

Modern Workplace

1. Workplace Innovation
2. Selecting Optimal Solution
3. Company Introduction



The Leader of AV System Integration



1 Workplace Innovation

AV & IoT driven Smart Workplace

Why Workplace Innovation?

JLL (a global commercial real estate services company) conducted a survey regarding workplace innovation.



JLL | *Asian Ambition*

Workplace
Powered by Human Experience

A global **Our global research project**

JLL created our unique global research project to provide the workplace experience, grounded in its specific impact on business performance and work outcomes. How experiences can be shaped by real estate to achieve strategic performance objectives.

7,364 Employees

40 Corporate Clients

12 Countries

3 Regions

Our findings

- Through this research project, we set out to demonstrate how transformational experiences could:
 - Impact employee engagement, empowerment and fulfillment in the workplace
 - Connect the link to professional happiness and satisfaction
 - Impact productivity and quality of life

Through this survey, we have identified key workplace features that directly affect employee wellbeing:

- New types of spaces
- Alternative work philosophies
- Different managerial approaches

These features are probably to impact the experience an organization seeks to create for employees and visitors and provide a better quality of life for employees and improve the efficiency of collaboration. Regardless of whether these experiences involve redesign of technology, innovative products, or collaborative ability people, these experiences must make a good impression and could deliver engaging, empowering and fulfilling experiences.

Human Experience Model

In this report we present our **Human Experience Model**, which we have developed from the outcomes of our research project.

The model can help you shape optimal user experiences to create value for your employees, customers, colleagues, visitors, stakeholders and your brand.



Workplaces must provide innovative spaces to meet employee expectations and attract and retain talents

Spaces dedicated to collaboration and teamwork have the strongest impact on productivity

Workplace Innovation helps companies enhance the employees' satisfaction and maximize the work productivity

How to Achieve Workplace Innovation?

Harvard Business School researched the impact of the open workspace.

Impact of the open workspace

PHILOSOPHICAL
TRANSACTIONS B

rstb.royalsocietypublishing.org

Research



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The impact of the 'open' workspace on human



**HARVARD
BUSINESS SCHOOL**

interaction, transparency, collaboration,
communication, spatial boundaries,
collective intelligence

The impact of the 'open' workspace on human collaboration

Ethan S. Bernstein¹ and Stephen Turban²

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Organizations' pursuit of increased workplace collaboration has led managers to transform traditional office spaces into 'open', transparency-enhancing architectures with fewer walls, doors and other spatial boundaries, yet there is scant direct empirical research on how human interaction patterns change as a result of these architectural changes. In two intervention-based field studies of corporate headquarters transitioning to more open office spaces, we empirically examined—using digital data from advanced wearable devices and from electronic communication servers—the effect of open office architectures on employees' face-to-face, email and instant messaging (IM) interaction patterns. Contrary to common belief, the volume of face-to-face interaction decreased significantly (approx. 70%) in both cases, with an associated increase in electronic interaction. ~~In short, rather than prompting increasingly vibrant face-to-face collaboration, open architecture appeared to trigger a natural human response to socially withdraw from officemates and interact instead over email and IM. This is the first study to empirically measure both face-to-face and electronic interaction before and after the adoption of open office architecture. The results inform our understanding of the impact on human behaviour of workspaces that trend towards fewer spatial boundaries.~~

This article is part of the theme issue 'Interdisciplinary approaches for uncovering the impacts of architecture on collective behaviour'.

Rather than prompting increasingly vibrant face-to-face collaboration, open architecture appeared to trigger a natural human response to socially withdraw from officemates.

People need a private and dedicated space for offline collaboration.

50%

eMails
IMs

The starting point of designing workplace innovation

Dedicated collaboration spaces must help people to



**Meet
more easily**

- ✓ One touch scheduling
- ✓ One touch joining
- ✓ One touch calling



**Communicate
more confidently**

- ✓ No concern on quality
- ✓ No concern on leakage



**Control
more intelligently**

- ✓ Wireless sharing
- ✓ Voice-activated control
- ✓ Speaker tracking systems

Key Considerations for Workplace Innovation

Six key features to consider for workplace innovation meet the essential needs of modern workplace



Key Considerations for Workplace Innovation

The key features are applied throughout the experience center. (<https://jsavt.co.kr/vr-체험>)

Room Scheduling

Content Sharing

Video Conference

Acoustic Treatment

AV over IP

Zero Touch



Room Scheduling

Helps people to easily check availability, reserve on the spot
Hallway signs and colored lights show whether the room is occupied

Needs

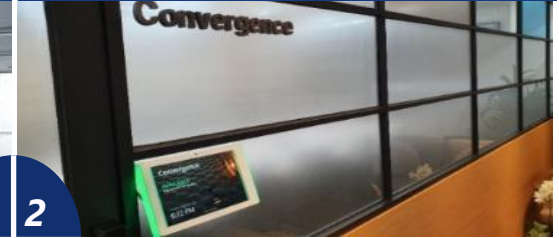
- 1 Easily check availability
- 2 Simply reserve on spot
- 3 No-show management
- 4 Statistical information

Solution

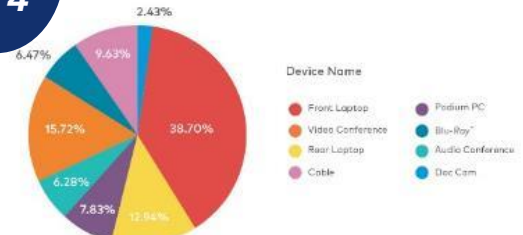
Color-specific occupancy indicator



On-screen reservation



Automatic status update with sensor



Server-based analytic information

Contents Sharing

A key feature for online and offline meetings
Wireless presentation system leveraging the existing office WiFi

Needs

- 1 Cable-free environment
- 2 Easily shift presenter
- 3 Display info during idle
- 4 No security issue

Solution

Content sharing through WiFi



Content sharing through WiFi



Customizable screen during idle

One-click shift




No data stored, No internet access

1
2
3
4

Video Conference

If each of devices is separately installed, all hassle begin
Having a packaged solution (reference design kit) is the best.

Needs

- 1 Simple connection
- 2 No need for setup
- 3 One-touch call
- 4 High quality

Solution

Hardware package	Reference design kit (MTR)
	
	
On-screen invitation and participation	Extra AV systems

Acoustic Treatment

Audio quality during a call depends on network and SW
Acoustic panels, right microphone affect the audio quality

Needs

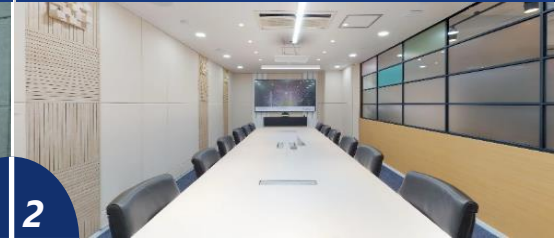
- 1 Minimize reverberation
- 2 Arrange mic cables
- 3 Pick up the voice equally
- 4 Harmonize with interior

Solution

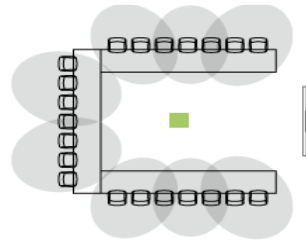
Acoustic panel treatment



Advanced ceiling microphone



1 2
3 4



Steerable mic lobe



Various installation mode

AV over IP

Handling audio and video traffic through the office network
Minimizes cable installation and maximizes scalability

