Smart Building Technology
and Hybrid Work Solutions

Cisco Talent and Collaboration Centers

Medium Collaboration Room - Video Centric Design Guide

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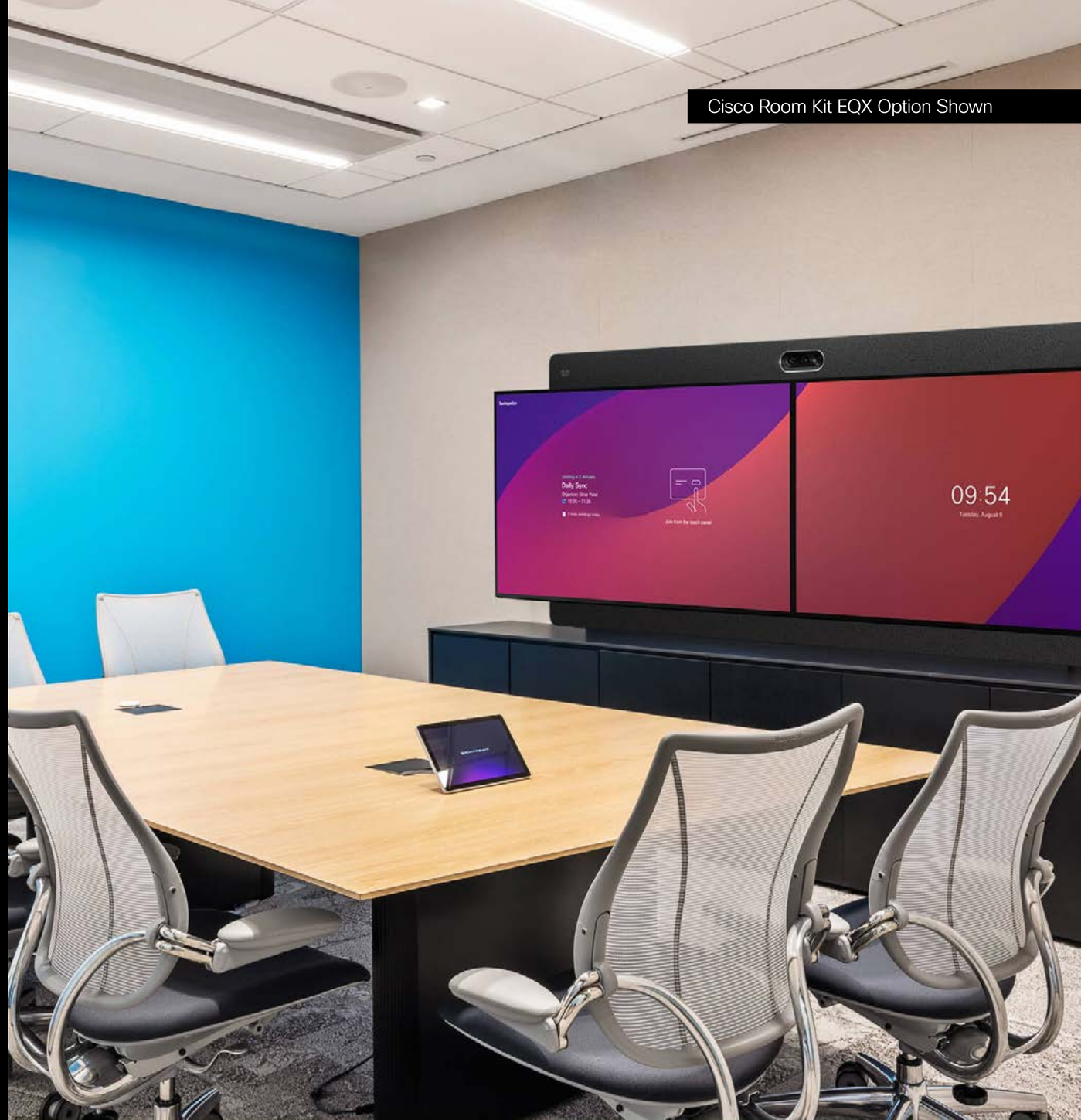

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Design Guide

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Cisco Room Bar Pro Option Shown

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Introduction

Overview and Intent

This document provides guidance on how to effectively design a Medium Collaboration Room - Video Centric.

This design brings space layout, technology, and furnishings together to create an optimal experience for those present locally and for remote attendees.

Each project is unique; thus, it is important to involve internal facilities and IT teams, as well as an architect and/or space designer, furniture providers, and a Cisco-certified integrator, as early as possible. The goal is to thoroughly understand the needs of the end users and address any local concerns, including physical layout, wall, floor, and ceiling composition, electrical/mechanical integration, network and cabling considerations, and external environmental issues (lighting/noise/temperature) before the design is finalized.

Note: Links to key Cisco documentation, including product data sheets, room preparation guides and installation materials can be found at the last page of this Design Guide.

Room Description

The video-centric collaboration room is perfect for information sharing and decision-making meetings. The horizontal table creates the effect of everyone sitting around a table. Dual displays ensure that remote participants, as well as content can be seen by all. This room can be deployed in a 7 person configuration (2x3x2) or 8 person (2x4x2), depending on the width of the allocated space.

Supported Collaboration Activities

Information Sharing	✔
Brainstorming	
Team Building	
Decision Making	✔

Visualization of Key Cisco Elements

Cisco Room Navigator
for Wall

Cisco Room Navigator
for Table

Dual 65” displays
LG / Panasonic / Samsung / Sony

Option 1

Cisco Room Bar Pro
with Cisco Table Microphones

Cisco Room Bar Pro

Cisco Table Microphone (x 2)

Option 2

Cisco Room Kit EQX
with Cisco Table Microphone Pros

Cisco Room Kit EQX

Cisco Table Microphone Pro (x 2)

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Certified Third Party Displays

Webex certified displays have been tested for compatibility and robustness of their video interfaces, optical characteristics, and basic security practices.

When connected to a Cisco collaboration device they will automatically reconfigure to the optimal configuration already tested and verified.

For up to date information on certified and compatible Cisco collaboration device partner offers, click on the link below.

Device Partners

Vendor	Product	Firmware version
Samsung	QPR-8K	1110.2
Samsung	QMR	2151.0
Samsung	QBR	2151.0
Samsung	QMB	1040.7
Samsung	QBB	1040.7
Panasonic	EQ1	1.50 Cu
Panasonic	EQ2	2.40
LG	UH5F-H	03.02.00
LG	UL3G	03.12.80
LG	UL3J	03.08.41
LG	UH5J	03.24.01
LG	UR640S	03.14.23
Sony	BZ30J, BU30J, BZ35J, BU35J, BZ40H, BU40H, BZ40J, BU40J	6.5929
Sharp/NEC	M751, M861, M981	1.200
Sharp/NEC	MA431, MA491, MA551, P435, P495, P555	3.203

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Option 1: Cisco Room Bar Pro

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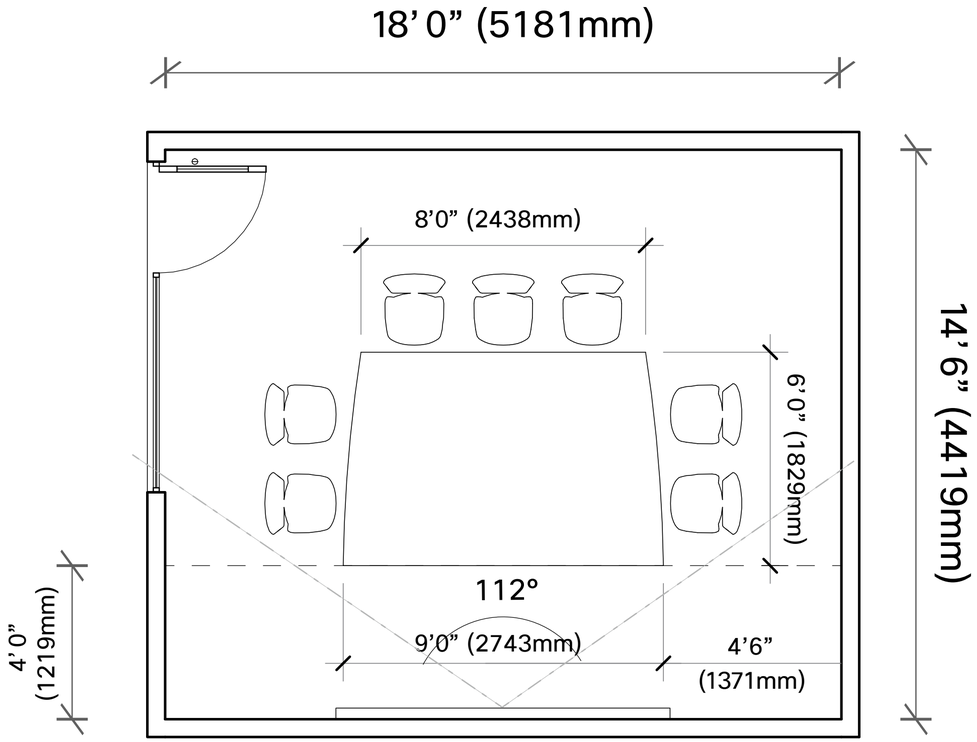
Medium Collaboration Room - Video Centric

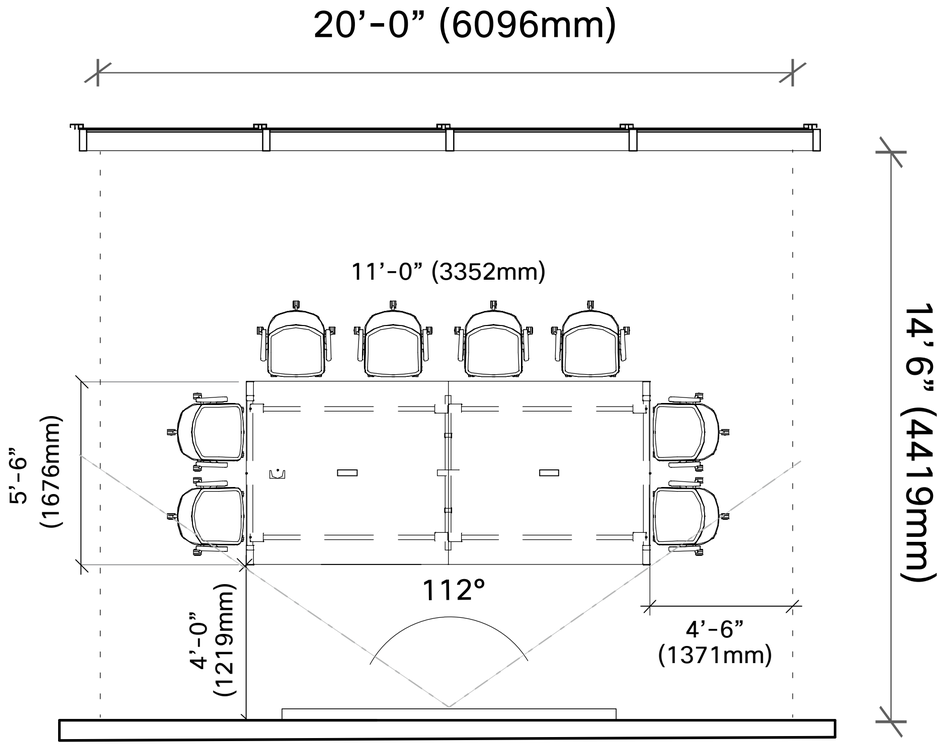
Room Layout

7-Person Layout



Note: Room dimensions show are the minimal size, based on the technology and furniture options shown.

