solutions that facilitate wireless presentation in meeting rooms – AMX Enzo (NMX-MM-1000), and AMX Acendo Core (ACR-5100).

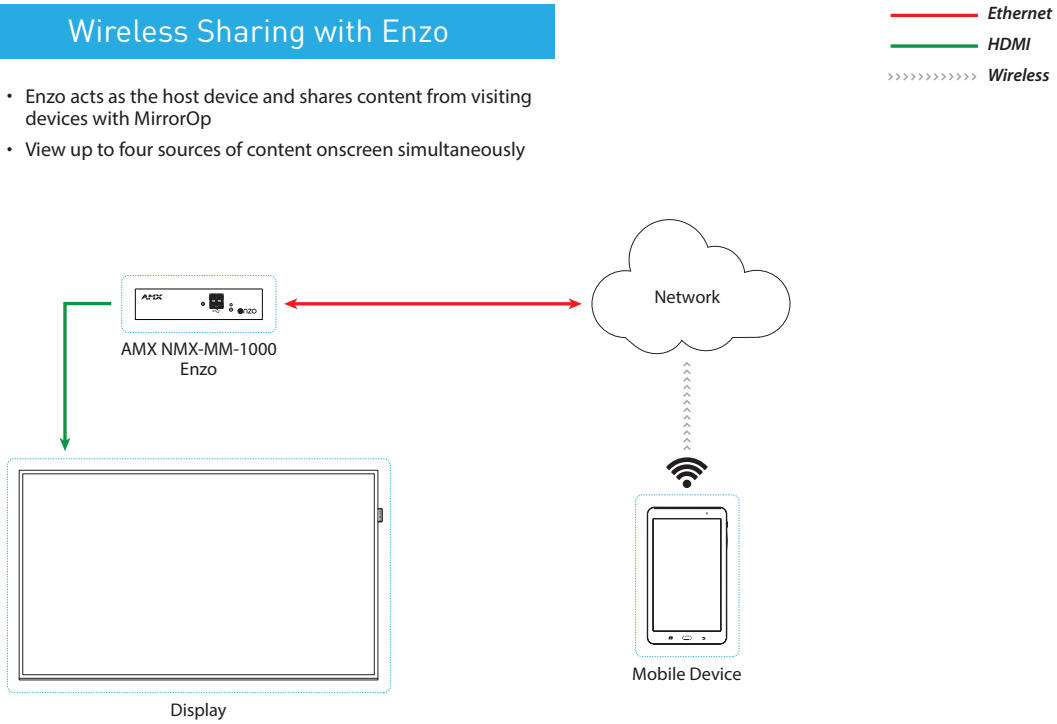
- **Sharing Capabilities and Applications to Support Various Device Types** – A successful screen sharing solution will include support for various OS platforms, including Windows, Mac, iOS, Android, and Chrome. Some solutions support native wireless, using technologies such as AirPlay, Google Cast and Miracast, while others require a helper app such as MirrorOp. AMX Enzo supports MirrorOp for content sharing as well as IP address entry and creation of bookmarks. AMX Acendo Core has AirPlay, Google Cast and Miracast built-in to support a range of visiting devices.

An in-room host device or smart display that is available to visiting devices on both the guest and corporate networks requires configuration of network access points to ensure the host device is available on both networks.

AMX by HARMAN is leading the industry in technology dedicated to supporting uninterrupted workflow in meeting spaces. We offer solutions for a range of budgets and requirements. For spaces that need support for web conferencing and scheduling in addition to content sharing, AMX Acendo Core is an in-room solution (host device) with AirPlay, Miracast, and Google Cast, in addition to one-click meeting start, scheduling, and document viewing for multiple documents on screen at the same time. When paired with Acendo Vibe, a Bluetooth enabled Conferencing Soundbar purpose-built for huddle spaces with sound by JBL, available with a wide-angle camera, this comprehensive offering is ideal for meeting spaces that support web conferencing and scheduling. For spaces that require simple wireless sharing, web browsing, and document sharing, AMX Enzo supports MirrorOp for wireless sharing and quick connectivity to documents and content located on cloud storage, USB, or the internet.