Needs

- 1 Manage AV traffic
- 2 Minimize construction
- 3 Secure delivery quality
- 4 Obtain scalability

Solution

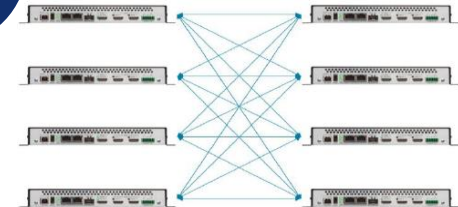
AV delivery on existing network



Encoder/Decoder installation only



Minimal latency



Flexible configuration




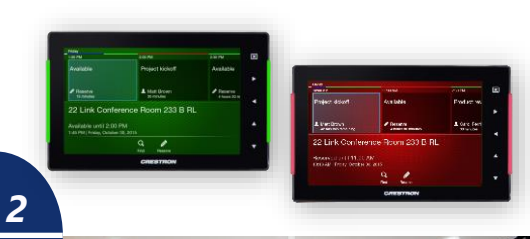


Zero Touch

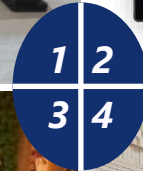
People get more concerned about touching due to pandemic
Control AV systems without touch using voice and sensor

Needs

- 1 No remote controllers
- 2 No touch
- 3 Safe environment
- 4 Easy control

Solution

AI speakers	Limited touch for control
	
	
A series of actions with scenario	Voice control



Modern Workplace Models

We designed the various spaces with the optimal AV systems.



Huddle Room



Board Room



Training Room



Open Space

Room Capacity

4~8 seats

15~20 seats

30 seats

30~50 seats

Room Application

Small group
collaboration

Presentation
Meeting

Training

Open Event

Key Features

Quick Connection

Presentation
Video Conference

Electronic Whiteboard
Advanced Audio

Live Streaming
Advanced Audio

Estimated Cost

TBD

TBD

TBD

TBD

Huddle Room

Ideal for 4~8 seats
Designed for small group collaboration



Features

- MS Teams or Zoom enabled
- Easy to start sharing, join and book an online meeting

Systems

- 65" Dual TVs for content and people
- Powerful soundbar with built-in camera and microphone
- Camera capable of people counting, auto framing
- Touch panel to simply control meetings
- Room scheduling touch panel



Board Room

Ideal 15~20 seats
Designed for formal presentation and video conference



Features

- Wireless presentation from PC or mobile
- Flexible and intelligent sound transmission
- Video conference with standard hardware

Systems

- 98" single TV with flexible screen layout
- Network-based wireless presentation system (AM-200 x1)
- Advanced ceiling microphone
- AV over IP system
- Touch panel to control AV devices



Training Room

Ideal for 20~30 seats
Designed for offline and online training

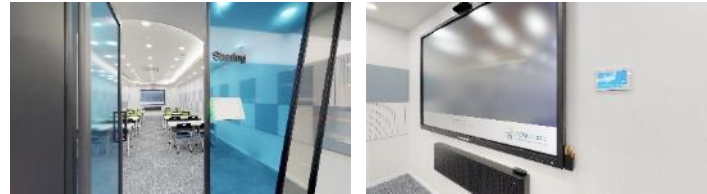


Systems

- 98" single TV with flexible screen layout
- Network-based wireless presentation system
- Advanced ceiling microphone with voice reinforcement
- AV over IP system
- Touch panel to control AV devices

Features

- Simple and easy presentation from lectern, desk, table or phones
- Instructor tracking intelligent microphone
- Video conference with standard hardware
- Wall mounted touch panel helps instructor easily control devices



Modern Workplace Models

Open Space

Ideal for over 30 seats
Designed for open event, seminar



Features

- Three mode audio environment (presenter, video conference, open)
- Optimal sound performance for the open event
- Easy configuration on wall mount touch panel

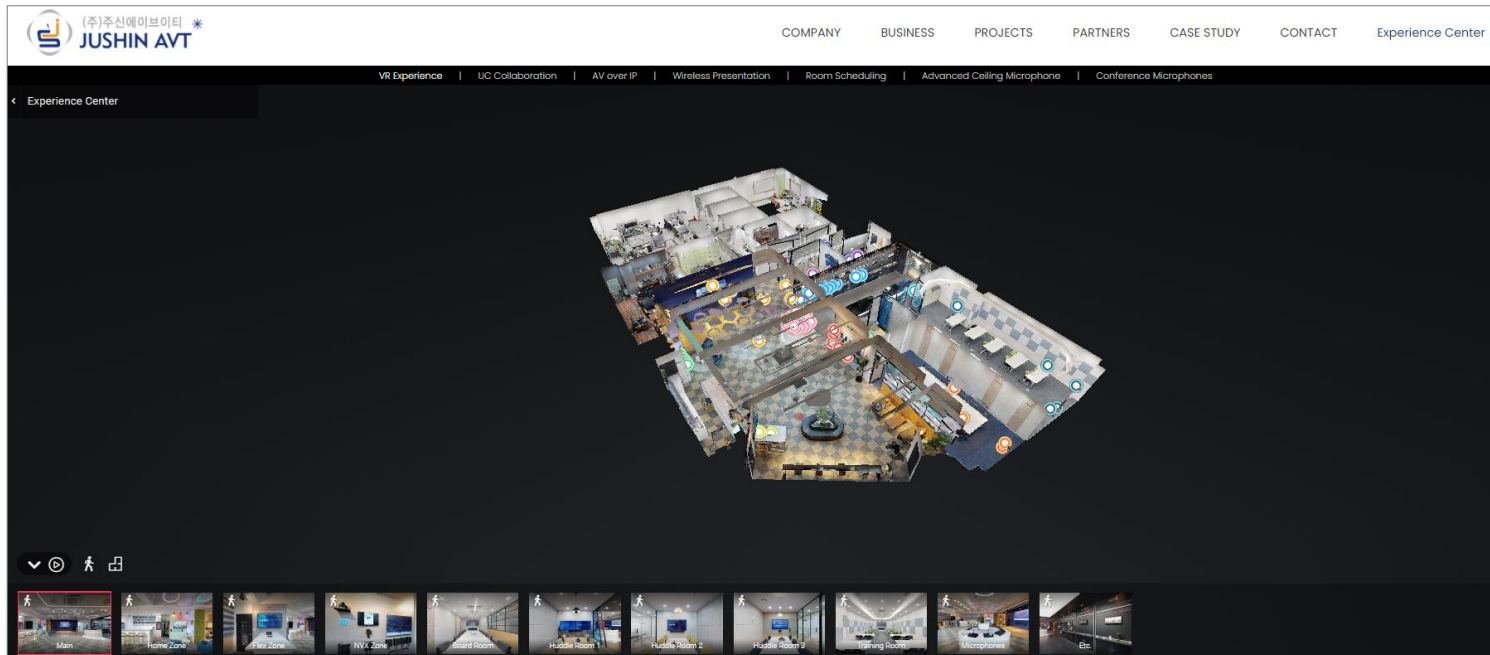
Systems

- 98" single TV with flexible screen layout
- Network-based wireless presentation system
- Triple advanced ceiling microphones with voice reinforcement
- AV over IP system
- Touch panel to control AV devices