Alternate 8-Person Layout



With its 112 degree Field of View (FoV), the Cisco Room Bar Pro will also support an 8-person configuration (2-4-2). This is not recommended with the Cisco Room Kit EQX.

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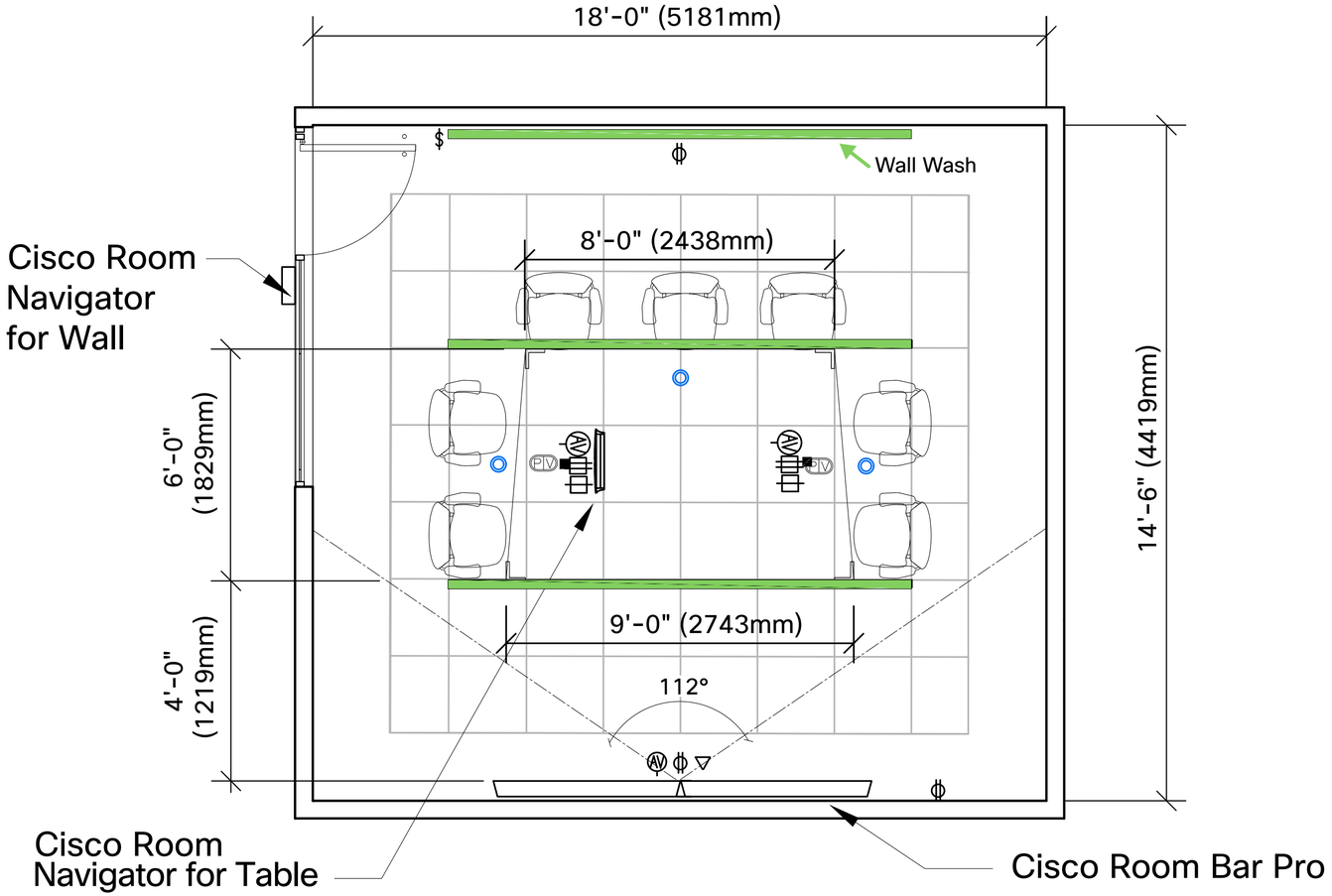
Medium Collaboration Room - Video Centric

Composite Plan



Graphics Symbols

- Acoustical Ceiling & Grid
- HVAC Diffusers (T.B.D.) Shown as Example Only
- Light Fixtures
- Acoustical Wall

Furniture Systems Version Devices

- Duplex Receptacle & Grid
- Data Receptacle

Power and Communication

WALL / CEILING / FLOOR VERSION DEVICES

- Third Party Speakers (Optional)
- Duplex Receptacle
- Data Receptacle
- Light Switch
- AV Receptacle
- Table Version Microphone
- Combination Power & Voice / Data Infeed

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Medium Collaboration Room - Video Centric

Video Device Mounting Options

Option 1 Cisco Room Bar Pro

There are two mounting options for the device when deploying the Cisco Room Bar Pro. Several factors will go into determining which option is best.

Option 1a Wall Mount

Wall Mounted – Requires wall to be blocked and electrical and data to be elevated. Specific wall mount hardware must be determined based on the weight of the displays that are selected.

Option 1b Credenza

A/V compatible credenza – Freestanding and fully integrated cabinets available from a number of specialized vendors eliminate the requirement for the wall to be blocked and electrical moved. Perfect for new and retrofit installations, allowing for quick and efficient installation.

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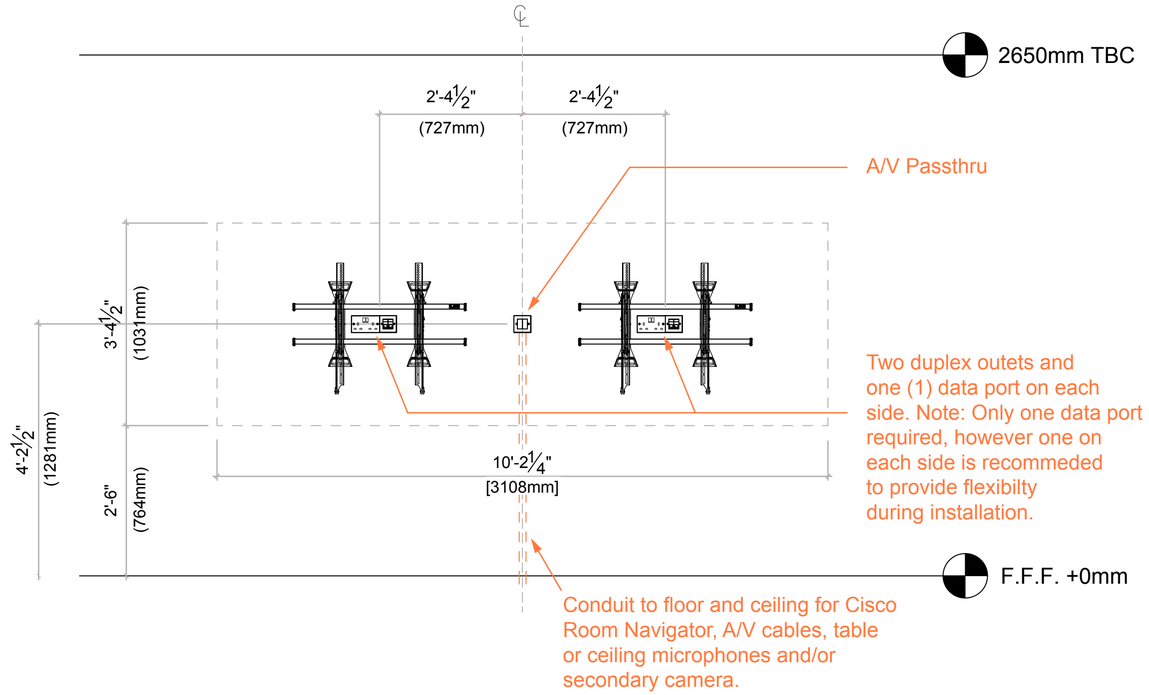
Medium Collaboration Room - Video Centric

Room Elevations

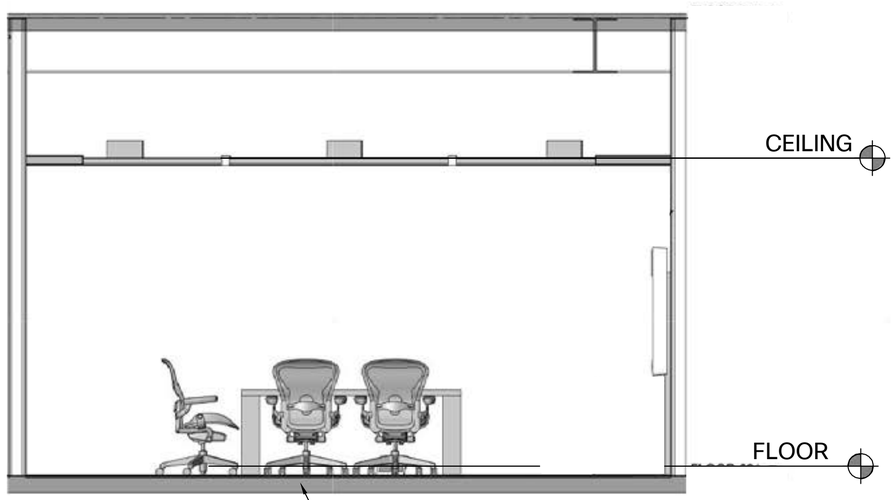
Option 1a

Cisco Room Bar Pro - Wall Mount

Electrical Elevation



Side Elevation



Conduit between the device and the table for Cisco Room Navigator for Table, Cisco Table Microphones, and A/V cables.

