

# Pro Hybrid Training Solutions



## Problems in **Hybrid Teaching / Training**

- ▶ During **Hybrid teaching** the teacher can see only **9 students** in a **miniature position**, which makes him **completely blind** to attention **being paid by remote students**.
- ▶ Similarly **local students** can not interact with far students creating **two different sites** of **local & remote students**.
- ▶ Lot of teachers still prefer to write using chalkboards or whiteboards for which no proper arrangement has been made in hybrid teaching in such a way that remote students also see the whiteboard / blackboard notes clearly.
- ▶ There is **no reliable way** to continuously **focus the camera on the teacher** in such a way that **remote students** can see the **teacher at all times**.
- ▶ There is **no reliable way** to focus the **camera on the speaking student** instant neosly.
- ▶ In the **absence of people & content separation** in hybrid teaching **neither people nor presentation** are **properly visible**.
- ▶ It is very cumbersome to **pass mic around to students** who want to ask the questions.
- ▶ Joining a hybrid training is also **very challenging** for which **IT help is required**.
- ▶ **Far students** complain that audio of the teacher is **not good enough**.
- ▶ There is **no way of content annotation & whiteboarding** in **hybrid teaching**.
- ▶ There is **no way of eye contact** of the **teacher with remote students**, local students also have to **turn back** to look at the few **remote students** who are visible.





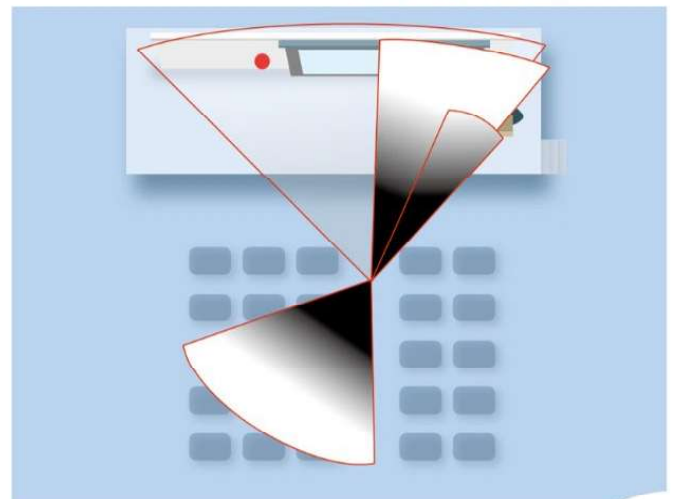
# Core Hybrid Training Solution

with Broadcast Quality Auto Ai Trainer Tracking & Cloud Recoding

Increase the pace & quantum of Effective Learning & Training across your organization with Core Hybrid Training Solution. Conduct an intimate town-hall or training session

## Key Capabilities of Core Hybrid Training Solution

- ▶ **AI Camera** locks the trainer face and **keeps tracking him/her** irrespective of whether the trainer is speaking or not.
- ▶ **Smart PTZ speed** adaptation adjusts the cameras corresponding pen, **tilt & Zoom** in such a way that the lens movement would be smooth avoiding jerks.
- ▶ The **AI powered smart PTZ camera** allows you to switch between **full body, half body & close up views** of **trainer** whether **trainer is speaking or not**.
- ▶ Uses **real images** as **big icon** to easily select the **desired camera view** manually if so **desired by the trainer**.
- ▶ You can also **optionally record the trainees lecture** using **MS Teams or Zoom**
- ▶ Allows trainer to **send far site his presentation** with himself in **PIP or vice-a-versa** which is **not possible** directly on **MS Teams or Zoom**.