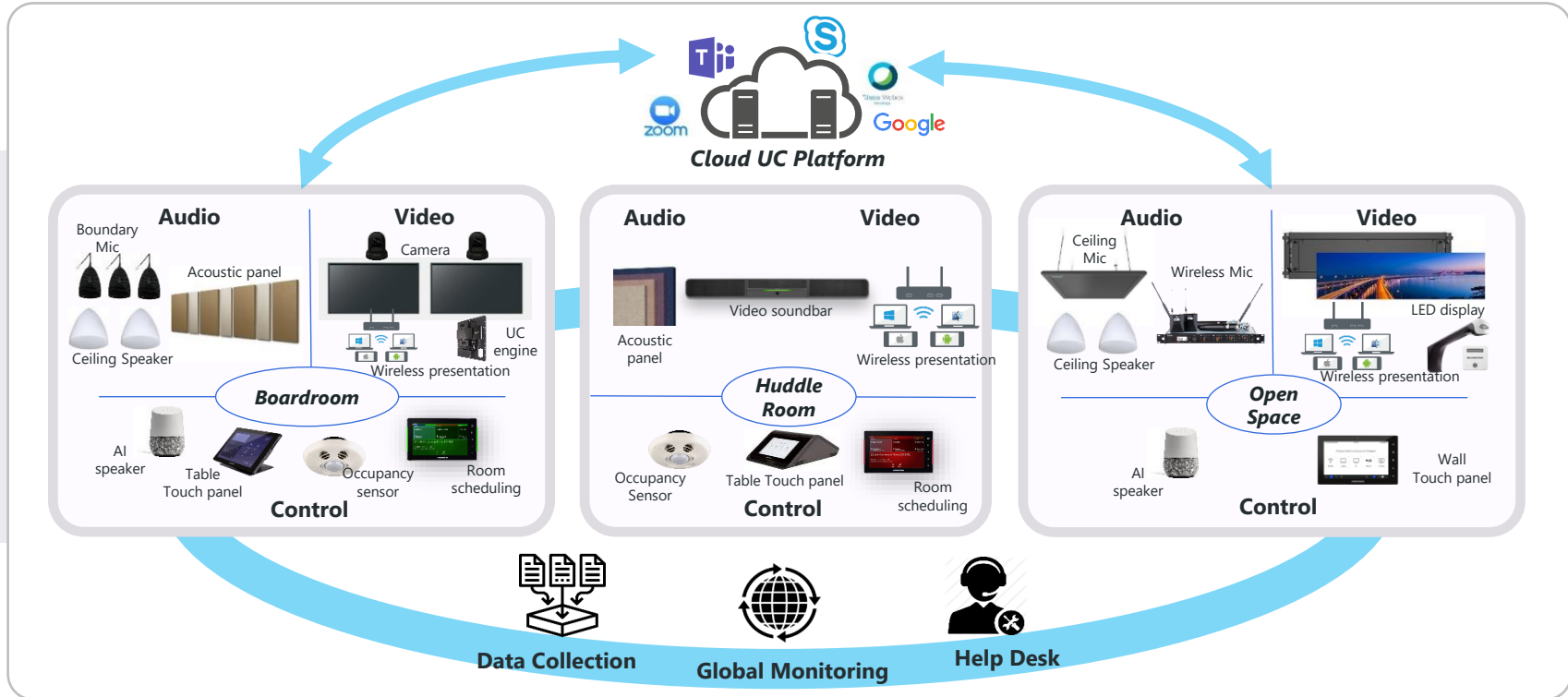


Experience Center

<https://jsavt.co.kr/en/vr/>



IoT driven modern workplace supports smart deployment and smart management.



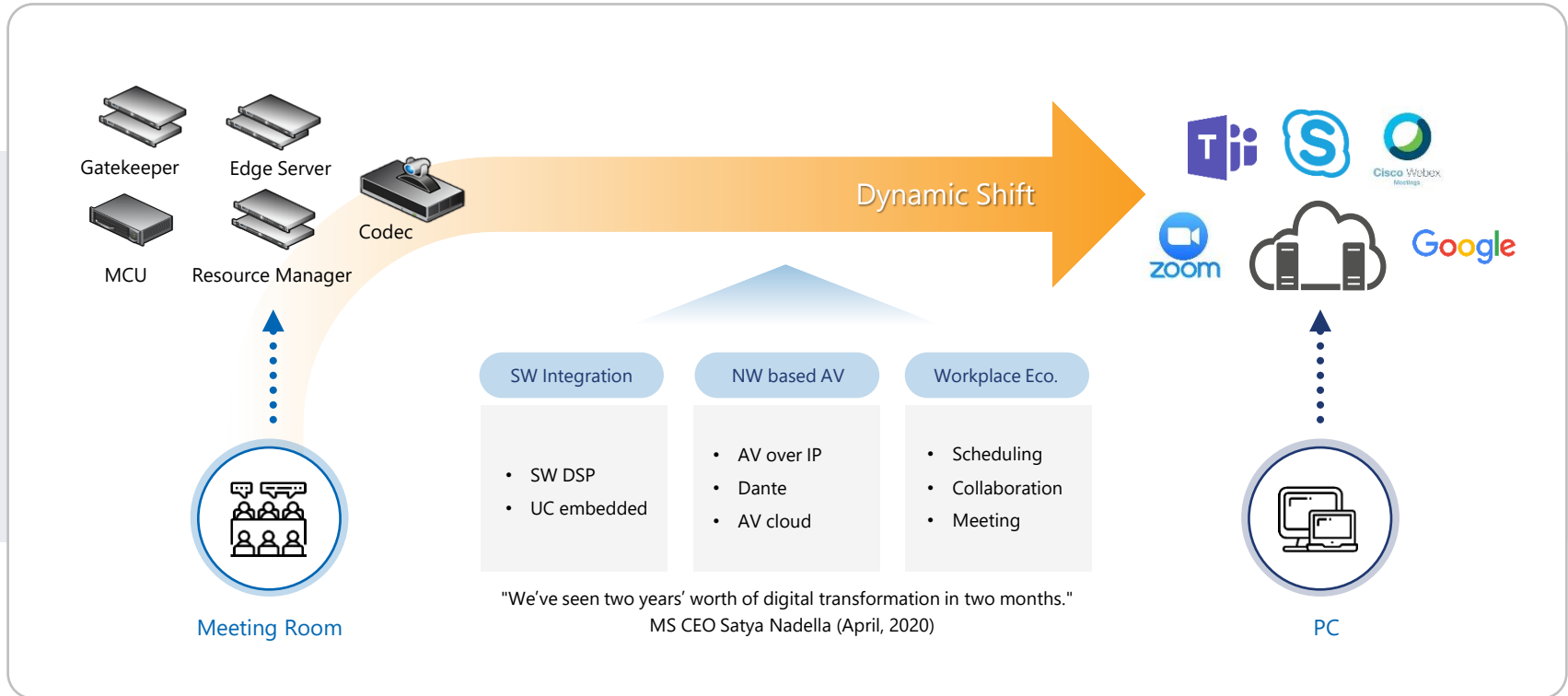
Selecting Optimal Solutions

2

Microsoft Teams Room Devices

➡ A Big Dynamic Shift

The SW platforms are driving the changes in the meeting rooms.





Meeting Room Devices at a glance

	Small Meeting Room	Medium Meeting Room	Large Meeting Room	Custom
Dimensions	3m X 3m	4.5m X 5m	4.5m X 8m	8m X 8m
People	5~7	~11	~18	18+
poly	<p>Studio X30 G40-T</p>	<p>Studio X50 Collaboration Bar</p>	<p>G85-T</p>	<p>G10-T</p>
CRESTRON	<p>B30/BX30/MM30-T</p>	<p>M50/MX50-T</p>	<p>M70/MX70-T</p>	<p>C100/CX100-T (w/ AV accessories)</p>
logitech	<p>MeetUp for Teams</p>	<p>Rally Kit for Teams</p>	<p>Rally Kit Plus for Teams</p>	



Huddle Room

Poly Studio X30 (Single Display)

Simple package with video sound bar and touch panel
Poly HW codec is built in.