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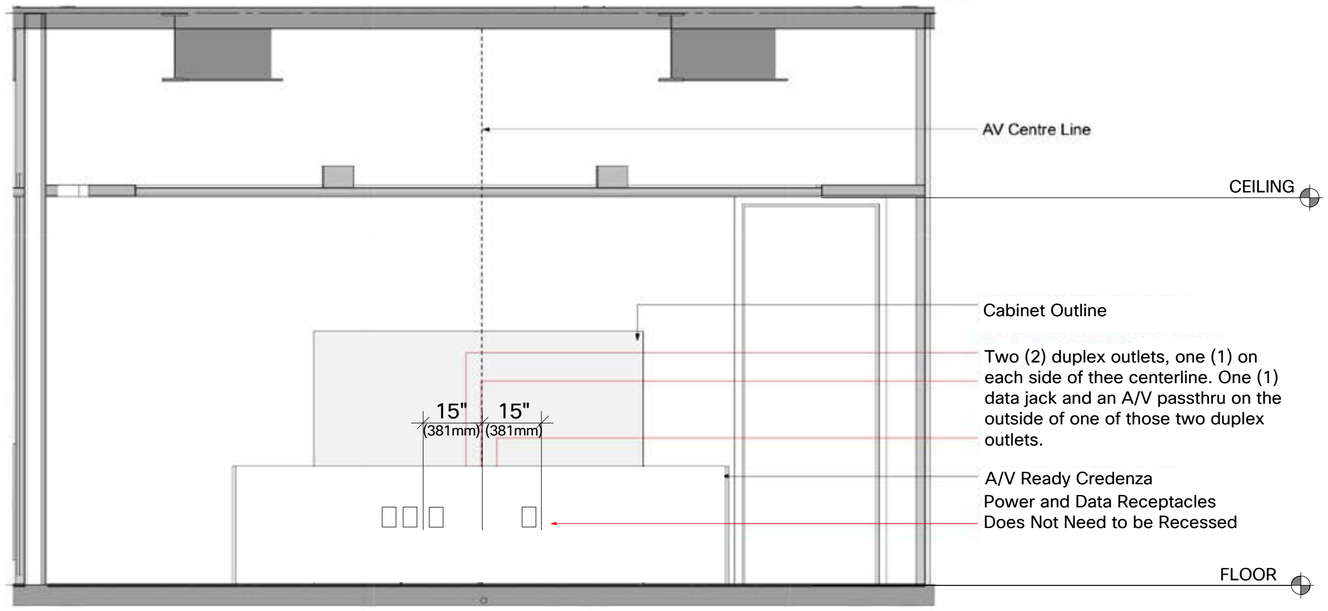
Medium Collaboration Room - Video Centric

Room Elevations

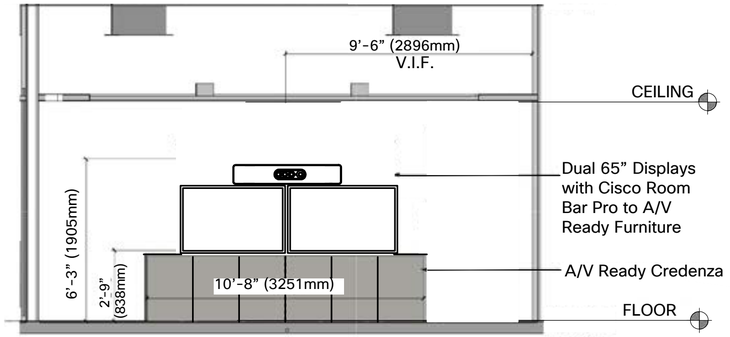
Option 1b

Cisco Room Bar Pro - A/V Credenza

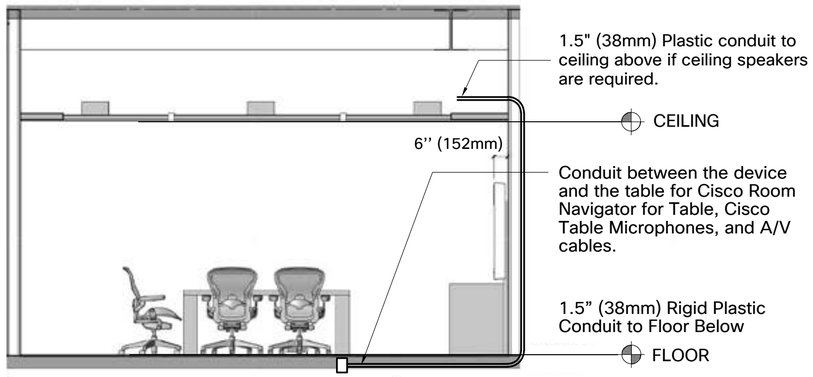
Conduit Elevation



Front Elevation



Side Elevation



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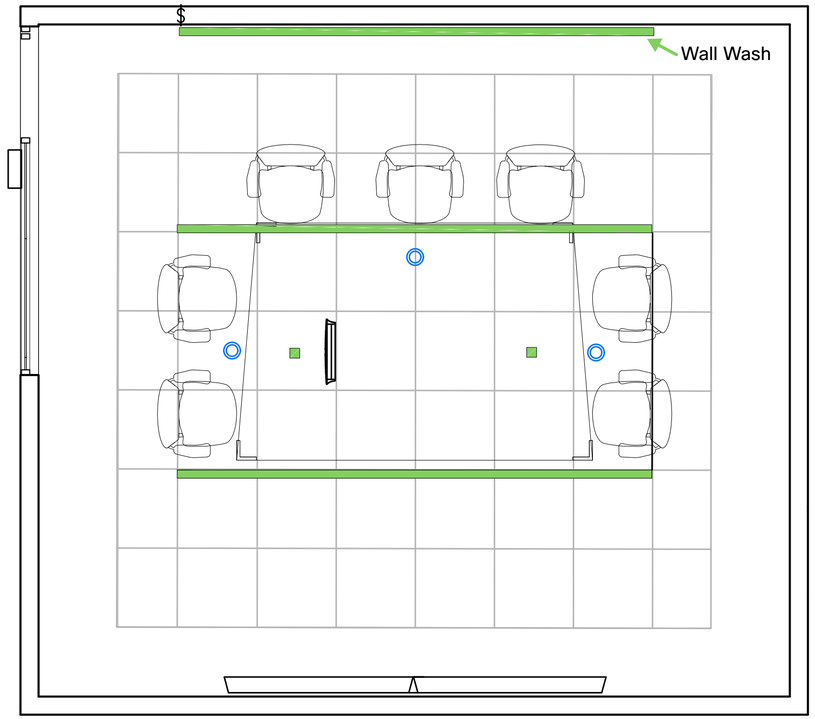
Medium Collaboration Room - Video Centric

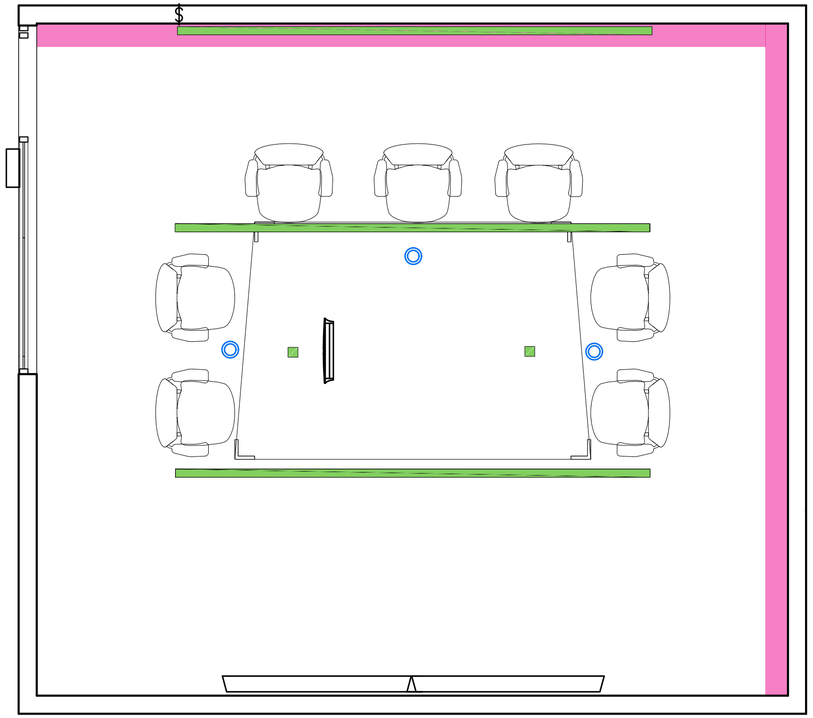
Reflective Ceiling Plan & Acoustical Treatment

Reflective Ceiling Plan



- A glare-free luminary with a beam angle of 90° or wider is recommended. In addition, fixtures selected should have a color temperature of ~4000K and color rendering index (CRI) of 85 or better.

Acoustical Treatment



- Two walls of acoustical wall treatment is optimal, preferred location is wall opposite device and then adjoining, away from entry location.

Graphics Symbols

- Acoustical Ceiling & Grid
- HVAC Diffusers (T.B.D.) Shown as Example Only
- Light Fixtures
- Acoustical Wall

Furniture Systems Version Devices

- Duplex Receptacle & Grid
- Data Receptacle

Power and Communication

WALL / CEILING / FLOOR VERSION DEVICES

- Third Party Speakers (Optional)
- Duplex Receptacle
- Data Receptacle
- Light Switch
- AV Receptacle
- Table Version Microphone
- Combination Power & Voice / Data Infeed

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Power & Data

General Specifications

Power/data requirements need to be verified for each project. Provide video device power/data even if the project plan does not include it on day one. Based on the design of this space, core drills and floor boxes will be required.

Power & Data

Provide one (1) LAN/Ethernet jack and two (2) duplex outlets on the wall behind the Cisco Room Bar Pro (a second ethernet port can be added for redundancy/future use). Exact location for both will depend on the mounting option chosen. Suggested locations can be found in the elevations section of this document, but exact location should be verified with the mount manufacturer or the A/V partner doing the install.

Power in Tabletop

User power should be surface mounted in the tabletop. If pop-ups or table wells are used, it is important to verify that they can accommodate all laptop power supplies. Provide shared power – 1 power port for every two seats.

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Medium Collaboration Room - Video Centric

Exploded IT Diagram

Cisco Room Navigator for Table (required)

The recommended approach is to connect the table stand Cisco Room Navigator directly to the Cisco Room Bar Pro using a network cable. The two can also be connected over the IT network if an ethernet port is available under the table.

Cisco Room Navigator for Wall

It is recommended to run the cable inside the wall or through the door frame directly back to a network switch.

Cisco Table Microphones

Although not technically required for a room of this size, they are highly recommended. Microphone extension cables may be needed if the run between table and device exceeds length of the cable that is provided with each microphone.

Third-party Speakers

Although not typically required for this space, they can be used if local conditions warrant. (Requires conduit behind device to ceiling.)