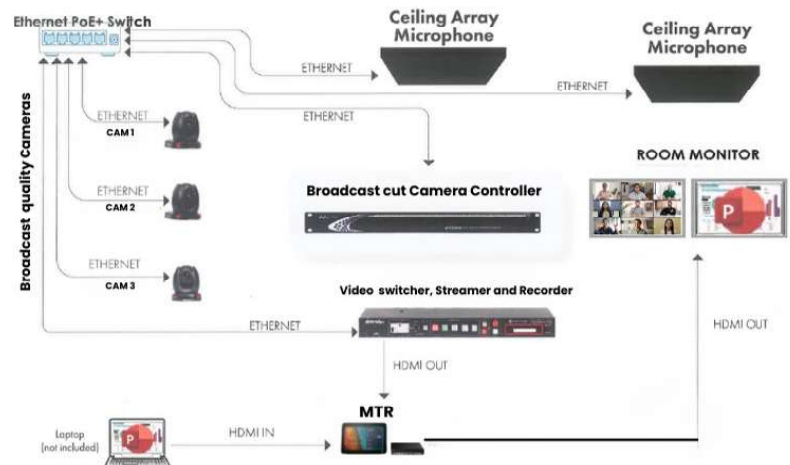
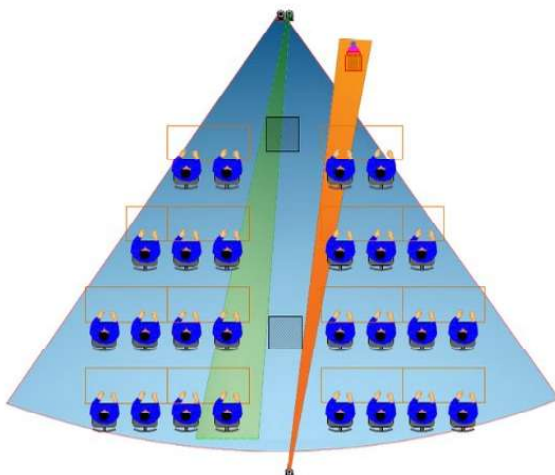
# Enhanced Hybrid Training Rooms

with Broadcast Quality Auto Trainer & Trainee Tracking With Local Recording

Give your both near & far trainees a high-quality learning experience with high quality audio that does not require any microphones to be passed on to trainees coupled with optional 10-12 db. of voice lift of the students and the trainers audio.

## Key Capabilities of Enhanced Hybrid Training Rooms

- ▶ **AI Camera** locks the trainer face and **keeps tracking him/her** irrespective of whether the trainer is speaking or not.
- ▶ **Automatic speaking** trainee switching leads to a very **engaging hybrid learning experience**.
- ▶ **People & content separation** for **both trainer & trainees** allow trainer to **track both near & far** trainees as well as high interactivity of **near & far trainees**.
- ▶ Provides **clean switching**, so you do not see cameras move into position, creating an experience.
- ▶ **10-12 db. voice** lift ensures that all students are clearly heard by the all the **local trainees** as well as **far trainees** in -spite of the **large size of the training room**.
- ▶ **Also record all the lectures** with completely automatic trainer and speaking trainee switching without any operator assistance.
- ▶ Optionally get **Business Octane's Altra Interiors** along with **Video telepresence lighting fixtures** for sending **bright images to far students**.
- ▶ Record **multiple composite views** of the **trainer and the trainees**, advanced windowing such as **side-by-side, picture-in-picture** and **picture-out-picture** shows **active speaker** and **presentation materials** at the same time.





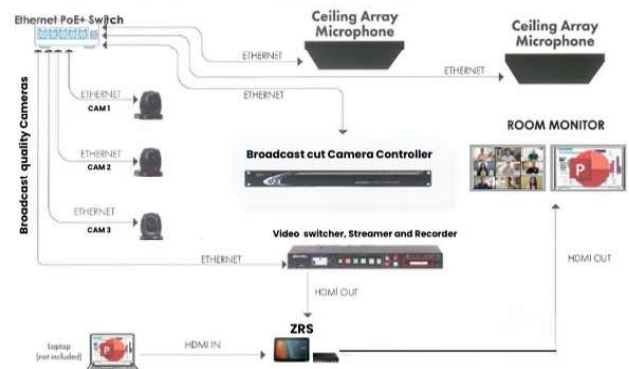
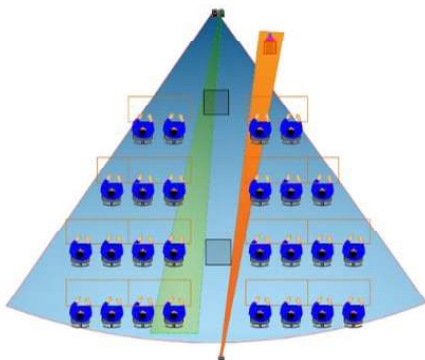
# Enhanced Zoom Hybrid Training Rooms

with Broadcast Quality Auto trainer & trainee tracking with Local recording

Give your both near & far trainees a high-quality learning experience with high quality audio that does not require any microphones to be passed on to trainees coupled with optional 10-12 db. of voice lift of the students and the trainers audio, while seeing the question asking trainee life size.

