HARMAN

HUDDLE SPACES

Audio Visual System Solutions for Education

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HUDDLE SPACES

A huddle space is traditionally a small room with a table, whiteboard and a few chairs. It is the venue of choice for small groups of students, instructors and administrators, who need a quiet place to meet and collaborate. In this space, people prefer to view content from a laptop or tablet on an LCD display and have the ability to access the Internet or conduct a web conference. By implementing control, automation and conferencing systems in your huddle spaces, you can ensure that the technology is easy to setup and manage, and create a comfortable meeting experience. HARMAN has a comprehensive portfolio of AV technology that can transform huddle spaces into state-of-the-art learning environments. We invite you to learn more about our AV solutions and discover how we are the perfect partner for developing professional-quality AV systems.
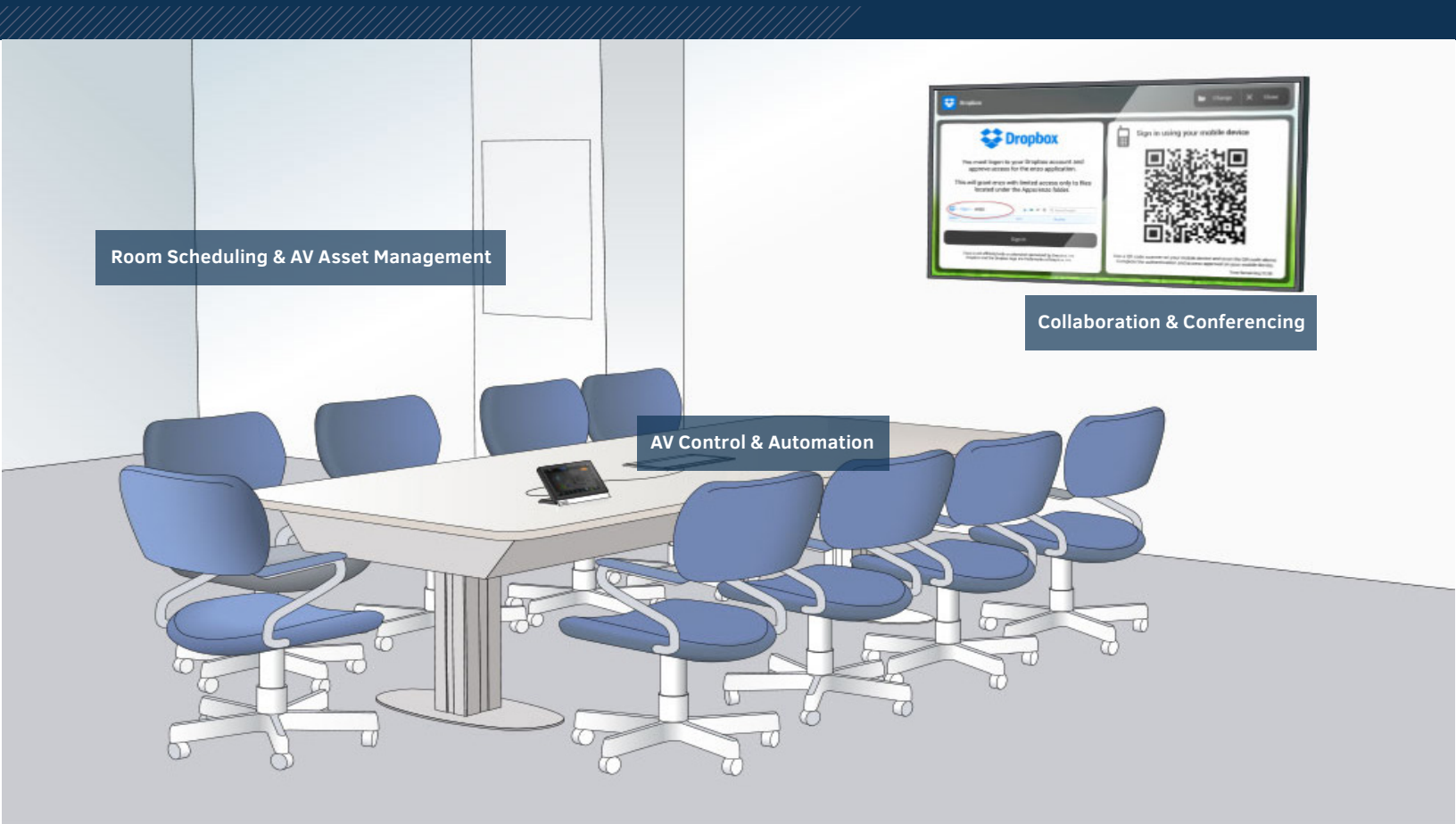