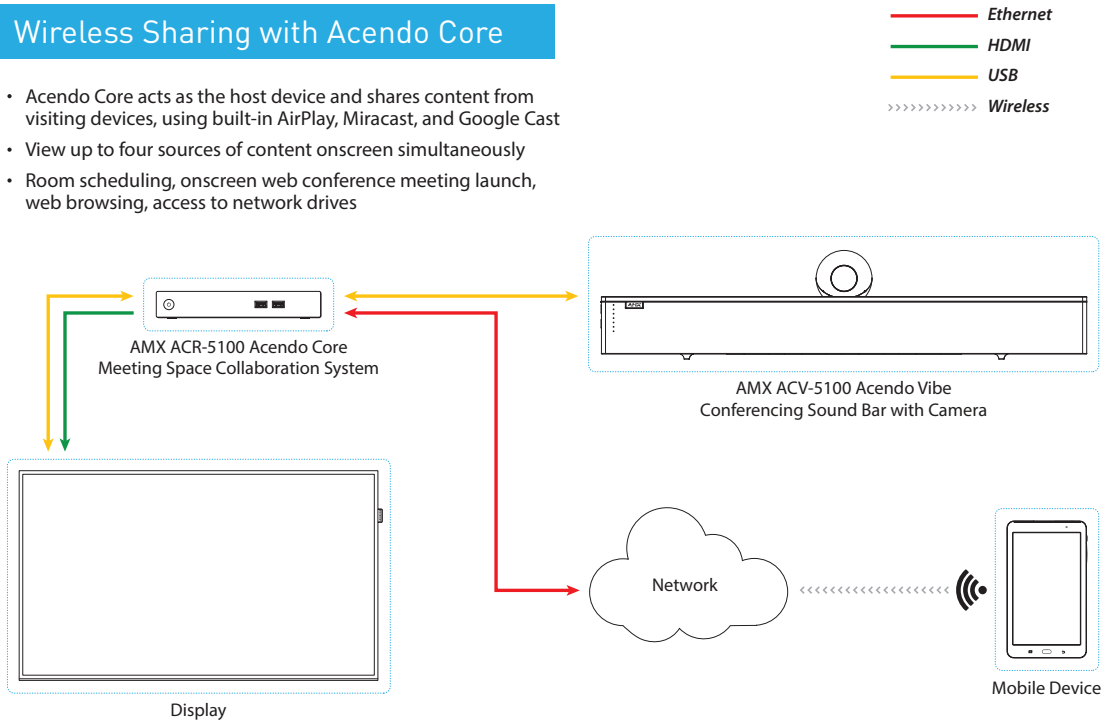
Wireless Sharing with Enzo

- Enzo acts as the host device and shares content from visiting devices with MirrorOp
- View up to four sources of content onscreen simultaneously