✂ Dimensions
3m X 3m

👥 People
5~7

Inquiry : info@jsavt.co.kr

Video Sound Bar



441.8 x 62.5 x 61.6 mm, 730g
4x digital zoom, 4K, 120° FOV, Auto Framing
Mic pick up range 4.5m
HDMI in(1)/out(1), USB A(1)/C(1), WiFi
H.323, SIP, Single speaker

※ Contents PC to be connected with sound bar through HDMI

Display



4K 55" TV x 1

Touch Panel

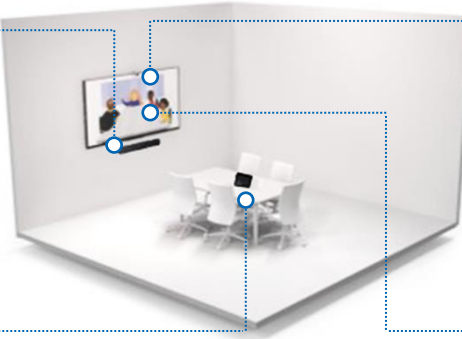


8", 1280x800
204.5 x 132.2 x 103.6 mm, 767g
RJ45

Wireless Presentation



HDMI in(1)/out(1), USB RS232, IR, Ethernet





Huddle Room

Poly G40-T (Dual Display)

Video sound bar, Teams PC (MTR), and touch panel
Supports dual display for content and people on separate screens

✂ Dimensions
3m X 3m

👤 People
5~7

Inquiry : info@jsavt.co.kr

Video Sound Bar



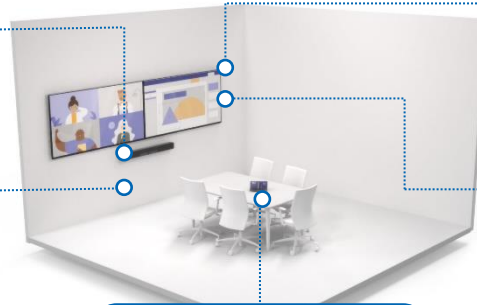
700 x 105 x 70 mm, 2.3kg
4K, 120° FOV, Auto framing
5x digital zoom, pick up 3.6m

PC



Intel Core i5 processor, Windows 10 IoT
8GB(RAM)/128GB(SSD)
USB A(5)/C(1), HDMI(2), DP(1)
RJ45, WiFi, BT

※ Contents PC to be connected with touch panel through HDMI



Display



4K 65" TV x 2

Wireless Presentation



FHD~4K transmission HDMI in/out

Touch Panel



8", 1280x800
204.5 x 132.2 x 103.6 mm, 767g
USB-A(1)/C(1), HDMI mini(1), 3.5mm
PIR motion sensor



Huddle Room

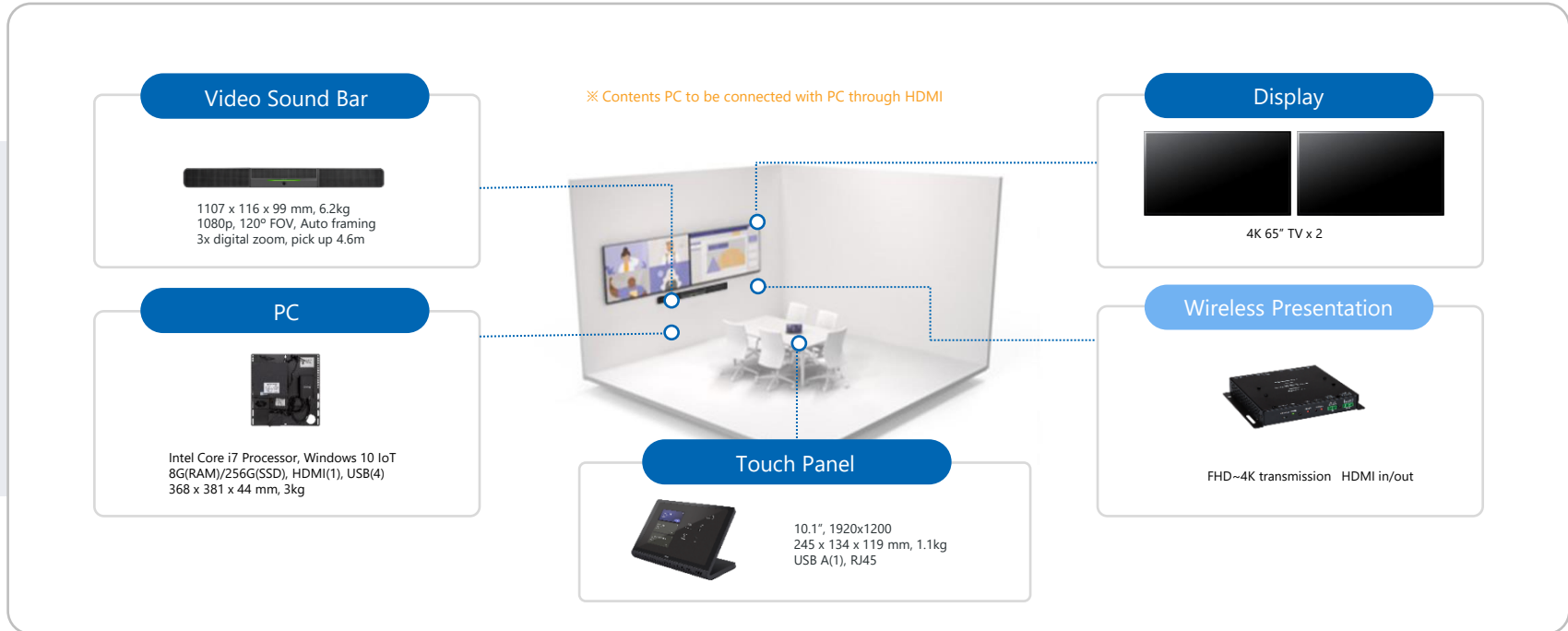
Crestron BX30-T (Dual Display)