COMMON ACTIVITIES

Huddle spaces are small meeting areas, where groups of 2–8 people gather to:

• Present information by connecting a laptop to an LCD display or projector

• Share content wirelessly from a tablet, smartphone or laptop

• Meet and collaborate with remote participants via web conference

• Reserve a room remotely through scheduling software, such as Microsoft Exchange or Google Calendar

HARMAN HAS A DIVERSE PORTFOLIO OF AV TECHNOLOGY FOR HUDDLE SPACES

HARMAN is the leading manufacturer of professional audio, video and control technology found in modern huddle spaces. Our technology seamlessly combines everything you need in one platform, which can be centrally managed to ensure the best room functionality. These comprehensive systems improve the quality of information delivery and lead to more effective meetings.

Room Scheduling & AV Asset Management

Collaboration & Conferencing

AV Control & Automation

TYPES OF AV SYSTEMS OUR TECHNOLOGY CAN BUILD

- AV Control & Automation System
- Collaboration & Conferencing System
- Room Scheduling & AV Asset Management System

WHAT IS AN AV CONTROL & AUTOMATION SYSTEM?

AV control and automation systems simplify the operation of AV equipment in huddle spaces, so students, instructors and administrators feel comfortable operating the room's technology and confident that it supports their needs.

The most common scenario in a huddle space meeting is for a presenter to show content from a laptop on a display. The AV control and automation system centralizes the input and output signals from different audio, video and computer devices, and simplifies the selection and operation of various sources.

How is this done? First, users simply connect a laptop to the HDMI or VGA cable to the port that is installed in the table or wall. Then they press a button on the user interface to route the content to the display. It's that easy. There are no complicated remotes or searching for the right cable.

THE CORE BUILDING BLOCKS OF AN AV CONTROL & AUTOMATION SYSTEM WITH AMX BY HARMAN

Modero®
Touch Panel

Massio™
ControlPad

HydraPort®

Netlinx® Controller

THE USER INTERFACE
The User Interface (UI) is the remote control for the AV system. A UI can be as simple as a keypad to as sophisticated as a full-color touch panel. The purpose of the UI is to simplify the operation of the AV system with intuitive controls and automated functions (such as powering on/off a display or switching between source devices). AMX by HARMAN offers a wide variety of UIs, including Modero Touch Panels, Enova Keypads, and Massio ControlPads.