Table Top Charging

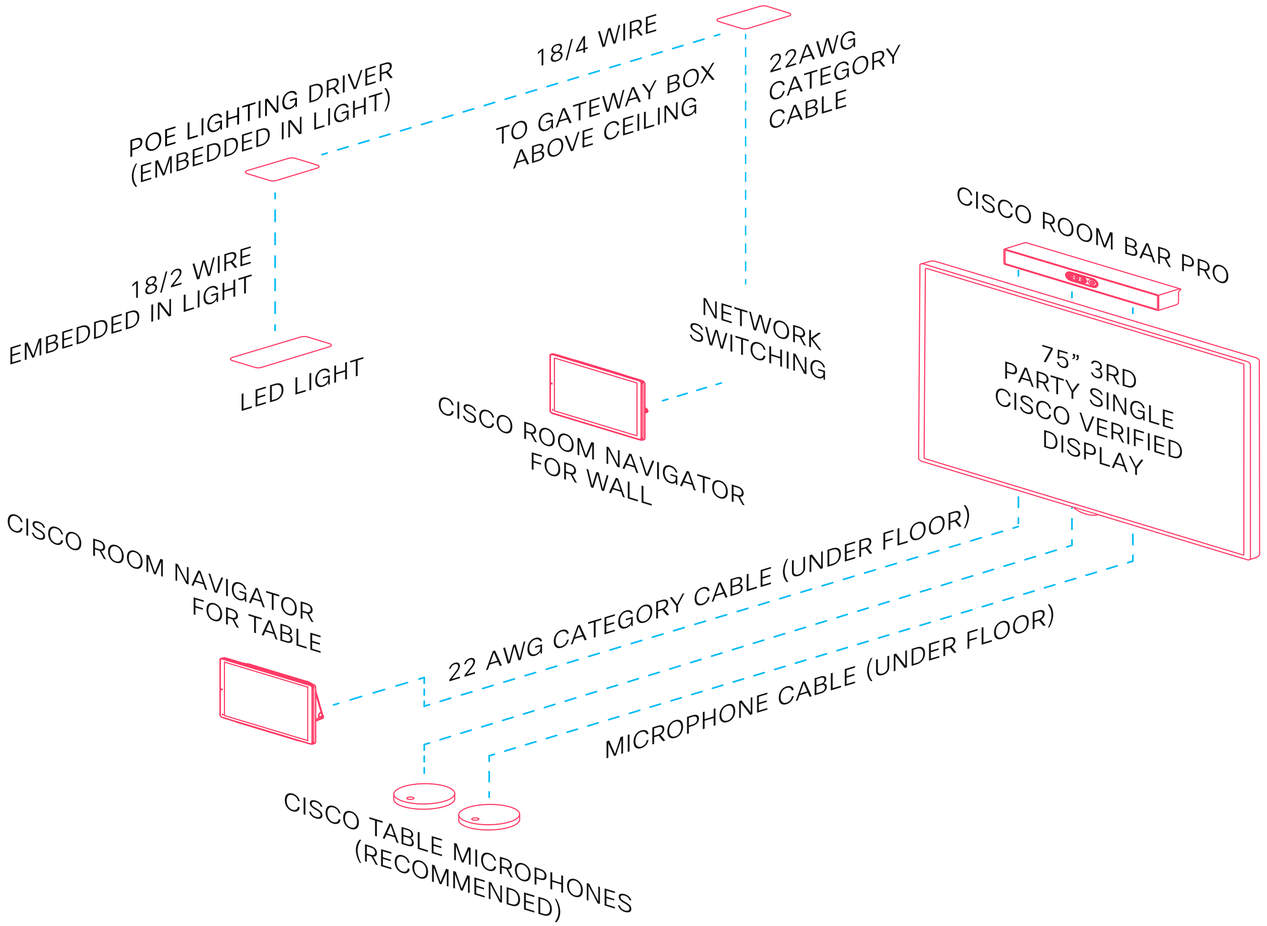
USB-C charging and convenience outlets on table top. Ensure the size of the trough and layout can accommodate a variety of laptop power supplies.

Wall Blocking

Required when the device is wall-mounted. The size and composition of blocking materials should be determined based on the overall weight of the solution deployed.

Core Drilling

Core Drill-Preferred method for providing connectivity between the table and the Cisco Room Bar Pro for the Cisco Room Navigator for Table, Cisco Table Microphones and/or A/V cables. If core drilling is not an option, a floor cable cover or wire concealer can be used.



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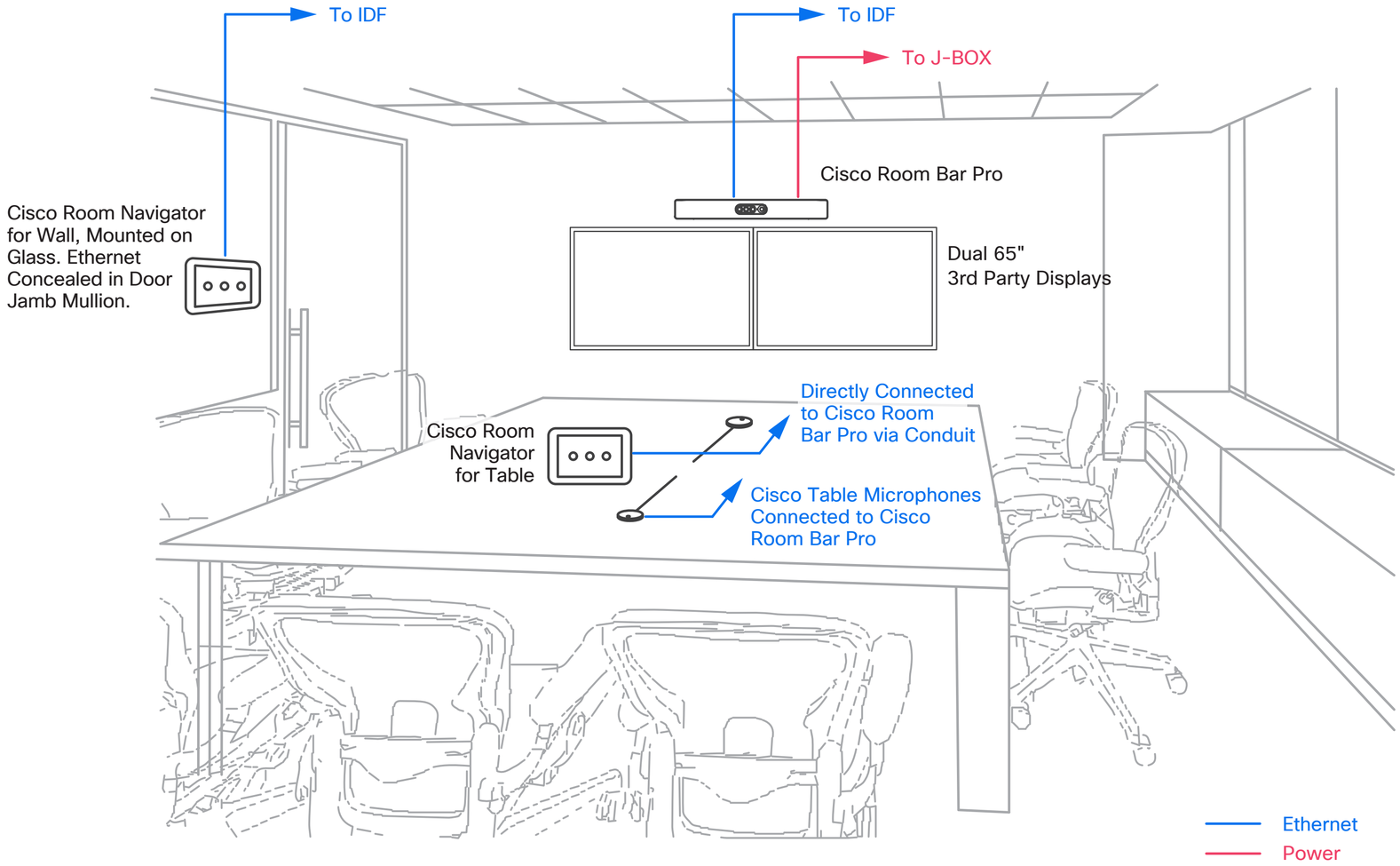
Medium Collaboration Room - Video Centric

Connectivity View



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Medium Collaboration Room - Video Centric

IT/OT Bill of Material

Cisco Products

Cisco Room Bar Pro Option:

- **CS-BARPRO-C-K9.** Cisco Room Bar Pro - Carbon Black (with Cisco Room Navigator for Table, mounting kit and accessories)
- **CS-MIC-TABLE-J** Cisco Table Microphones (Qty 2)
- **CS-T10-WM-K9=** Cisco Room Navigator for Wall

Non-Cisco peripherals

- Dual 65” Video Displays
- Third-party wall mount or AV-ready credenza

IOT Devices

- IAQ coming from the Cisco Room Navigator, No additional IoT IAQ
- Occupancy sensing is coming from the Cisco Endpoints
- Suggested lighting specifications: 220LPW raw, 140LPW delivered
- Each Medium Collaboration room POE lights being power by 4 ports on the ceiling
- Traditional DC Wall Switch
- Ensure device is not connected to ASHRAE 90.1 outlet

External microphones and speakers

- The Cisco Room Bar Pro is equipped with an internal microphone array and is optimized for small to medium sized collaboration spaces, thus external microphones are not technically required if people are seated within 13 feet (4 meters) from the device. That said, we do recommend adding two (2) table microphones to this space to ensure the best audio experience.
- The Cisco Room Bar Pro has a 3-channel loudspeakers embedded within, third-party external speakers are typically not needed unless room acoustic conditions warrant their use.

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Option 2: Cisco Room Kit EQX

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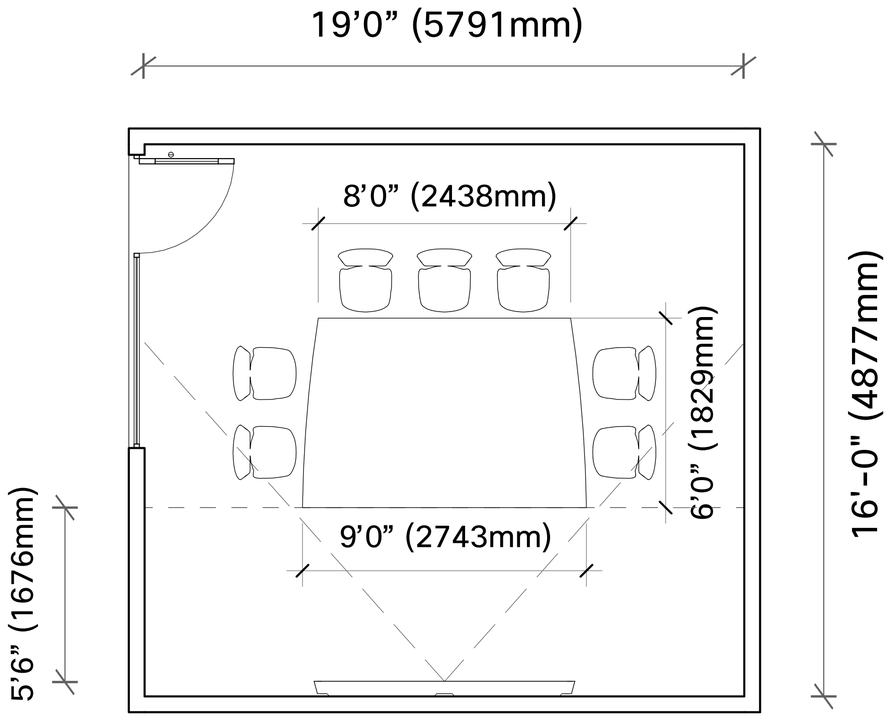
Medium Collaboration Room - Video Centric

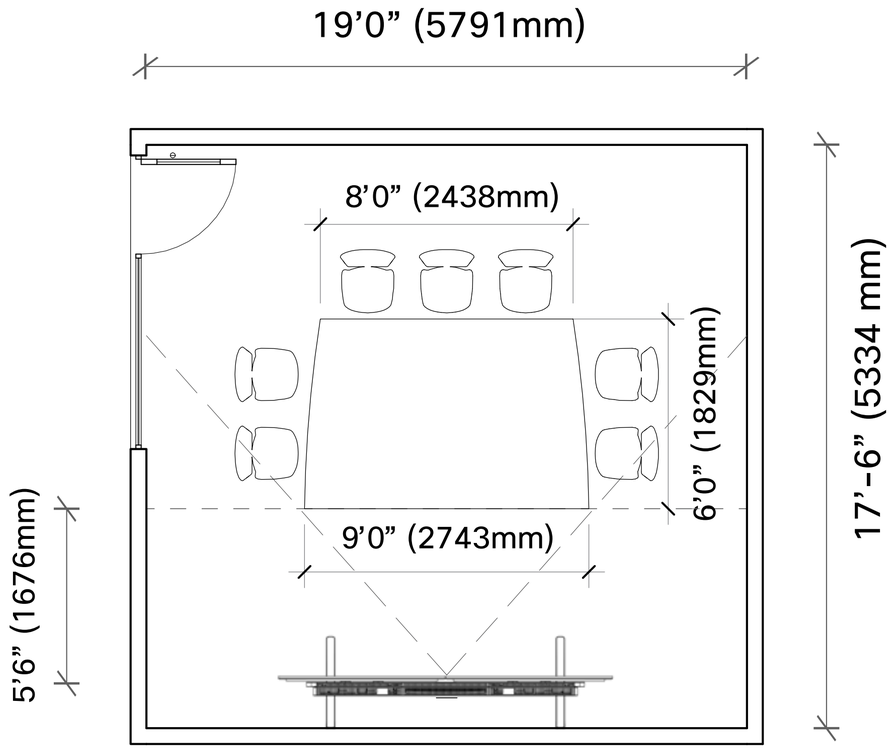
Room Layout

Layout Using Wall Mount, Wall Stand, or A/V Credenza



Note: Room dimensions show are the minimal size, based on the technology and furniture options shown.