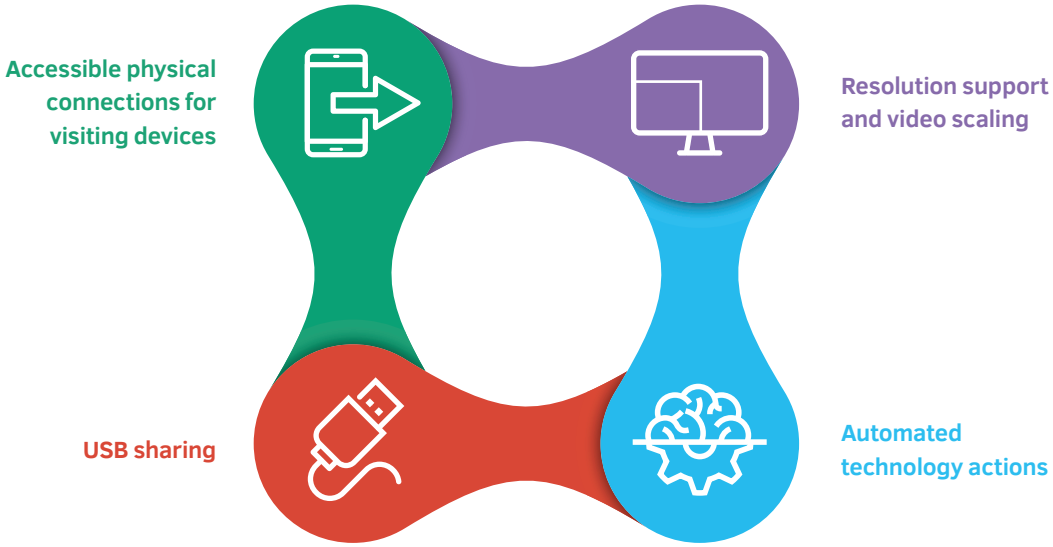
Wireless Sharing with Acendo Core

- Acendo Core acts as the host device and shares content from visiting devices, using built-in AirPlay, Miracast, and Google Cast
- View up to four sources of content onscreen simultaneously
- Room scheduling, onscreen web conference meeting launch, web browsing, access to network drives



WIRED CONTENT SHARING CONSIDERATIONS

While a wired system is not dependent on the Wi-Fi network or compatible device apps, there are other considerations such as connector location, signal compatibility, and level of user selection required to display content.



- **Accessible Physical Connections for Visiting Devices** – When a visitor enters the room with their device, it should be easy to find a physical connection that matches their device. Spaces should support current signal types like HDMI, while still supporting older connections like VGA. To make them easy to find, a good option is a table architectural connectivity solution. This could be as simple as a table grommet or a more comprehensive architectural connectivity option like AMX HydraPort.

- **Resolution Support and Video Scaling** – The technology chosen for a wired solution should also include support for various resolutions, and ideally video scaling. The room technology is the negotiator between the visiting device and the display or projector. If the visiting device sends a higher resolution than the room can accept, the in-room device should scale the resolution down. If the opposite is true, and the visiting device sends a resolution lower than the display or projector can accept, the image should be scaled to ensure the best image is displayed for an optimal viewing experience. This is not just important for image quality, it can also eliminate an interruption in signal-passing, due to incompatibility, which would result in a blank display and a service call. AMX Connectivity and Transport (CT) Kits are a simple solution that support a range of visiting device connection options and resolutions that will automatically scale the content from visiting devices, without the user having to fuss with resolution settings. The CT Kits have multiple connections for visiting devices as well as an in-room host device.

- **Automatic Technology Actions** – To reduce service calls and meeting delays, the visiting content should be automatically displayed in the room once the physical connection is made. This includes turning on the display or projector, sending the content, and as mentioned above, scaling the video to a resolution compatible with the display or projector to avoid an interruption in content. AMX CT Kits deliver these automatic technology actions in addition to automatically reverting back to the original state of the room, typically a connected host device or PC, after the visiting device is disconnected.