ARCHITECTURAL CONNECTIVITY
Bring Your Own Device (BYOD) has become a standard practice throughout many schools. Connecting personal devices to a huddle space AV system requires different types of cables, because each device may have a unique output. The AMX HydraPort consolidates all of the cables and ports needed to connect to the AV system inside a sleek, surface-mounted enclosure that mounts into furniture. HydraPorts are customizable with swappable input modules, power outlets, keypads and retractable cables.
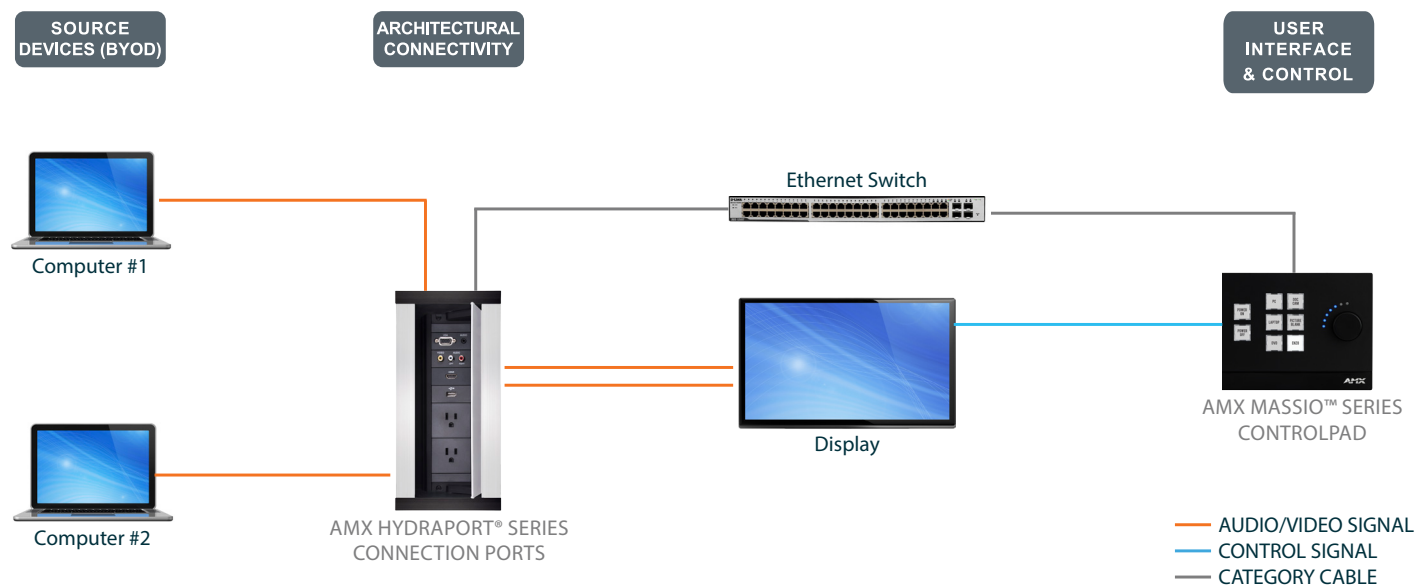
CENTRAL CONTROLLER
The Central Controller is the brain of the AV system, which coordinates functionality with the user interface and communicates to other AV devices, like displays. A Central Controller can be a standalone device or built directly into the user interface, called a ControlPad, where space is not available for installing a controller. ControlPads are a perfect solution for huddle spaces, allowing users to control a display's power and switch between device sources.

TIPS FOR DESIGNING THE AV CONTROL & AUTOMATION SYSTEM

- Evaluate your equipment to see if you need a video switcher. Typically, a projector or flat-screen TV serves as the video switcher in a huddle space. If you already have a display, double check the manufacturer's manual to confirm that your device has the proper type and quantity of input ports (such as VGA and HDMI) for the devices used in the huddle space.

- Determine the required functions users need to operate each source device in the system, like power on/off, volume up/down and device selection. This will determine the size of user interface you may need for all of the required buttons.

- Decide where users connect their devices to the display. Will it be a HydraPort in the table or an AV plate in the wall? Consider the cable types needed for connectivity, the length of these cables and any potential tripping hazards.

AMX AV CONTROL & AUTOMATION SYSTEM CONCEPT FOR HUDDLE SPACES

SOURCE DEVICES (BYOD)

ARCHITECTURAL CONNECTIVITY

USER INTERFACE & CONTROL

Ethernet Switch

Computer #1

Computer #2

AMX HYDRAPORT® SERIES CONNECTION PORTS

Display

AMX MASSIO™ SERIES CONTROLPAD

— AUDIO/VIDEO SIGNAL
— CONTROL SIGNAL
— CATEGORY CABLE

RAPID PROJECT MAKER HELPS YOU BUILD THE PERFECT AV CONTROL & AUTOMATION SYSTEM

RAPID PROJECT MAKER

Rapid Project Maker, or RPM, is a cloud-based software application that guides you through the process of selecting, configuring and connecting your devices, such as switchers, touch panels and displays. With RPM, you can program your AV controller and create an elegant user interface with no programming skills, and save hours of time versus traditional code-based programming. This software is free to our registered users.