## Key Capabilities of Enhanced Zoom Hybrid Training Rooms

- ▶ **AI Camera** locks the trainer face and **keeps tracking him/her** irrespective of whether the trainer is speaking or not.
- ▶ **Automatic speaking** trainee switching leads to a very **engaging hybrid learning experience**.
- ▶ Both the **trainer and the near site trainees** can see **active far site trainee** asking a question life-size which results in much **higher overall interactive training & learning**.
- ▶ **People & content separation** for **both trainer & trainees** allow trainer to **track both near & far** trainees as well as high interactivity of **near & far trainees**.
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- ▶ Record **multiple composite views** of the **trainer and the trainees**, advanced windowing such as **side-by-side, picture-in-picture** and **picture-out-picture** shows **active speaker** and **presentation materials** at the same time.





## Dual Divisible Enhanced Hybrid Training Rooms

with Broadcast Quality Trainer & Trainee Tracking System with Local Recording

Give the same enhanced hybrid learning experience to your teams in dual divisible training rooms, individually & jointly.

### Key Capabilities of Dual Divisible Enhanced Hybrid Training Rooms

- ▶ Fully capable of **enhanced hybrid experience** in **individual mode** and in **combined mode** at the **press of a button**.
- ▶ **Far site trainees** get to see the **complete combined room trainees** and the **current speaking trainee** as well as the **trainer** giving them a feel as if they are also **learning locally** from the **same location**.
- ▶ **Precise multiple camera** geometries optimizes individual room as well as **combined room usage**.
- ▶ **10-12 db. voice** lift ensures that all students are clearly heard by the all the **local trainees** as well as **far trainees** in - spite of the **large size of the training room**.
- ▶ **People & content separation** for **both trainer & trainees** allow trainer to **track both near & far** trainees as well as encourage high interactivity of **near & far trainees**.
- ▶ **Easily slide** the **acoustic dividing partitions** for a **joint hybrid meeting experience** with your brand sheet acting as the trainers background.
- ▶ You can **switch the AV functionalities** of **individual & dual use** at the **press of a button**.
- ▶ All other functionalities like **automatic trainer and trainee tracking, recording & sharing** remain **same in both joint & individual mode**.





## Dual Divisible Zoom Enhanced Hybrid Training Rooms

with Broadcast Quality Trainer & Trainee Tracking System with Local Recording

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- ▶ You can **switch the AV functionalities** of **individual & dual use** at the **press of a button**.
- ▶ All other functionalities like **automatic trainer and trainee tracking, recording & sharing** remain **same in both joint & individual mode**.





## Triple Divisible Enhanced Hybrid Training Rooms

with Broadcast Quality Trainer & Trainee Tracking System with Local Recording

Give the same enhanced hybrid learning experience to your teams in triple divisible training rooms individually & jointly all three of them.

### Key Capabilities of Triple Divisible Enhanced Hybrid Training Rooms

- ▶ Fully capable of **enhanced hybrid experience** in **individual mode** and in **combined mode** at the **press of a button**.
- ▶ **Far site trainees** get to see the **complete combined room trainees** and the **current speaking trainee** as well as the **trainer** giving them a feel as if they are also **learning locally** from the **same location**.
- ▶ **Precise multiple camera** geometries optimizes individual room as well as **combined room usage**.
- ▶ Get the **remote trainer to address** in the combined mode appearing **life like size** behind the **podium**.
- ▶ Also get the **capability to convert** this into a **giant conference room / seminar room** with a sitting front panel.
- ▶ **10-12 db. voice** lift ensures that all students are clearly heard by the all the **local trainees** as well as **far trainees** in - spite of the **large size of the training room**.
- ▶ **People & content separation** for **both trainer & trainees** allow trainer to **track both near & far** trainees as well as encourage high interactivity of **near & far trainees**.
- ▶ Also get additional capabilities of **conducting large seminars** with a **head table of 5 participants** and the **presenter on the podium**.
- ▶ **Easily slide** the **acoustic dividing partitions** for a **joint hybrid meeting experience** with your brand sheet acting as the trainers background.
- ▶ You can **switch the AV functionalities** of **individual room & the combined three room solution**.