Layout Using the Cisco EQX Floor Stand



Note: Room dimensions shown are the minimal size, based on the technology and furniture options shown. The length of this space is slightly larger than what is shown for the Wall Mount, Credenza, and Wall Stand options due to the width of the legs on the Cisco EQX Floor Stand.

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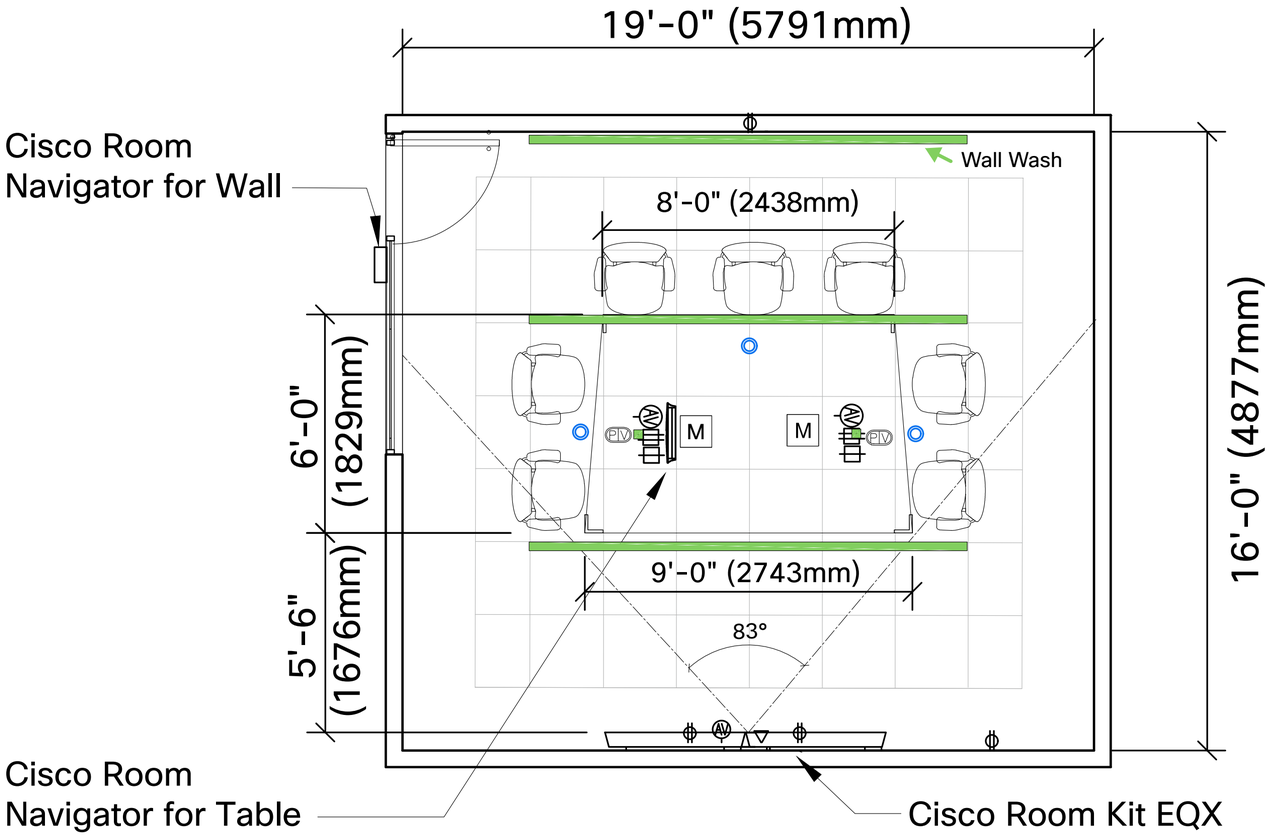
Medium Collaboration Room - Video Centric

Composite Plan



Graphics Symbols

- Acoustical Ceiling & Grid
- HVAC Diffusers (T.B.D.) Shown as Example Only
- Light Fixtures
- Acoustical Wall

Furniture Systems Version Devices

- Duplex Receptacle & Grid
- Data Receptacle

Power and Communication

WALL / CEILING / FLOOR VERSION DEVICES

- Third Party Speakers (Optional)
- Duplex Receptacle
- Data Receptacle
- Light Switch
- AV Receptacle
- Table Version Microphone
- Combination Power & Voice / Data Infeed

Note: Setback from display to edge of table is greater than in the Room Bar Pro scenario due to 83 degree FoV of the EQX.

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Medium Collaboration Room - Video Centric

Video Device Mounting Options

Option 2 Cisco Room Kit EQX

There are four mounting options for the device when using the Cisco Room Kit EQX in the Medium Collaboration Room – Video Centric. The physical conditions of the space, desired aesthetics, and required amenities will define which solution is most appropriate.

Option 2a Wall Mount

Wall Mounted – Requires wall to be blocked and electrical and data to be elevated.

Option 2b A/V Credenza

Freestanding – Does not require wall blocking. Perfect for retrofit installations, or when trash, recycling and/or extra storage is required.

Option 2c Wall Stand

Wall tethered – An effective solution when the wall is not blocked, but still may require power and data to be relocated.

Option 2d Floor Stand

Freestanding – A perfect for retrofits, open area deployments, or when video needs to be installed quickly.

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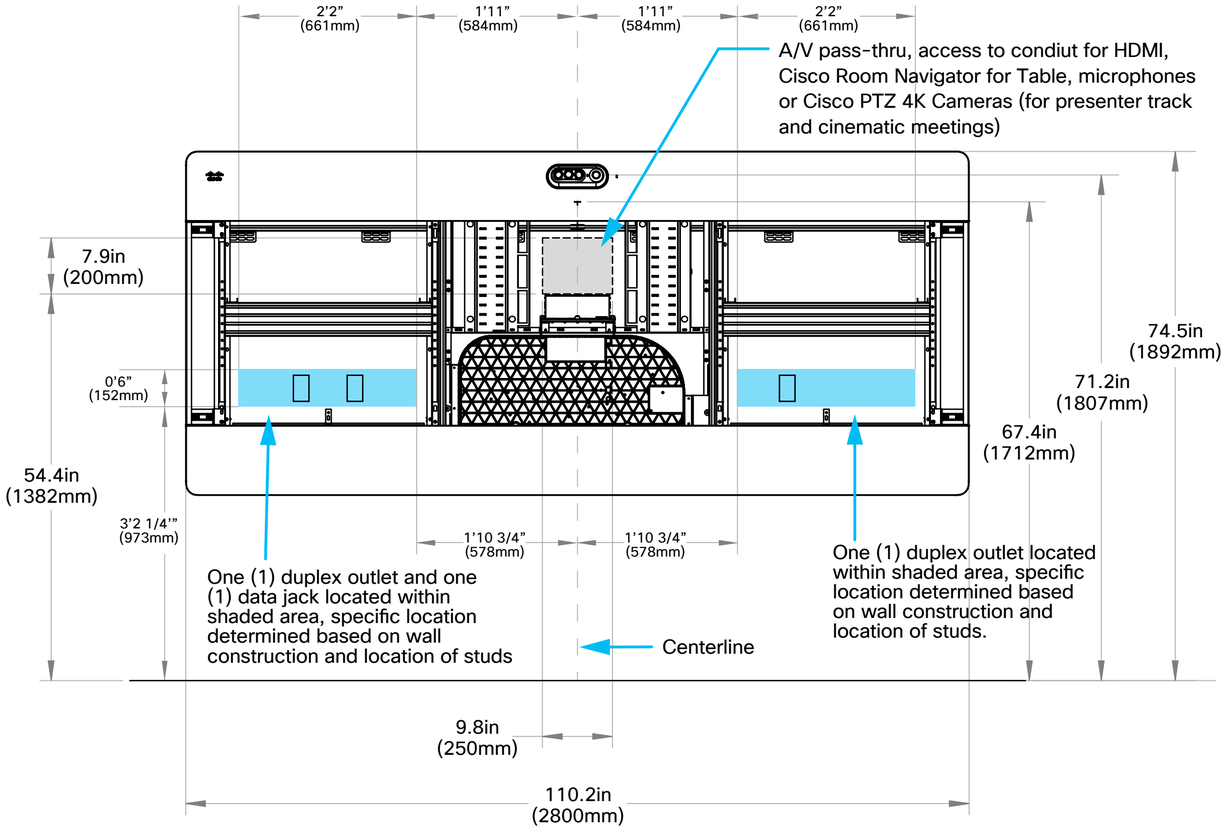
Medium Collaboration Room - Video Centric

Room Elevations

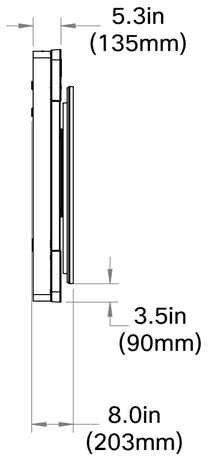
Option 2a

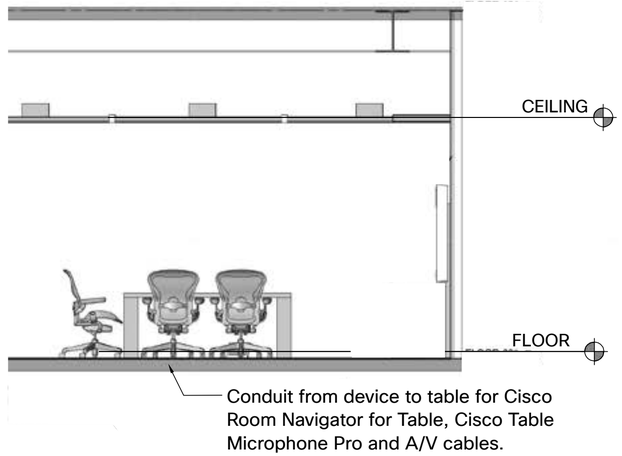
Cisco Room Kit EQX with Wall Mount

Front Elevation



Side Elevation





Due to the depth of EQX, furniture, millwork or a cane rail may be required to meet local accessibility codes.