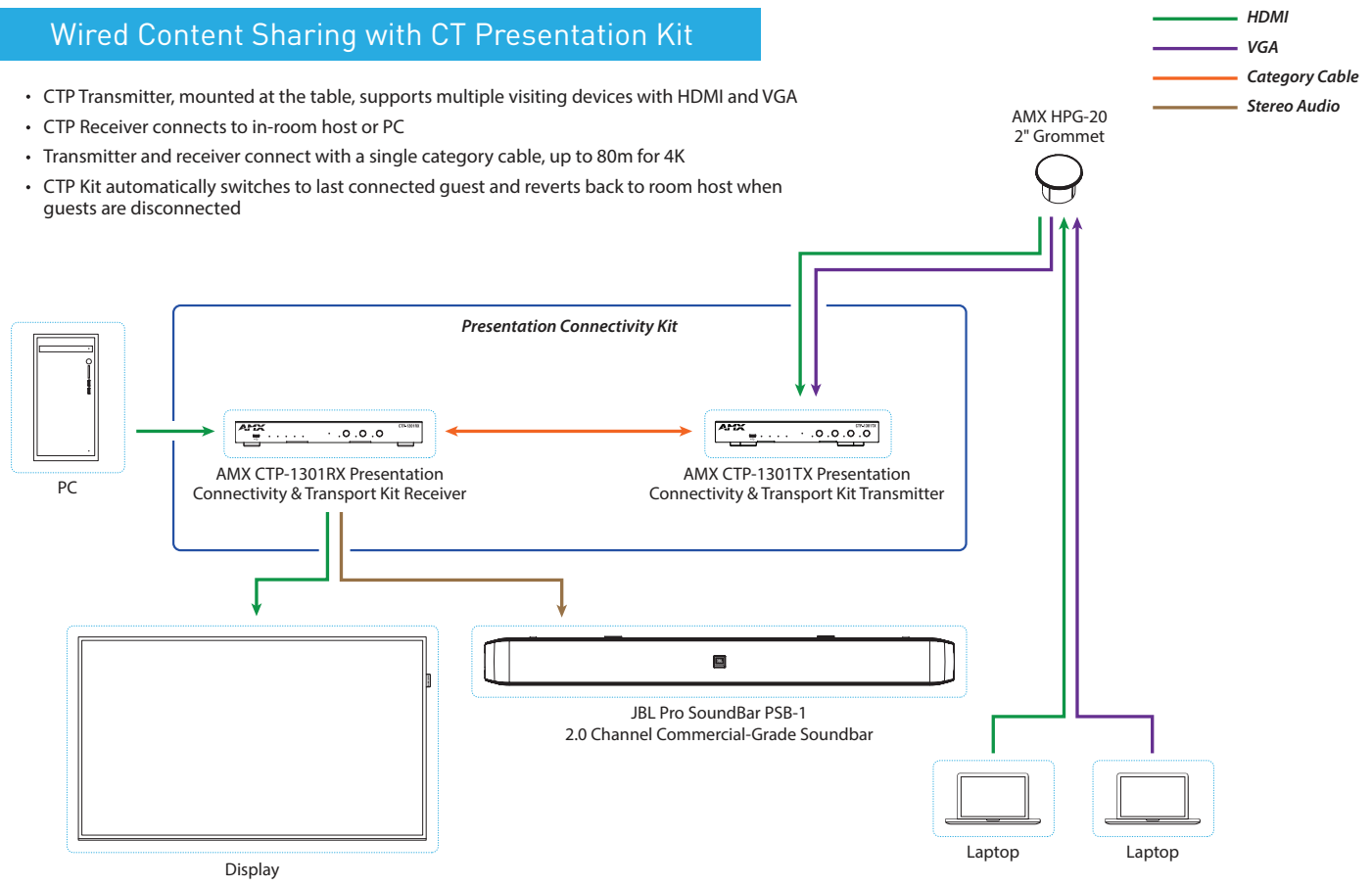
- **USB Sharing** – If the room has USB devices such as a camera, soundbar, keyboard, or mouse, it is important that the visiting device has access to these USB devices. Elevating a meeting from a device intended for a single user to professional gear intended for groups is critical to meeting flow. See the HARMAN Huddle Space Design Guide for more information on this topic. The ability for a visiting device to not just share audiovisual content, but also utilize the full set of room technology is supported in the Conferencing CT Kit (CTC-1402). For example, once a visiting device is connected to the CT Kit in a room with an integrated soundbar, camera, and keyboard and mouse, USB audio is automatically sent to the soundbar, the camera is available for use in web conferencing, and the keyboard and mouse are now available to manage content, delivered by the visiting device.

Elevating a meeting from a device intended for a single user to professional gear intended for groups is critical to meeting flow.

The new **AMX Connectivity and Transport (CT) Kits** include a transmitter and receiver that behave as a single unit. The transmitter has multiple connections for visiting devices and is typically mounted under the table and made accessible on top of the table through an in-table architectural connectivity solution. Once the visiting device makes a connection with the CT Kit, the kit turns on the display or projector, and the transmitter automatically scales and sends the audiovisual content from the visiting device, through the transmitter, and to the receiver which is typically mounted next to the display or projector. All of this happens automatically without any required user interactions or adjustments. If the Conferencing Kit is installed, and USB is also connected, USB peripheral devices are also connected. The kit also allows for a constantly connected host device or PC and reverts back to this connection automatically when visiting devices are disconnected.