Video sound bar, Teams PC (MTR), and touch panel
Supports BYOD

✂ Dimensions
3m X 3m

👥 People
5~7

Inquiry : info@jsavt.co.kr





Huddle Room

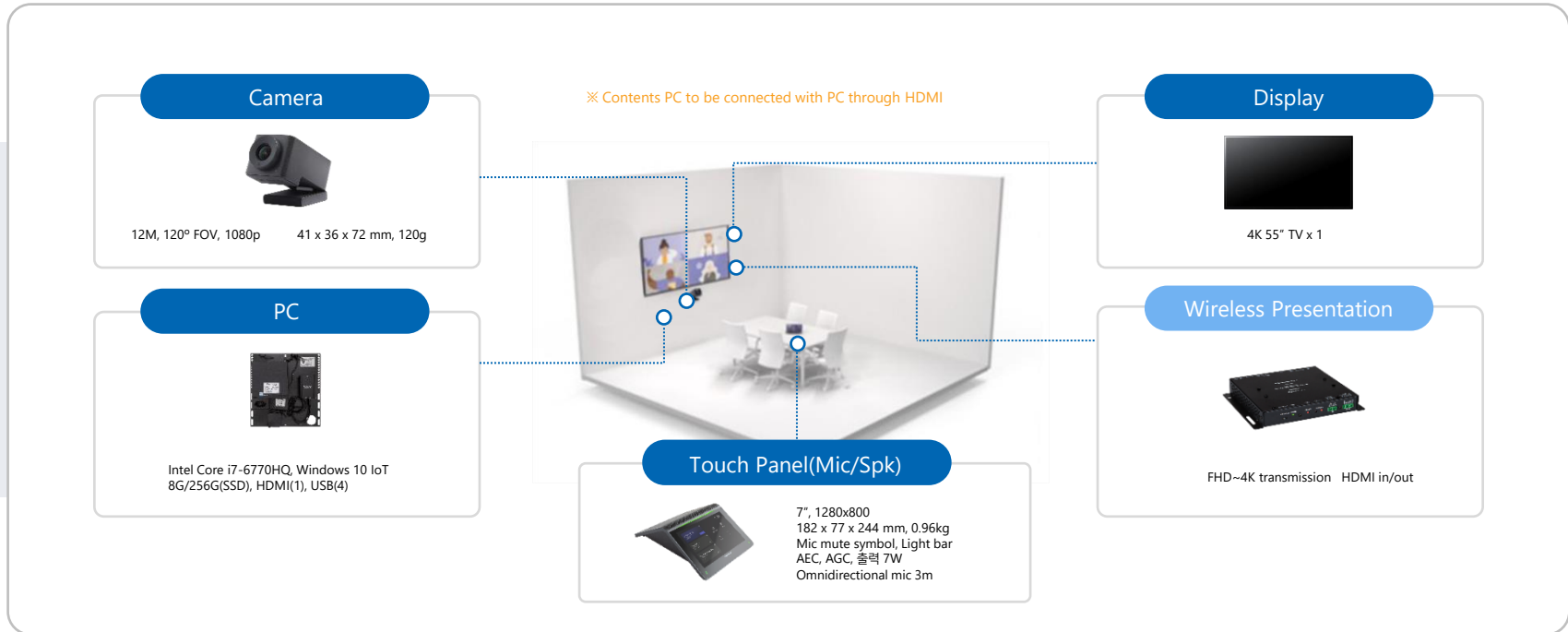
Crestron MM30-T (Single Display)

Camera, Touch Panel with built-in mic and speaker, PC(MTR)
Supports single display for content and people

✕ Dimensions
3m X 3m

👤 People
5~7

Inquiry : info@jsavt.co.kr





Huddle Room

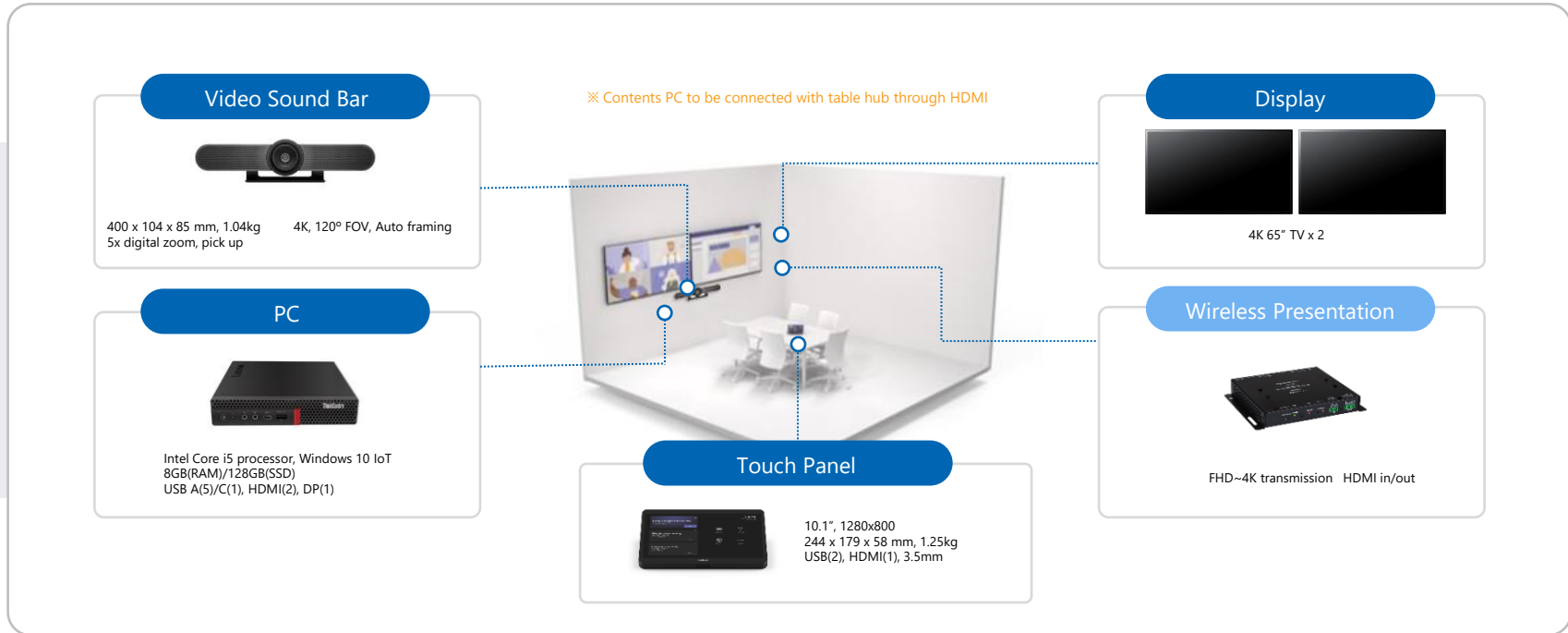
Logitech MeetUp (Dual Display)

All-in-one sound bar, PC(MTR), Touch panel
Supports dual display for contents and people

✂ Dimensions
3m X 3m

👤 People
5~7

Inquiry : info@jsavt.co.kr





Medium Meeting Room

Poly Studio X50 (Dual Display) ¹⁾

All-in-one sound bar(Collaboration Bar), touch panel
Poly HW codec is built in.

✕ Dimensions
4.5m X 5m

👤 People
~11

Inquiry : info@jsavt.co.kr

Video Sound Bar



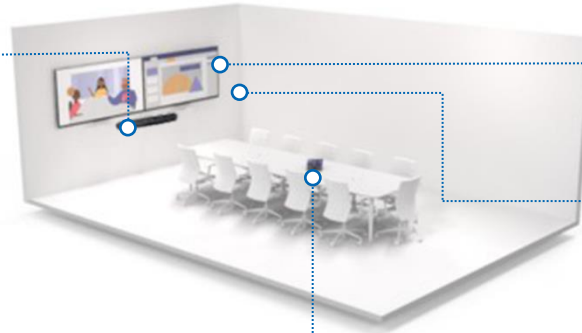
762mm x 102mm x 102mm, 2.54 kg
5x digital zoom, 4K, 120° FOV, Auto Framing
Mic pick up range 7.5m
HDMI in(1)/out(2), USB A(2)/C(1), WiFi
H.323, SIP, Stereo speaker

Touch Panel



8", 1280x800 RJ45 204.5 x 132.2 x 103.6 mm, 767g

※ Contents PC to be connected with sound bar through HDMI



¹⁾ To be supported

Display



4K 65" x 2

Wireless Presentation



HDMI in(1)/out(1), USB RS232, IR, Ethernet



Medium Meeting Room

Crestron MX50-T (Dual Display)