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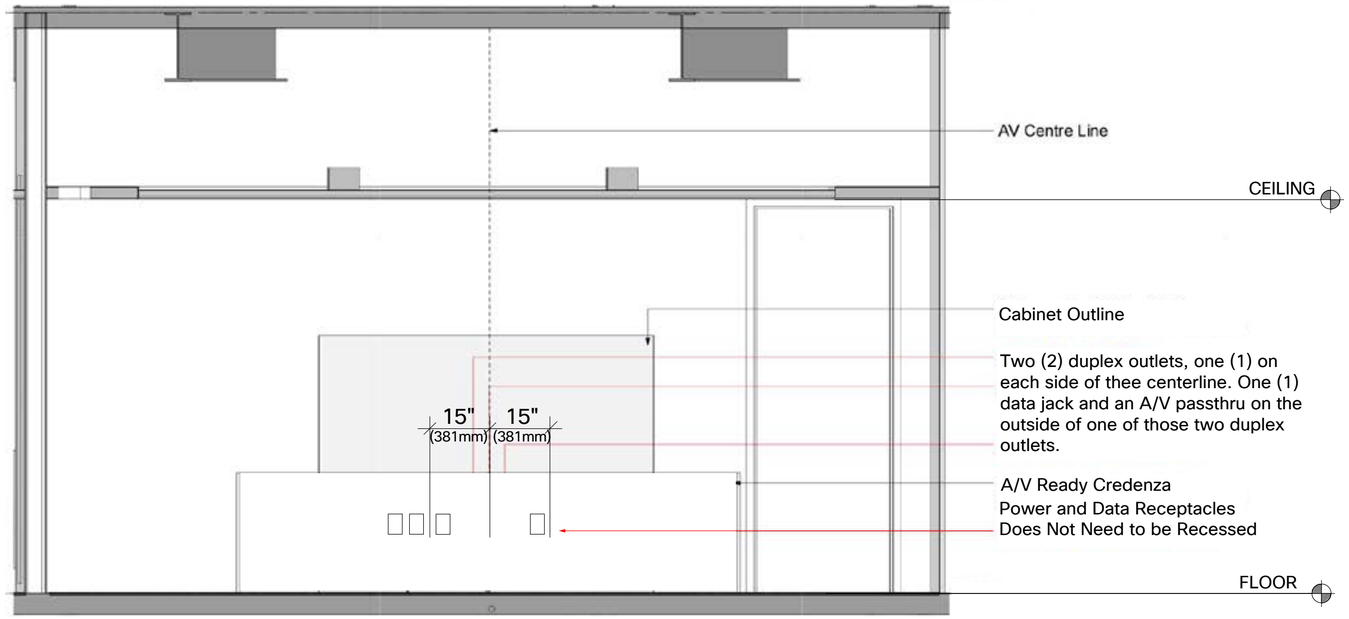
Medium Collaboration Room - Video Centric

Room Elevations

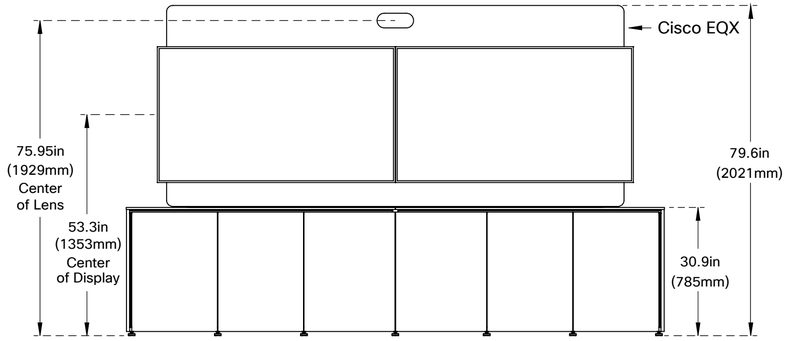
Option 2b

Cisco Room Kit EQX with A/V Credenza

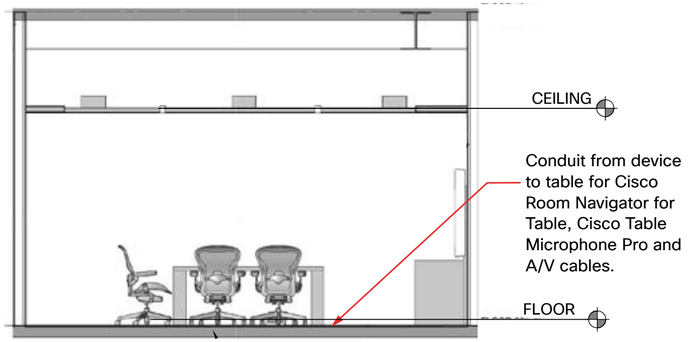
Conduit Elevation



Front Elevation



Side Elevation



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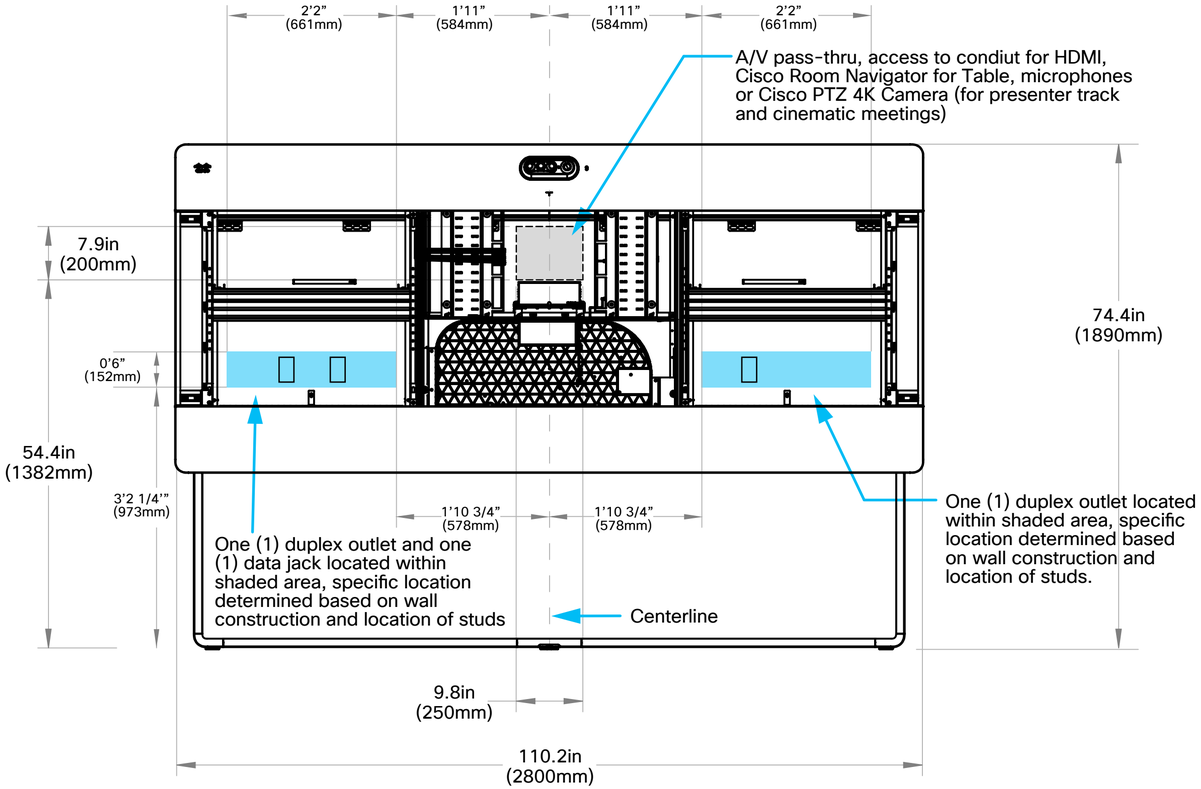
Medium Collaboration Room - Video Centric

Room Elevations

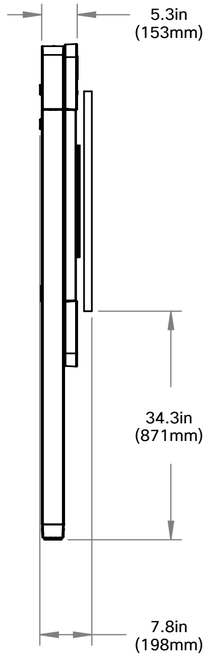
Option 2c

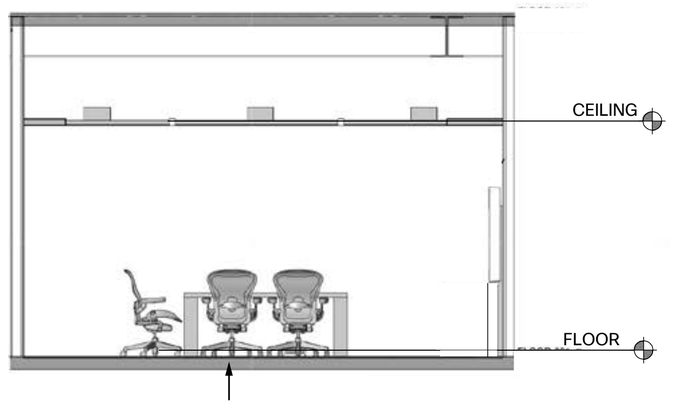
Cisco Room Kit EQX with Wall Stand

Front Elevation



Side Elevation





Conduit from device to table for Cisco Room Navigator for Table, Cisco Table Microphone Pro and A/V cables.

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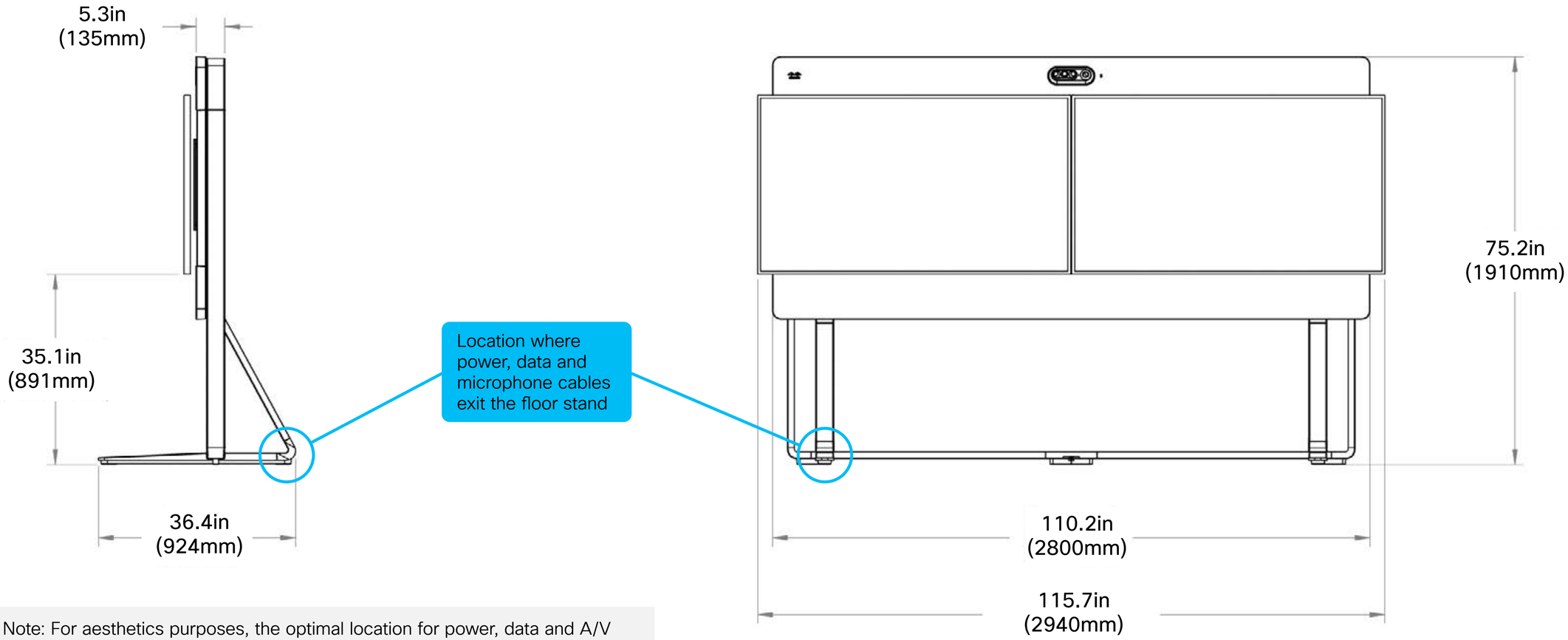
Medium Collaboration Room - Video Centric

Room Elevations

Option 2d

Cisco Room Kit EQX with Floor Stand



Note: For aesthetics purposes, the optimal location for power, data and A/V passthru is in floor boxes. Wall mounted outlets, either standard or elevated, can also be used.