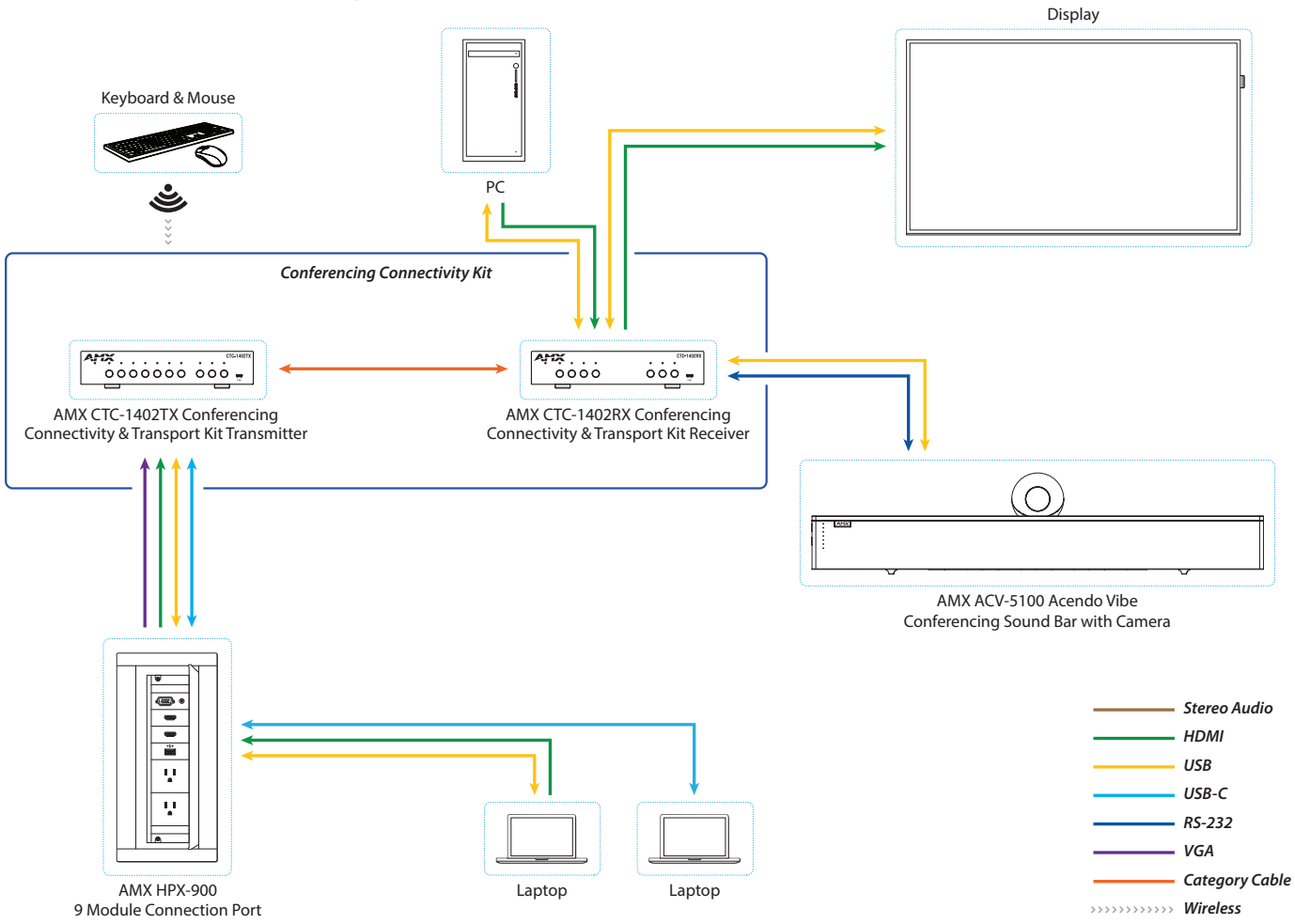
Wired Content Sharing with CT Presentation Kit

- CTP Transmitter, mounted at the table, supports multiple visiting devices with HDMI and VGA
- CTP Receiver connects to in-room host or PC
- Transmitter and receiver connect with a single category cable, up to 80m for 4K
- CTP Kit automatically switches to last connected guest and reverts back to room host when guests are disconnected



Wired Content Sharing with CT Conferencing Kit

- CTC Transmitter, mounted at the table, supports multiple visiting devices with HDMI, DisplayPort, VGA, and USB-C
- CTC Receiver connects to in-room host or PC
- Transmitter and receiver connect with a single category cable, up to 80m for 4K
- CTC Kit automatically switches to last connected guest, giving them access to share AV content and access to USB peripherals, including keyboard, mouse, touch display, and soundbar
- CTC Kit reverts back to room host when guests are disconnected