To learn more about RPM, visit www.amxrpm.com.

WHAT IS A COLLABORATION & CONFERENCING SYSTEM?

Collaboration and Conferencing Systems facilitate presentations through screen mirroring of wireless devices, access to cloud-based services, file sharing and web conferencing.

FOR PRESENTERS, the presentation system provides secure access to content. Files can be stored in the cloud and pulled down onto a local computer (like Enzo® by AMX) in the huddle room. When a meeting concludes, the presenter can share content by posting a QR code onto the screen for others to scan. This removes the need for printed handouts, because participants have instant access to the document digitally. Conferencing systems also allow presenters to connect with people on other campuses or in distant locations through a video camera and a web conferencing application.

PARTICIPANTS benefit from the presentation system, because it empowers them to collaborate proactively with the rest of the group through their own wireless devices, using screen mirroring. Thanks to QR code sharing, participants can instantly pull presentation content from the presenter to their personal devices for future review.

TECHNOLOGY MANAGERS like collaboration systems, because they can replace the room PC. This reduces energy use, software license costs and maintenance/startup time. The collaboration system can also be managed remotely through the help desk.

THE CORE BUILDING BLOCKS OF A HARMAN COLLABORATION & CONFERENCING SYSTEM

Enzo®

CONTENT SHARING PLATFORM
Enzo® by AMX is a PC replacement that allows users to present directly from their devices through wireless screen mirroring. Enzo includes onboard web-based applications, like a web browser, Skype®, MirrorOp® and document viewers.

Sereno™

VIDEO CONFERENCING CAMERA
The AMX Sereno Video Conference Camera is a cost-effective camera designed for smaller meeting rooms and huddle spaces. The Sereno has a 120-degree field of view, a retractable shutter and USB connectivity.
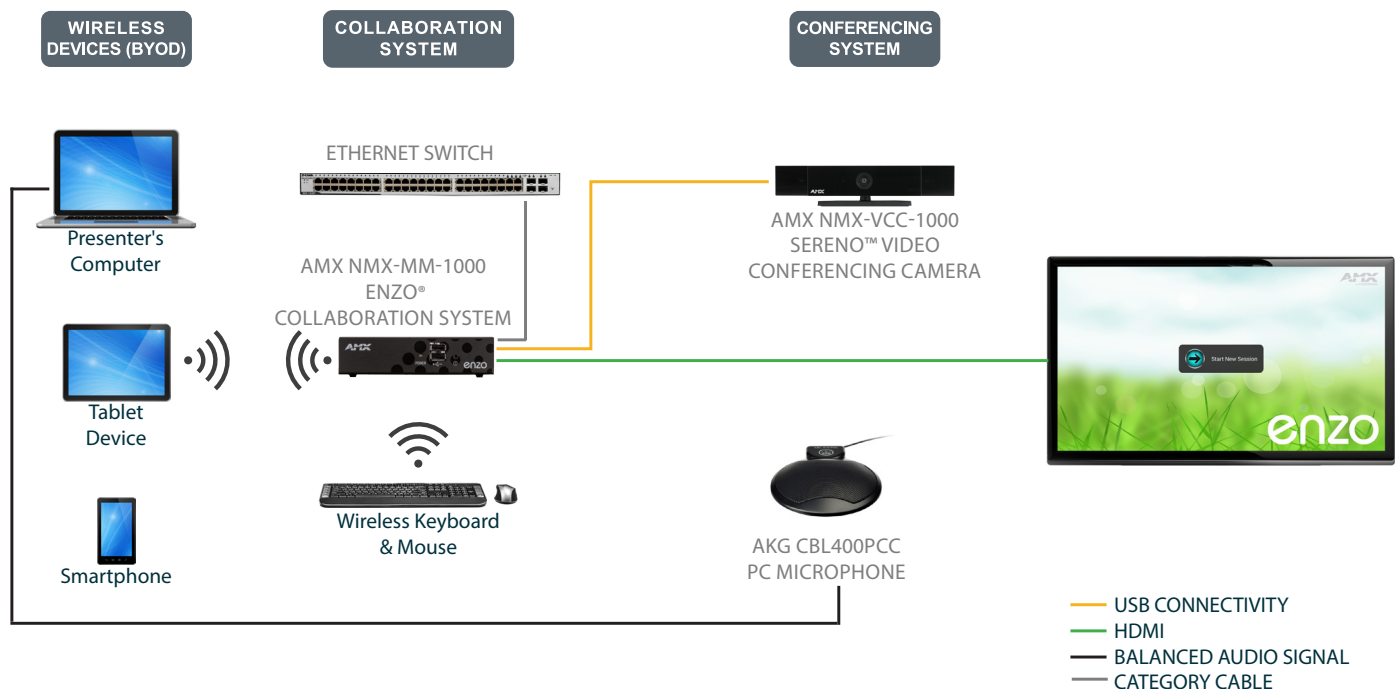
CBL 400PCC PC Microphones