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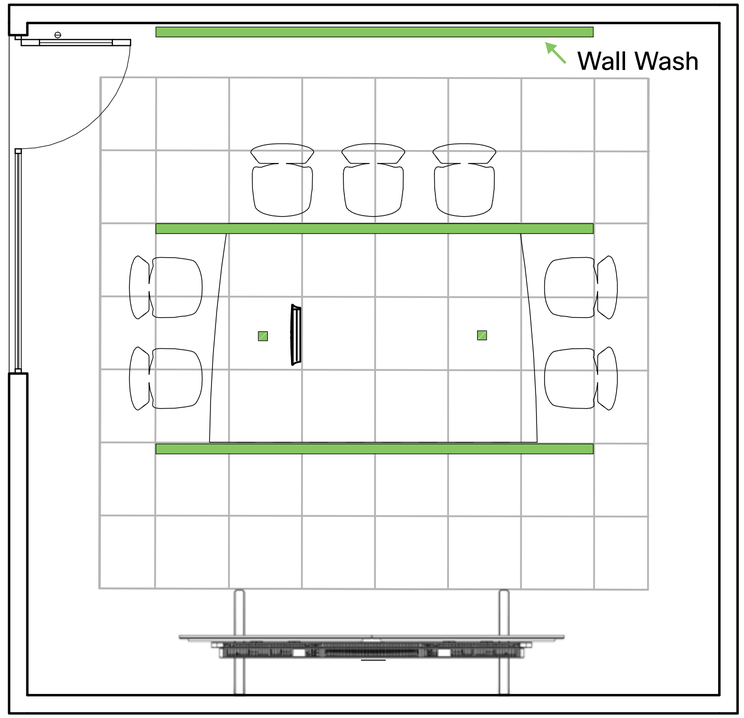
Medium Collaboration Room - Video Centric

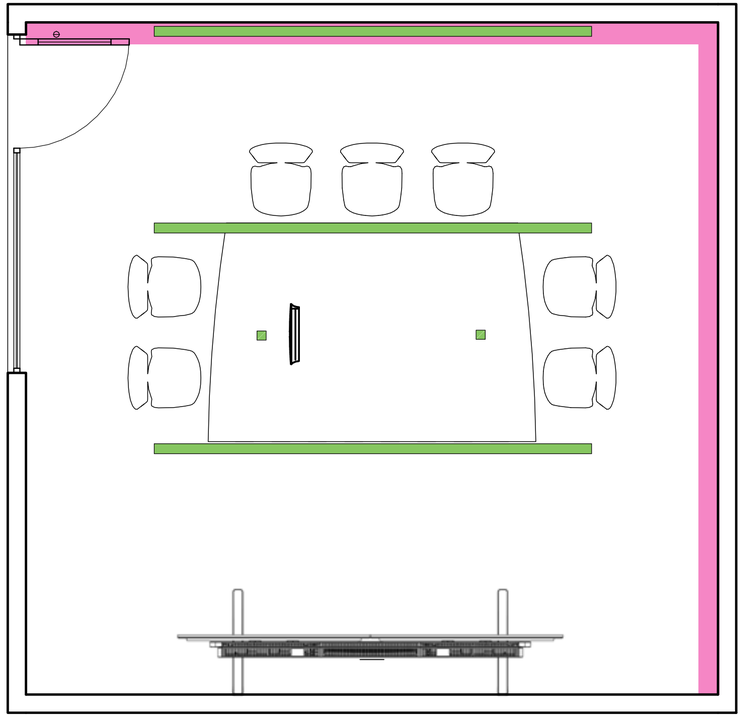
Reflective Ceiling Plan & Acoustical Treatment

Reflective Ceiling Plan



- A glare-free luminary with a beam angle of 90° or wider is recommended. In addition, fixtures selected should have a color temperature of ~4000K and color rendering index (CRI) of 85 or better.

Acoustical Treatment



- Two walls of acoustical wall treatment is optimal, preferred location is wall opposite device and then adjoining, away from entry location.

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- Table Version Microphone
- Combination Power & Voice / Data Infeed

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Power & Data

General Specifications

Power/data requirements need to be verified for each project. Provide video device power/data even if the project plan does not include it on day one. Based on the design of this space, core drills and floor boxes will be required.

Power & Data

The Cisco Room Kit EQX requires two (2) duplex outlets and one (1) LAN/Ethernet jack, located on the wall behind the device (a second Ethernet jack can also be added for redundancy/future use). Suggested locations for these services can be found in the “Elevations” section of this document. Exact location, however, should be verified with A/V consultants and installation personnel. In addition, power (1 outlet) must be available under the table for the network switch supporting the Cisco Microphone Pros.

Power in Tabletop

User power should be surface mounted in the tabletop. If pop-ups or table wells are used, it is important to verify that they can accommodate all laptop power supplies. Provide shared power – 1 power port for every two seats.

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Medium Collaboration Room - Video Centric

Exploded IT Diagram

Cisco Room Navigator for Table (required)

The recommended approach is to connect the table stand Cisco Room Navigator directly to the Cisco Room Kit EQX using a network cable. The two can also be connected over the IT network if an ethernet port is available under the table.

Cisco Room Navigator for Wall

It is recommended to run the cable inside the wall or through the door frame directly back to a network switch.

Cisco Table Microphone Pro (required)

Individual microphones connect to a PoE switch mounted under the table, with a single network cable connecting the switch to the Room Kit EQX. The PoE switch will require power under the table.

Third-party Speakers

Not required for a room of this size.

Table Top Charging

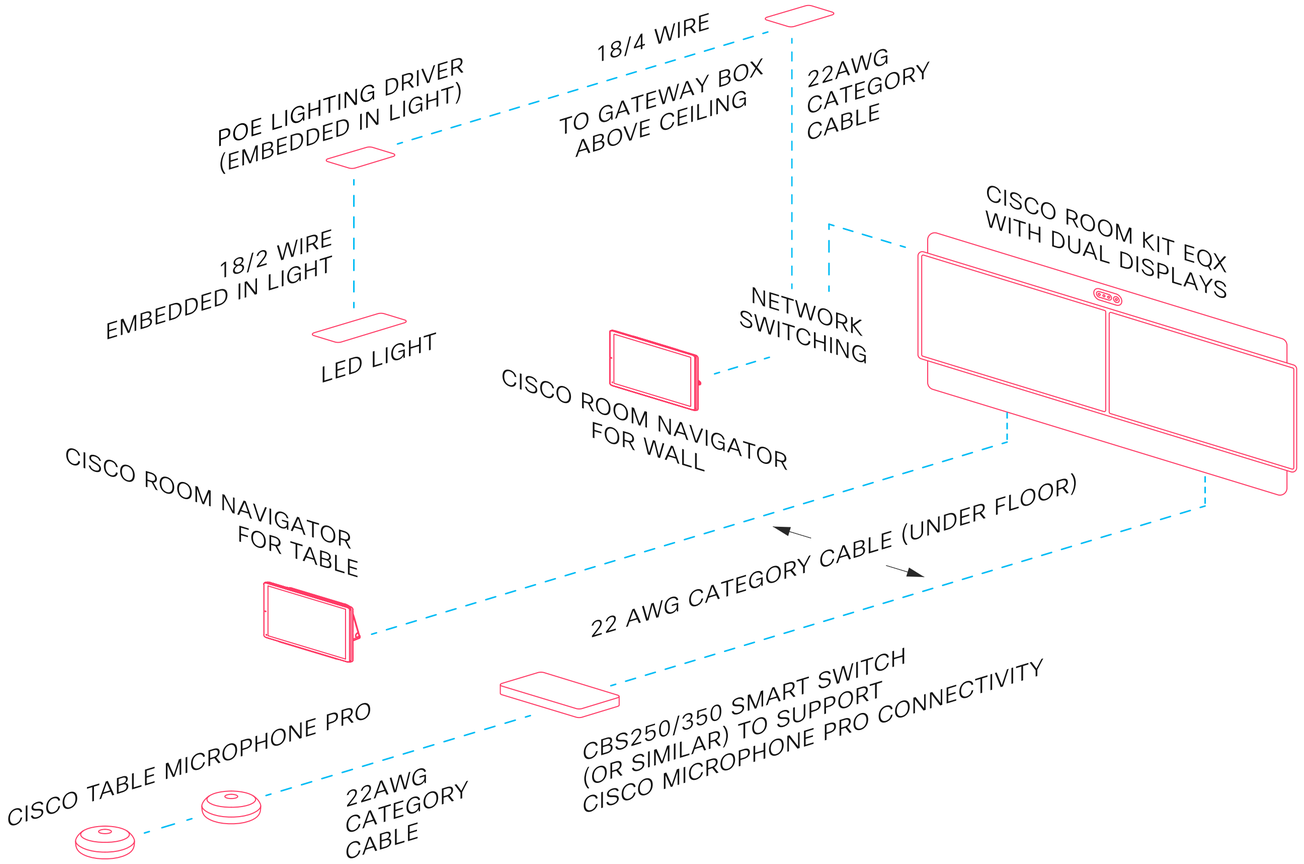
USB-C charging and convenience outlets on table top. Ensure the size of the trough and layout can accommodate a variety of laptop power supplies.

Wall Blocking

Required when the device is wall-mounted. The size and composition of blocking materials should be determined based on the overall weight of the solution deployed.

Core Drilling

Core Drill-Preferred method for providing connectivity between the table and the Cisco Room Kit EQX for the Cisco Room Navigator for Table, Cisco Table Microphone Pros and/or A/V cables. If core drilling is not an option, a floor cable cover or wire concealer can be used.