WIRED AND WIRELESS CONTENT SHARING: A HYBRID APPROACH

For the most comprehensive solution, a wired/wireless content sharing hybrid approach is best. This provides wired connectivity to users who are not comfortable with wireless, don't want to download apps, have trouble accessing the network, or have legacy devices that do not support connectivity. Wired connectivity also supports environments when security policies do not allow for certain types of devices, or may not allow for wireless at all. And, visitors have multiple options to fit their comfort and technology level, which means fewer service calls.

Hybrid Content Sharing with Acendo Core/Vibe and CT Conferencing Kit

- Acendo Core acts as the host device and shares content from visiting devices, using built-in AirPlay, Miracast, and Google Cast
- View up to four sources of content onscreen simultaneously
- Room scheduling, onscreen web conference meeting launch, web browsing, access to network drives
- Acendo Vibe provides wide angle camera and premium JBL sound for web conferencing
- CTC Transmitter supports multiple visiting devices with HDMI, DisplayPort, VGA, and USB-C
- CTC Receiver connects to in-room host or PC
- Transmitter and receiver connect with a single category cable, up to 80m for 4K
- CTC Kit automatically switches to last connected guest, giving them access to share AV content and access to USB peripherals, including keyboard, mouse, touch display, and soundbar
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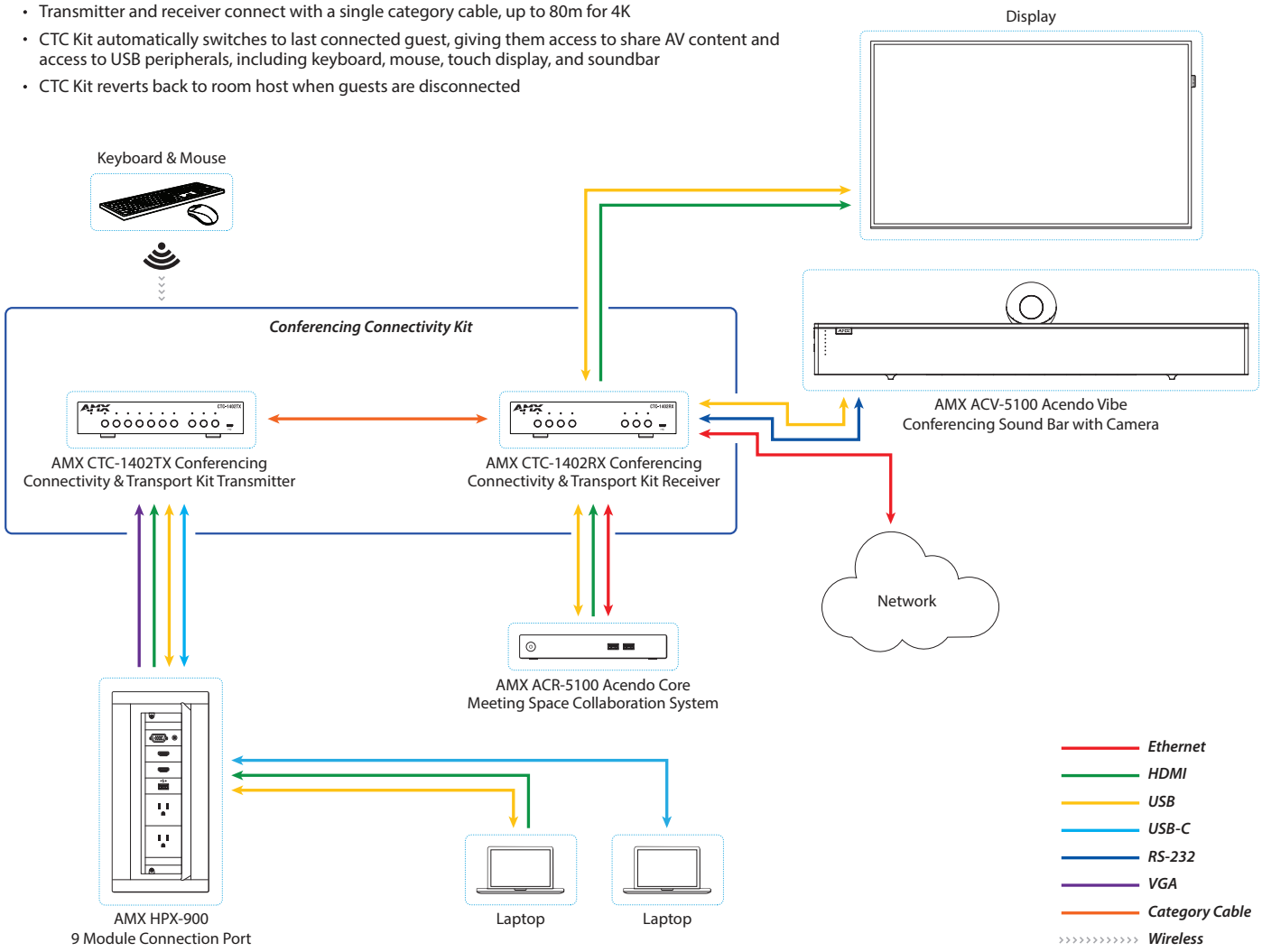
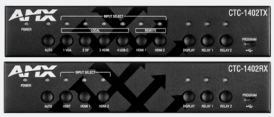