CONFERENCING PC MICROPHONES
PC microphones provide a wide pickup pattern for picking up multiple people seated close to each other when using a laptop for web conferencing. AKG by HARMAN has a diverse offering of Boundary microphones, including the CBL 400PCC PC Microphone, perfect for web conferencing applications.

TIPS FOR COLLABORATION & CONFERENCING SYSTEMS IN HUDDLE SPACES

• Provide at least one PC microphone for every two seats.

• Note line-of-site issues if using a camera for video conferencing. Mount the camera at seating height.

• Plan network permissions before installing Enzo, so presenters and students have access to files and can use the onboard applications.

COLLABORATION & CONFERENCING SYSTEM CONCEPT FOR HUDDLE SPACES

WIRELESS DEVICES (BYOD)

COLLABORATION SYSTEM

CONFERENCING SYSTEM

ETHERNET SWITCH

Presenter's Computer

Tablet Device

Smartphone

AMX NMX-MM-1000 ENZO® COLLABORATION SYSTEM

Wireless Keyboard & Mouse

AMX NMX-VCC-1000 SERENO™ VIDEO CONFERENCING CAMERA

AKG CBL400PCC PC MICROPHONE

Start New Session

enzo

— USB CONNECTIVITY
— HDMI
— BALANCED AUDIO SIGNAL
— CATEGORY CABLE

COLLABORATION & CONFERENCING SYSTEM RESOURCES

ENZO® by AMX: http://www.amx.com/products/NMX-MM-1000.asp

SERENO™ by AMX: http://www.amx.com/products/NMX-VCC-1000.asp

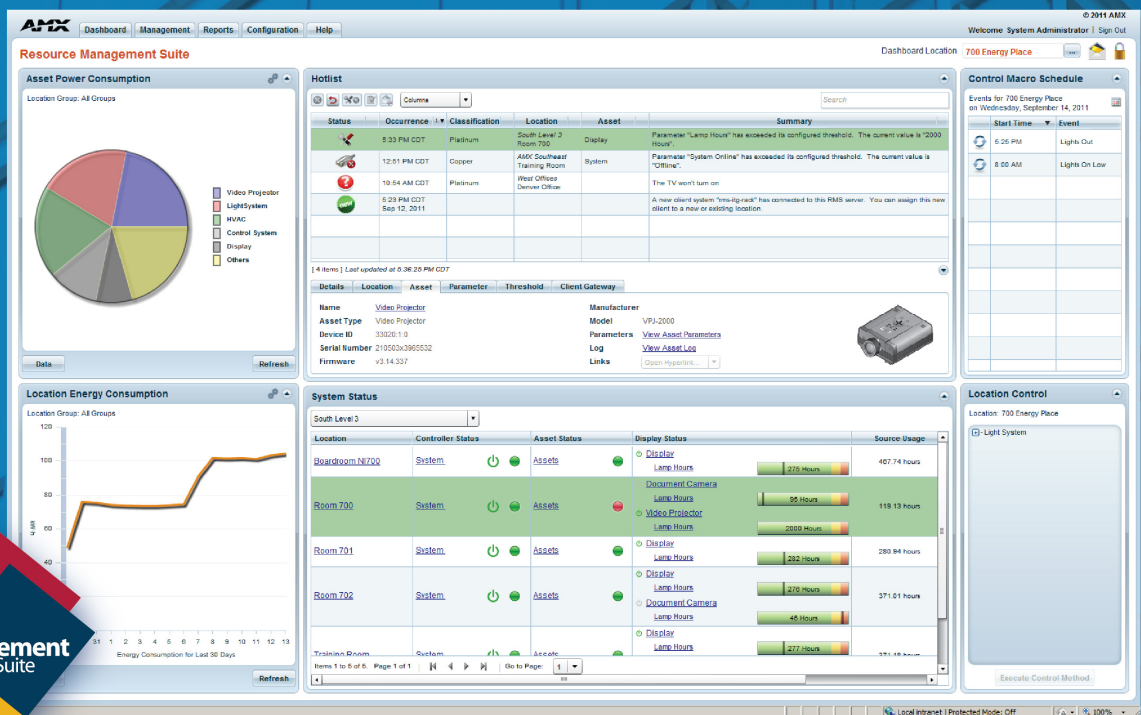**AKG Conferencing Microphones:** http://www.akg.com/pro/microphones/speech-spoken-word/boundary-layer-microphones

RESOURCE MANAGEMENT FOR HUDDLE SPACES:
AV ASSET MANAGEMENT

It happens far too often. The institution invests in AV equipment, only to find that they are constantly chasing issues due to the lack of a centralized system for monitoring and managing the equipment. Even more frustrating, support personnel must visit each room in person to troubleshoot problems, since they have no way to communicate remotely with the AV equipment.