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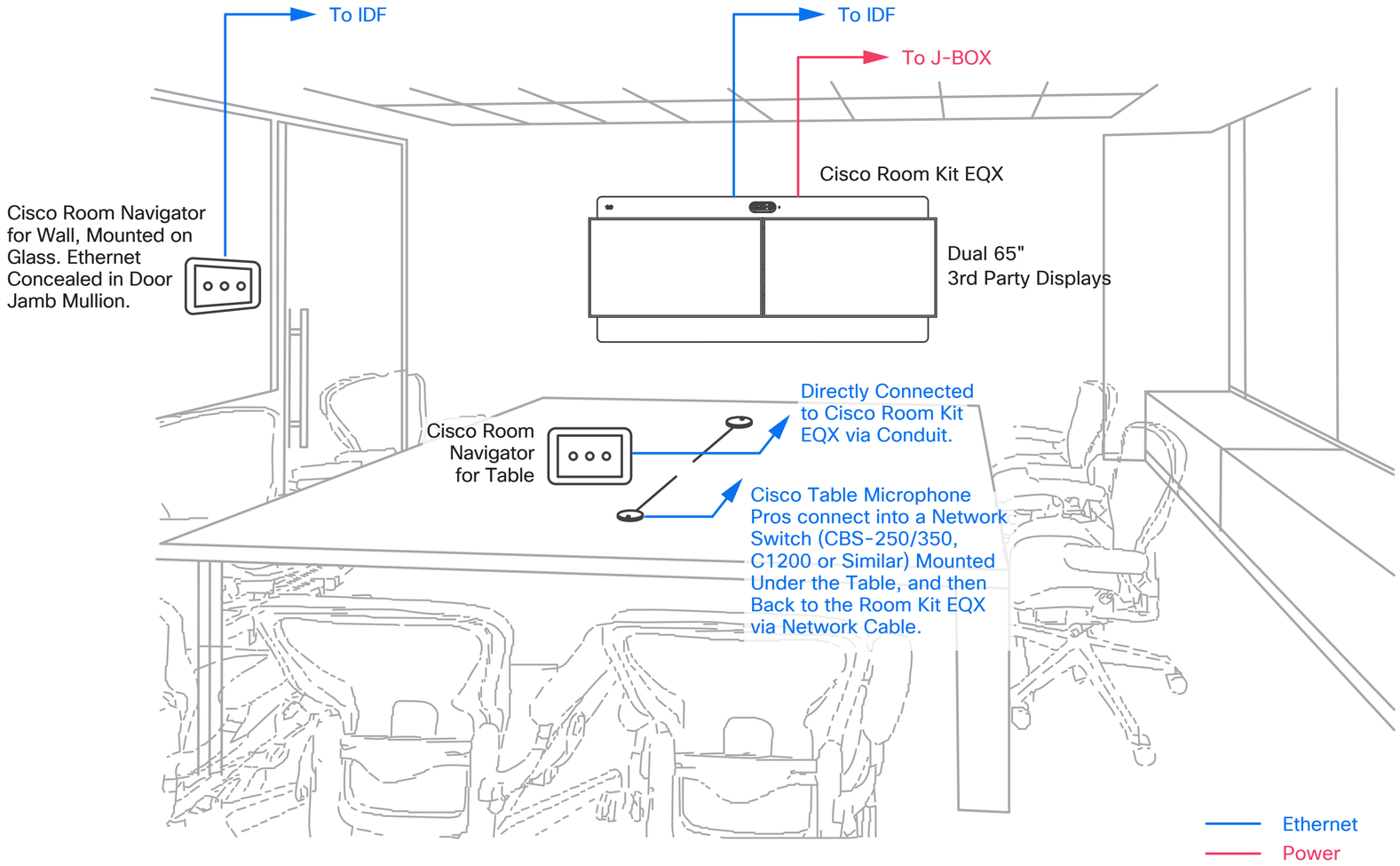
Connectivity View



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Medium Collaboration Room - Video Centric

IT/OT Bill of Material

Cisco Products

Cisco Room Kit EQX Option:

CS-KIT-EQZX-C-K9.	Cisco Room Kit EQX, Carbon Black
CS-KIT-EQX-WMK-C	Cisco Room Kit EQX Wall Mount Carbon Black (Optional)
CS-KIT-EQX-WSK-C	Cisco Room Kit EQX Wall Stand Carbon Black (Optional)
CS-KIT-EQX-FSK-C	Cisco Room Kit EQX Floor Stand Carbon Black (Optional)
CS-MIC-ARRAY-T	Cisco Table Microphone Pro (Qty 2)
CBS250-8T-D-xx.	Cisco Business Series Smart Switch (model CBS250-8T-D)
CS-T10-WM-K9=	Cisco Room Navigator for Wall

Non-Cisco peripherals

- Dual 65” Video Displays
- Cisco Wall Mount, Wall Stand, Floor Stand or 3rd party AV-ready credenza

IOT Devices

- IAQ coming from the Cisco Room Navigator, No additional IoT IAQ
- Occupancy sensing is coming from the Cisco Endpoints
- Suggested lighting specifications: 220LPW raw, 140LPW delivered
- Each Medium Collaboration room POE lights being power by 4 ports on the ceiling
- Traditional DC Wall Switch
- Ensure device is not connected to ASHRAE 90.1 outlet

External microphones and speakers

- External microphones are required for the Cisco Room Kit EQX installation. Third-party speakers are not typically required in a space of this size unless environmental conditions warrant their use.

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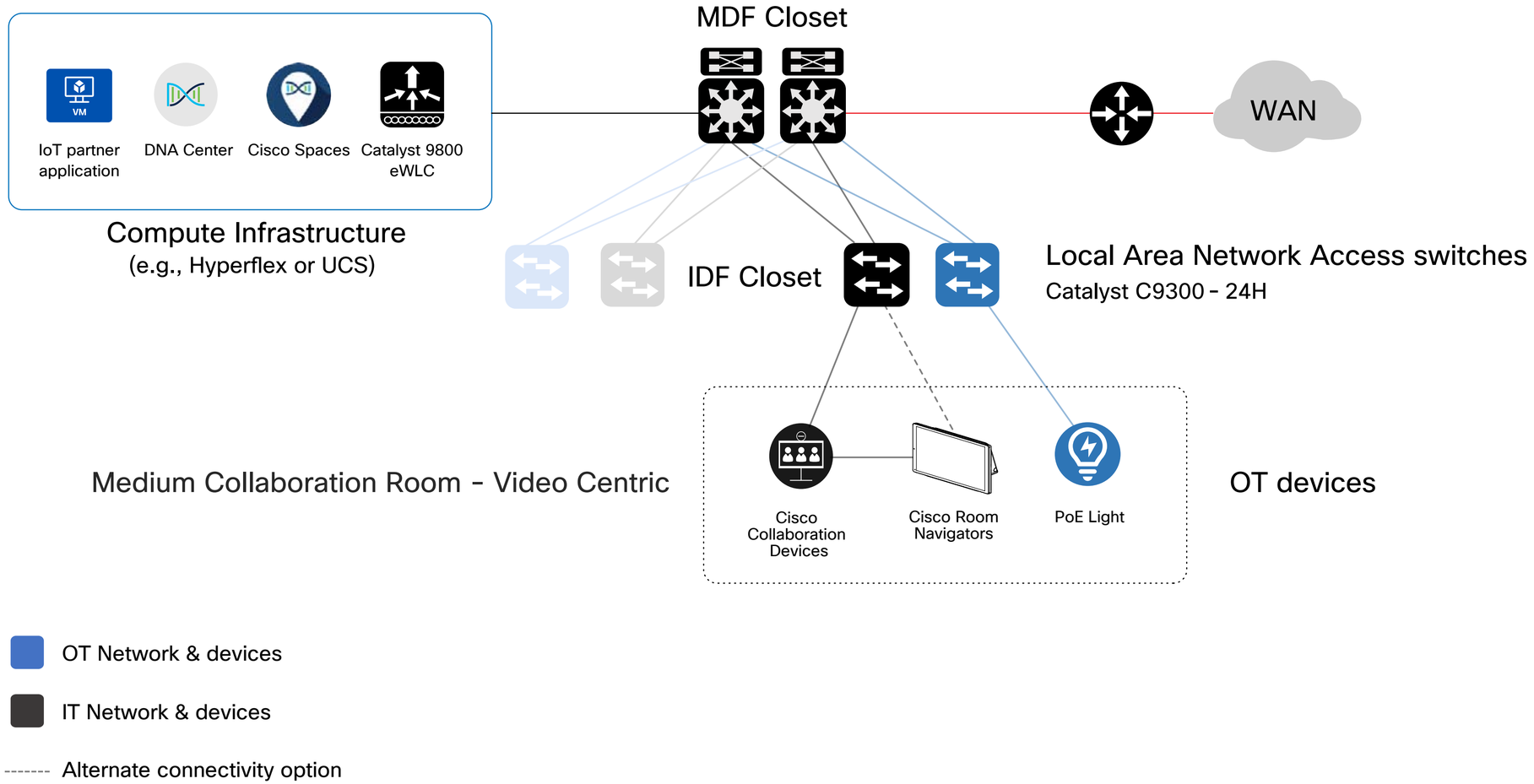
IT/OT Reference Architectures

- Separate IT and OT network layout
- Port based DHCP allocation
- 90W UPoE+



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Commissioning-User Acceptance Testing (UAT) Criteria

OT/Space Testing

- [ ] Verify manual adjustment of lights, shades and environmentals are operational from wall controls.
- [ ] Confirm lighting occupancy sensor is functional.
- [ ] Check any tabletop power and data functionality.
- [ ] Verify any smart buildings integrations are working properly.

IT Testing

- [ ] Internet connectivity of Cisco Collaboration device.
- [ ] Initiate test calls on video endpoint (via Room Navigator, Webex app and voice controls).
- [ ] Validate environmental metrics are being displayed on collaboration device and Room Navigator.
- [ ] Confirm help videos are loaded.
- [ ] Confirm that Room Navigator for Wall is powered and that booking function is working properly. Check that booking function is also available within the room via the Room Navigator for Table.
- [ ] Verify the Cisco Smart Workspaces display is showing proper presence status.

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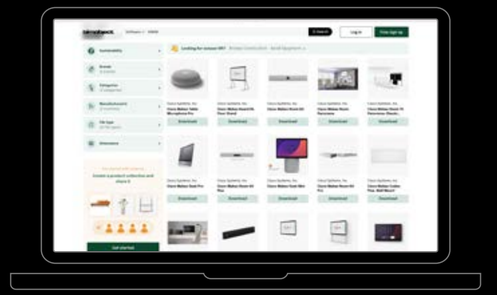
Design Files

Design files (Revit, AutoCAD, Sketch up, Rhino3D, etc.) for Cisco's collaboration devices, network switches, wireless access points and Meraki security cameras can be found at www.bimobjects.com, search "Cisco."



Resources

Cisco.com	
Guide	Guide: Best Practices for Creating Effective Video-enabled Rooms
Data Sheet	Cisco Room Bar Pro Data Sheet
Data Sheet	Cisco Room Kit EQX Data Sheet
Guide	Cisco Room Kit EQX Room Preparations Guide
Guide	Cisco Room Kit EQX Installation Guide

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The intent of this document is to highlight the details, components and partners used in the creation of a Medium Collaboration Room - Video Centric. Any reference herein to any specific commercial products or service does not necessarily constitute or imply its endorsement or recommendation.

Version 27 (February 7, 2024)