Camera, Touch panel with built-in mic and speaker, PC(MTR)
Supports BYOD

✂ Dimensions
4.5m X 5m

👤 People
~11

Inquiry : info@jsavt.co.kr

Camera



12M, 120° FOV, 1080p 41 x 36 x 72 mm, 120g

PC



Intel Core i7 Processor, Windows 10 IoT
8G(RAM)/256G(SSD), HDMI(1), USB(4)

※ Contents PC to be connected with touch panel through HDMI



Display



4K 65" TV x 1~2

Wireless Presentation



FHD~4K transmission HDMI in/out

Touch Panel (Mic/Spk)



7", 1280x800, 227 x 324 x 105 mm, 2.5kg
Mic mute symbol, Light bar
95dB SPL@0.5 (11W), Occupancy sensor
Quad mic array, Pick up 6m, Mic 확장(2)
(HDBT(1))



Large Meeting Room

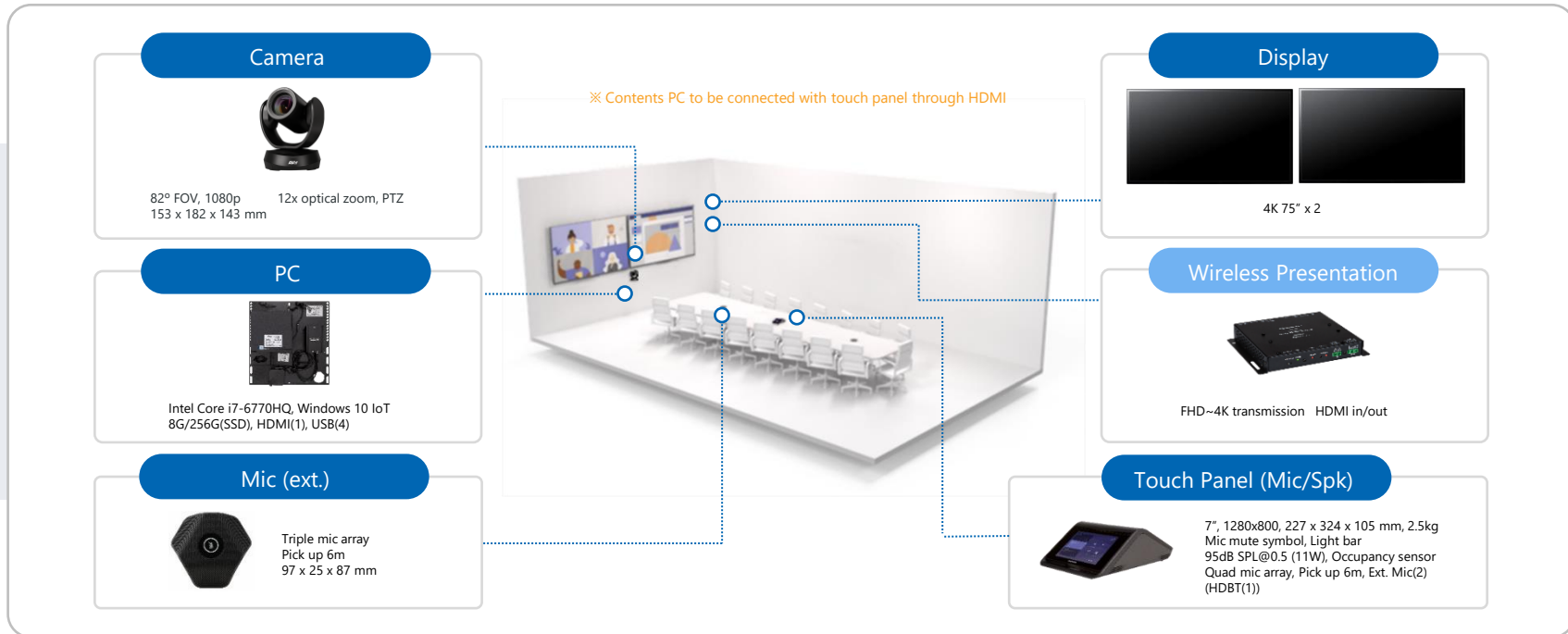
Crestron MX70-T (Dual Display)

PTZ camera, PC(MTR), Touch panel with built-in mic/speaker
Supports BYOD

✂ Dimensions
4.5m X 8m

👥 People
~18

Inquiry : info@jsavt.co.kr





Large Meeting Room

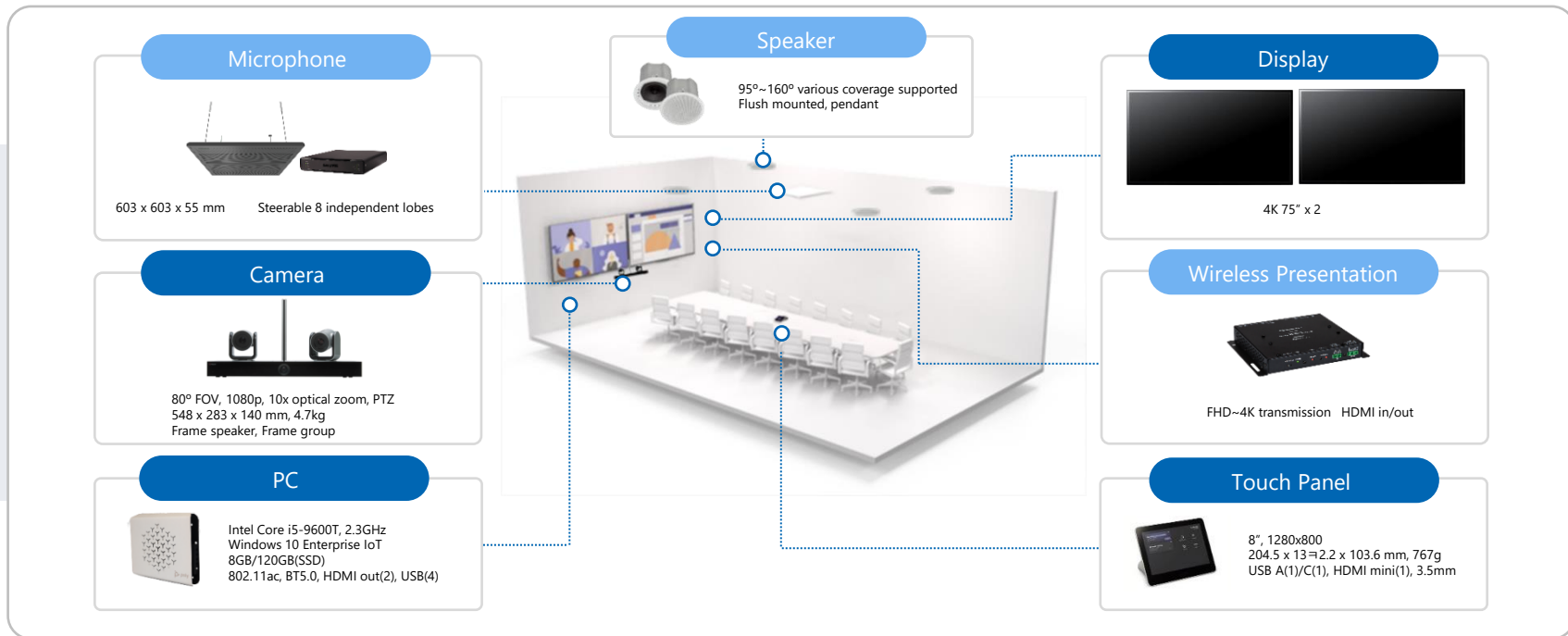
Poly G85-T (Dual Display)