AMX Presentation Connectivity and Transport (CT) Kit

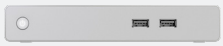
The AMX Presentation Connectivity and Transport Kit allows in-room and visiting devices to easily share meeting spaces. Each kit includes a transmitter and receiver that distribute 4K content, with automatic switching, scaling, and distance transport.

Learn more at www.amx.com/ctseries

AMX Conferencing Connectivity and Transport (CT) Kit

The AMX Conferencing Connectivity and Transport Kit allows in-room and visiting devices to easily share meeting spaces. Each kit includes a transmitter and receiver that distribute 4K content, with automatic switching, scaling, and distance transport. The Conference kit also supports USB 2.0 peripheral switching, allowing for dynamic sharing of room USB devices.

Learn more at www.amx.com/ctseries



AMX Acendo Core Collaboration System

This meeting place collaboration system includes web conferencing, document viewing, and wireless screen sharing in an easy-to-use platform. In this application, Acendo Core provides an easy method for meeting attendees to begin a web conference, wirelessly share content from multiple devices at once, and view presentation materials using the built-in document viewers.

Learn more at amx.com/acendocore

Acendo Vibe Conferencing Sound Bar with Camera

Acendo Vibe is a total conferencing sound bar solution designed specifically for the demands and elegance of the modern workspace. Robust JBL audio provides far-field microphone array, ambient noise reduction, echo cancellation and professional speakers to deliver experienced conference audio. A wide-angle camera catches everyone in the space; while CEC display control, USB and Bluetooth connectivity ensure an optimized experience.

Learn more at www.amx.com/acendovibe

AMX Enzo Presentation System

Enzo enables easy content sharing with quick access to presentations, photos, videos and other documents. With the integration of MirrorOp® real-time screen mirroring technology, users can wirelessly share content from their devices. With a built-in web browser, Enzo can also display documents and content that are located in cloud storage, or the internet. It also has a USB port for direct connection.

Learn more at www.amx.com/enzo

JBL Pro SoundBar PSB-1

The 2.0 Channel Commercial-Grade Soundbar with a feature set designed for commercial applications. Optimal JBL clarity without the fuss. The all-in-one design of the Pro SoundBar provides full-range sound without the need for a separate subwoofer, providing excellent quality audio while minimizing sound transfer to neighboring meeting rooms.

Learn more at www.jblpro.com/prosoundbar

AMX HydraPort Connection Ports

HydraPort is a beautifully accessible table connectivity option. Choose from over 50 cable, power and control modules to customize for any meeting space.

Learn more at: www.amx.com/hydraport

AMX Grommets

For easy one-stop shopping AMX offers HPG-20 2" Grommets in matte, frosted and gloss silver and black as well as HPG-10 ¾" Mini-Grommet in black.

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