Resource Management Suite (RMS) Enterprise is scalable client/server-based software for IT and AV managers that provides remote management and scheduling capabilities for AV assets and building systems. The software features a user-friendly dashboard, making it easy to centralize the management and monitoring of AV equipment, lights, HVAC and other building functions. This allows IT and AV managers to proactively maintain AV displays before a bulb burns out and receive immediate notification when a device goes offline.

The RMS Dashboard

WIDGET-BASED GUI
RMS Enterprise includes a fully customizable dashboard layout for each secure user, including visual bar graphs, user-defined status and notifications, and hotlists displaying all current system exceptions and issues.

GO GREEN WITH ENERGY MANAGEMENT
Save money and the environment by remotely turning off equipment when the huddle space is empty or on weekends. Track and run reports on energy usage for monitored assets.

CENTRALIZE THE AV SUPPORT DESK
Centrally monitor AV technology problems right from your IT support desk and remotely control AV devices in the huddle space when users call in for help.

SOLVE TECHNOLOGY ISSUES PROACTIVELY
With active monitoring of AV technology in the huddle space, AV support staff can setup automatic email alerts that give them the ability to proactively respond to issues as soon as they arise.

RESOURCE MANAGEMENT FOR HUDDLE SPACES: SCHEDULE MANAGEMENT

A college campus runs on classes and events, which are allocated facility resources through a master calendar. Schedule management systems, like Exchange, Lotus Notes or Google Calendar, provide a platform to centrally create and change schedules, so campuses can efficiently manage their huddle spaces. Once this schedule is created, however, how do students and instructors know if there is a room change, time change, cancellation or if that space is available for the next hour?