Full automatic speaker tracking camera, PC(MTR), Touch Panel
Ceiling microphones and speakers supports clean environment

✂ Dimensions
4.5m X 8m

👥 People
~18

Inquiry : info@jsavt.co.kr





Large Meeting Room

Logitech Rally Plus (Dual Display)

Tabletop mic(2), front speakers(2), PTZ camera, PC(MTR), touch panel
Separate table hub and video hub connect all cables

✂ Dimensions
4.5m X 8m

👥 People
~18

Inquiry : info@jsavt.co.kr

Camera



Optical 15x zoom, 4K, 90° FOV
182 x 152 x 152 mm, 1.52kg

Auto framing

Speaker



103 x 449 x 80 mm, 1.60kg

Output 95dB SPL

PC



Intel Core i5 processor, Windows 10 IoT
8GB(RAM)/128GB(SSD)
USB A(5)/C(1), HDMI(2), DP(1)

Microphone



21 x 102 x 102 mm, 300g
Pick up 4.5m diameter

Display



4K 75" x 2

Wireless Presentation



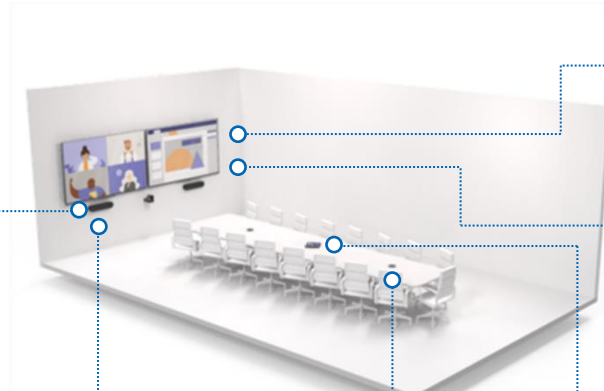
FHD~4K transmission

HDMI in/out

Touch Panel



10.1", 1280x800
244 x 179 x 58 mm, 1.25kg
USB(2), HDMI(1), 3.5mm





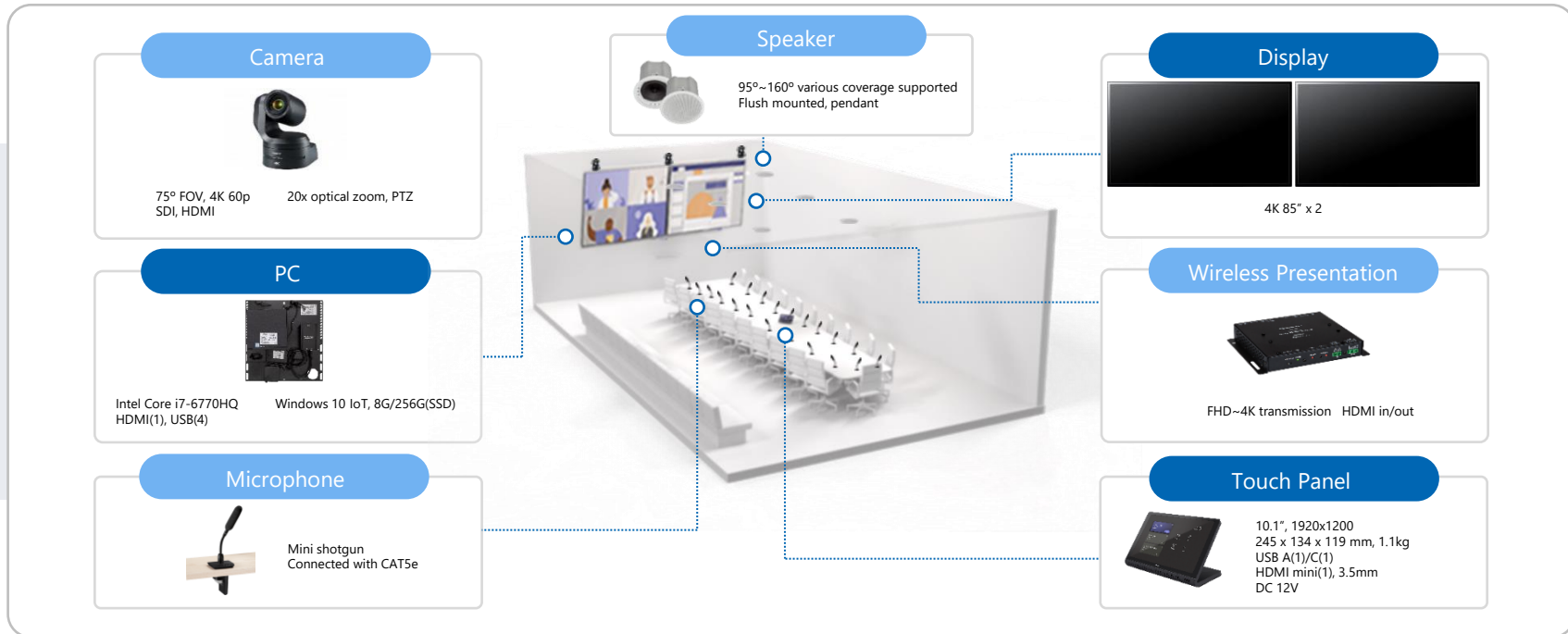
Crestron CX100-T (Dual Display)

Camera presets are called by microphone activation
The optimal audio environment for voice lifting

✂ Dimensions
8m+

👥 People
18+

Inquiry : info@jsavt.co.kr





Collaboration Room

Microsoft Surface Hub 2S (50")

Teams embedded collaboration tool
Supports co-creating

✕ Dimensions
3m X 3m

👥 People
5~7

Inquiry : info@jsavt.co.kr



Main display for huddle rooms



Collaboration tool for
medium meeting room



Benefits of MTR (comparing with BYOD/PC)

Reliability

- Microsoft certified devices
- Only for Teams/Skype for Business
- High quality



Scalability

- Enterprise level full deployment
- Remote setup & configuration ¹⁾
- Interoperable with AV control ²⁾



Usability

- Proximity Join
- One-touch join/calling
- Consistent, intuitive, inclusive
- Join Cisco, Zoom meeting ²⁾



Manageability

- Remote health monitoring ³⁾
- Professional technical supports
- Always ready and up-to-date