AMX's RMS Enterprise Scheduler is a comprehensive room schedule module that assists students and instructors in locating rooms by displaying the scheduled events on a touch panel adjacent to room entrances. It eliminates delays in class start times by automating the room technology, thereby eliminating the time typically spent on equipment setup.

CORE SCHEDULE SOLUTION PRODUCTS

RESOURCE MANAGEMENT SUITE ENTERPRISE SCHEDULER
Schedule rooms from any touch panel or PC. Integrate RMS with many popular scheduling platforms and display the room schedule on touch panels.

QUICK RESPONSE SCHEDULING
An alternative to a touch panel, this sleek acrylic wall panel displays the room schedule on mobile devices by scanning a QR code. It is elegant looking and simple to install without wires.

MODERO S SERIES TOUCH PANEL
Modero is a cost-effective way to display schedules outside any room. Mount on virtually any surface, including glass, and easily view red/green room availability lights to determine occupancy.

For more information about Resource Management Suite, please visit: http://www.amx.com/resourcemanagementsuite/

BRINGING TOGETHER THE HARMAN HUDDLE SPACE AV SYSTEM

Our diverse catalog of audio, video and control technology builds comprehensive audio visual systems for the huddle space.
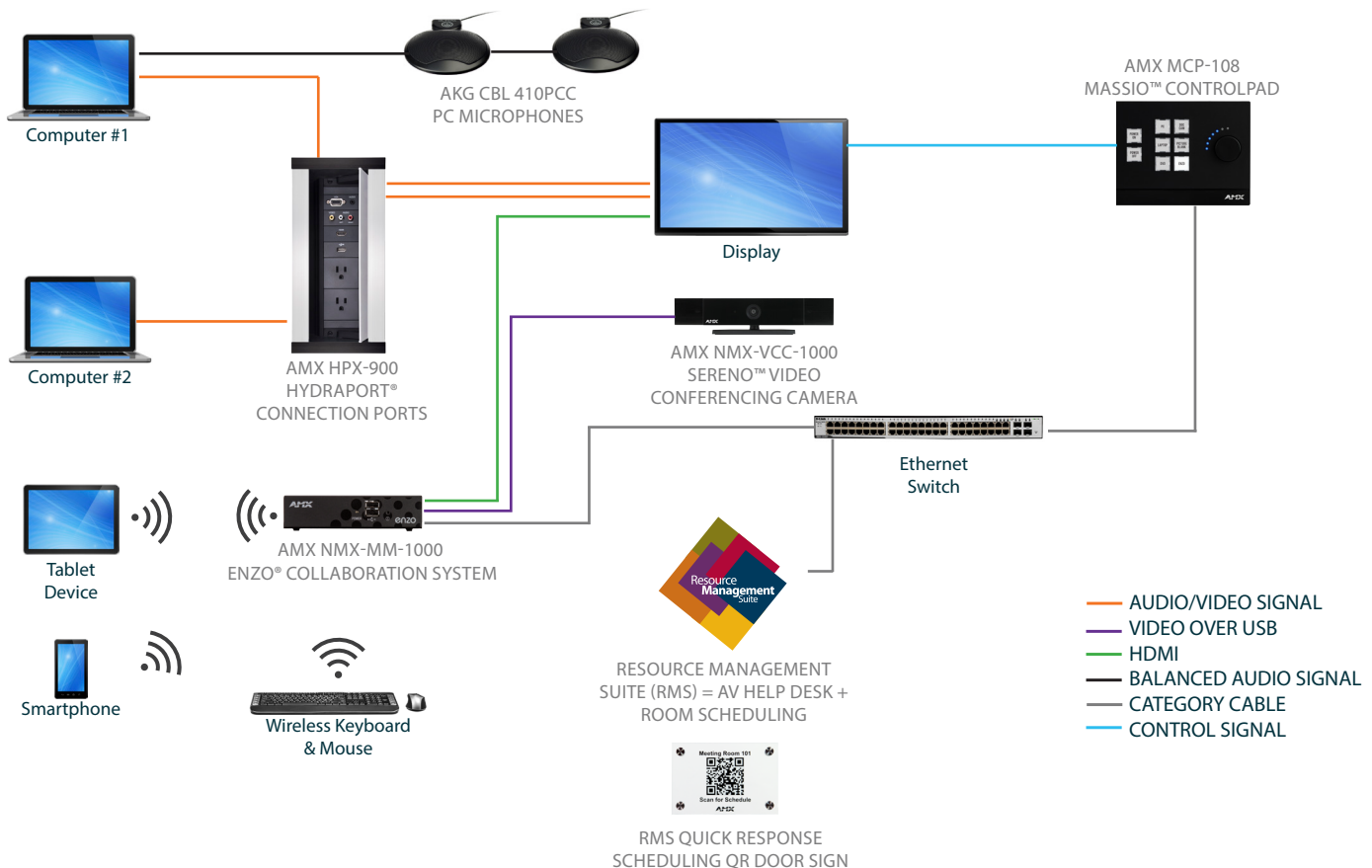
In this diagram, we demonstrate an approach to merging AV Control & Automation, Collaboration & Conferencing and Room Scheduling & AV Asset Management systems together to create one unified system.

For more technical resources on our brands and product families featured in this diagram, we suggest the following websites:

AKG   http://www.akg.com/pro/microphones/speech-spoken-word

AMX   http://www.amx.com/productinfo/

HARMAN HUDDLE SPACE AV SYSTEM CONCEPT

Computer #1

AKG CBL 410PCC
PC MICROPHONES

AMX MCP-108
MASSIO™ CONTROLPAD

Display

Computer #2

AMX HPX-900
HYDRAPORT®
CONNECTION PORTS

AMX NMX-VCC-1000
SERENO™ VIDEO
CONFERENCING CAMERA

Ethernet
Switch

Tablet
Device

AMX NMX-MM-1000
ENZO® COLLABORATION SYSTEM

Smartphone

Wireless Keyboard
& Mouse

RESOURCE MANAGEMENT
SUITE (RMS) = AV HELP DESK +
ROOM SCHEDULING

— AUDIO/VIDEO SIGNAL
— VIDEO OVER USB
— HDMI
— BALANCED AUDIO SIGNAL
— CATEGORY CABLE
— CONTROL SIGNAL

RMS QUICK RESPONSE
SCHEDULING QR DOOR SIGN

FOR MORE INFORMATION

Email us: education@harman.com

To contact a member of our Education Business Development Team, visit: http://www.amx.com/automate/contactamx/

ADDITIONAL RESOURCES

Campus Explorer: http://www.amx.com/education/plan/campusexplorer/

AMX White Papers: http://www.amx.com/education/plan/resources/#!/

AMX Training Videos: https://www.youtube.com/user/AMXconfigure

AKG Training Videos: https://www.youtube.com/user/AKGAcoustics

About HARMAN Professional Solutions

HARMAN Professional Solutions is the world's largest professional audio, video, lighting, and control products and systems company. We serve the entertainment and enterprise markets with comprehensive systems, including enterprise automation and complete IT solutions for a broad range of applications. Our brands comprise AKG Acoustics®, AMX®, BSS Audio®, Crown International®, dbx Professional®, DigiTech®, JBL Professional®, Lexicon Pro®, Martin®, Soundcraft® and Studer®. These best-in-class products are designed, manufactured and delivered to a variety of customers, including tour, cinema and retail as well as corporate, government, education, large venue and hospitality. In addition, our world-class product development team continues to innovate and deliver groundbreaking technologies to meet our customers' growing needs. For scalable, high-impact communication and entertainment systems, HARMAN Professional Solutions is your single point of contact.

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