¹⁾ Crestron XiO Cloud

²⁾ Collaboration Bar is not applicable

³⁾ Microsoft Teams Admin Center



MTR vs Collaboration Bar

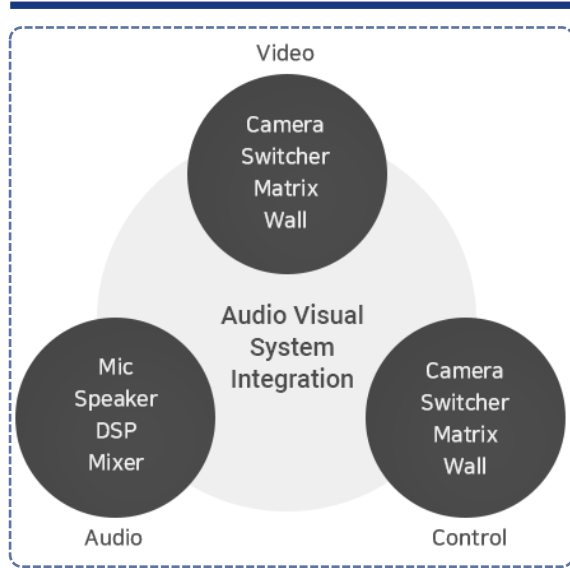
	Microsoft Teams Rooms	Collaboration Bars
Operating System	Windows 10 IoT Enterprise	Android
Service Support	Microsoft Teams and Skype for Business	Microsoft Teams
All in one unit	No	Yes
Dual Display Support	Yes	No (Yes from '21)
Control interface	Room touch panel	Room touch panel
Use case	Small, Medium and Large rooms	Personal, small or huddle rooms
Support for external cameras, room audio systems	Yes	No
Transmit video resolution	Up to 1080p	Up to 720p (1080p from '21)
Number of participants video viewed concurrently	9 (3x3)	4 (2x2)
Support to connect to Zoom and WebEx meetings	Yes	No
Content Camera/traditional whiteboard capture	Yes	No
Present whiteboard from the unit	Roadmap	No
HDMI input to screen share	Yes	No (Yes from '21)
Proximity Join	Yes	Yes
Custom Branding	Yes	No

Company Introduction

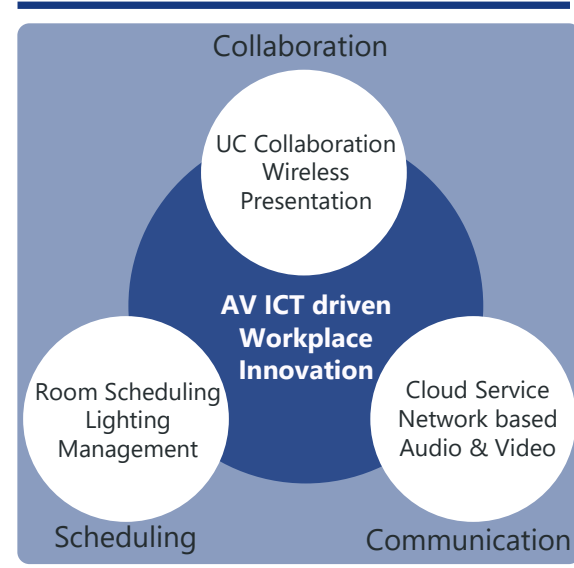
A Workplace Innovation Leader

JUSHIN AVT is a top-tier AV system integrator in the country with over-20-year experiences.

AV System Integration



Workplace Transformation



Offering Global AV/ICT Solutions

Partnering with global players of the AV and UC market we are offering the latest and greatest solutions.

Video
















Audio




Superior
Centering
Solutions
A SHURE Company








JBL
HARMAN




ALLEN & HEATH
WORLD CLASS MIXING




VOICE
ACUSTIC
professional premium loudspeaker systems

Control





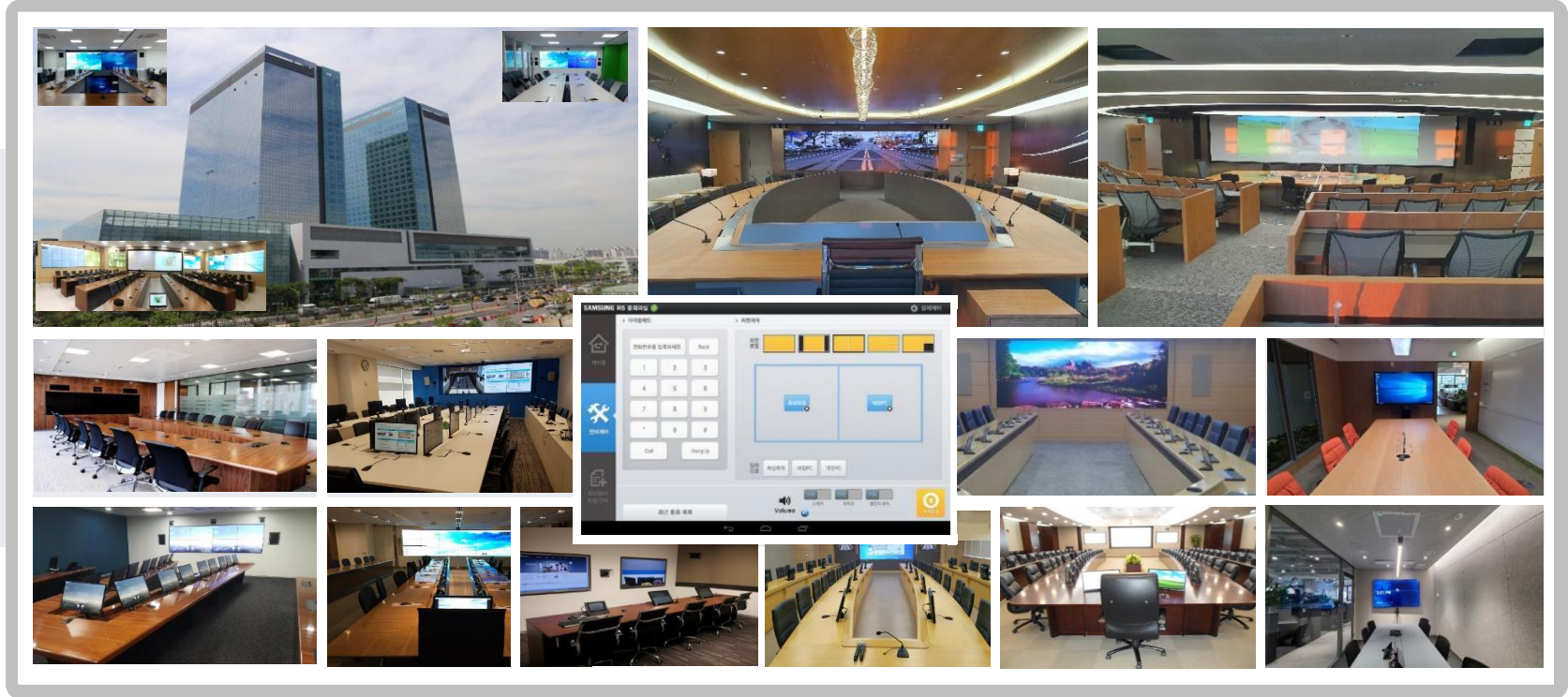
AMX
HARMAN

UC



Successful Projects – Large Enterprises

We have completed many of boardrooms, executive rooms, conference rooms in headquarter offices of large enterprises.



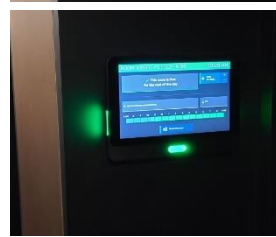
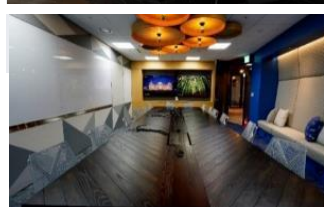
Successful Projects – Government

We have completed a number of conference rooms and meeting rooms for the state council and ministry offices.



Successful Projects – MNCs

Microsoft, Starbucks, Google, Nestle, Chanel, JLL, Invesco, MMC, MetLife, Swagelok are all our customers.



We are holding the legally authorized licenses and the global certificates issued by global AV associates and alliances.



◀ **AVIXA**
(Global AV Association)

PSNI ▼
(Global AV Alliance)



◀ **CTS**
(AV Professional Certificate)



Thank You

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