## Triple Divisible Zoom Enhanced Hybrid Training Rooms with Broadcast Quality Trainer & Trainee Tracking System

Give the same enhanced hybrid learning experience to your teams in triple divisible training rooms individually & jointly all three of them.

### Key Capabilities of Triple Divisible Enhanced Hybrid Training Rooms

- ▶ Fully capable of **enhanced hybrid experience** in **individual mode** and in **combined mode** at the **press of a button**.
- ▶ **Both the trainer and near site trainees** can see **active far site trainee** ask a question **life-size** which results in much higher overall **interactive trainer & learning**.
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- ▶ You can **switch the AV functionalities** of **individual room & the combined three room solution**.





# Enhanced Hybrid Teaching Classrooms

## with Broadcast Quality Trainer & Trainee Tracking System

The solutions enables a seamless hybrid training experience by giving trainers, local trainees, and remote participants clear, separate views of the presentation, active speakers, and attendees—ensuring life-like interaction, better visibility, and higher engagement for everyone.

### Key Capabilities of Enhanced Hybrid Teaching Classrooms

- ▶ Trainer can now see all remote participants separately and active remote trainee separately. A confidence monitor for the trainer is also provided.
- ▶ Remote trainees can also see the trainer view along with separate view of local Trainees' for more interactive trainings.
- ▶ Local trainees can also now see all remote participants separately, active remote life like trainee separately along with seeing the trainers presentation separately without having to look back
- ▶ Remote trainees can also see the local question asking trainee too life like.



**24 PAX**

**40 PAX**



**60 PAX**

**84 PAX**

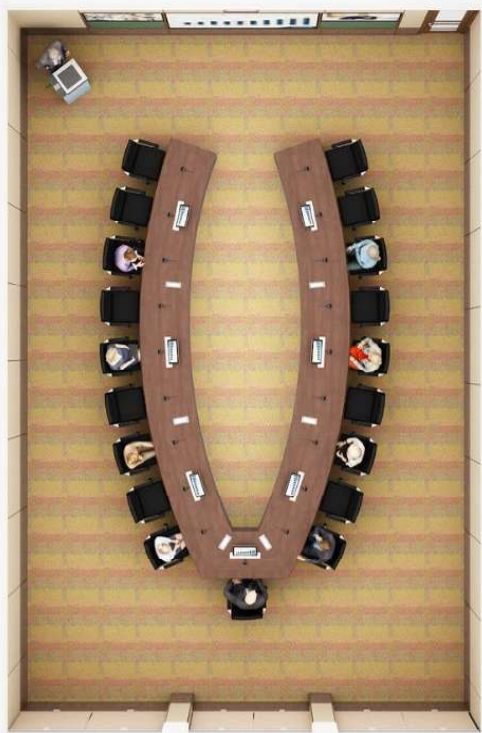
## Enhanced Hybrid Training Room

with Horse Shoe Orientation and with Broadcast Quality Trainer & Trainee Tracking System

The solutions enables a seamless hybrid training experience by giving trainers, local trainees, and remote participants clear, separate views of the presentation, active speakers, and attendees—ensuring life-like interaction, better visibility, and higher engagement for everyone.

### Key Capabilities of **Enhanced Hybrid Horse Shoe Orientation**

- ▶ Trainer can now see all remote participants separately and active remote trainee separately. A confidence monitor for the trainer is also provided.
- ▶ Remote trainees can also see the trainer view along with separate view of local Trainees' for more interactive trainings.
- ▶ Local trainees can also now see all remote participants separately, active remote life like trainee separately along with seeing the trainers presentation separately without having to look back
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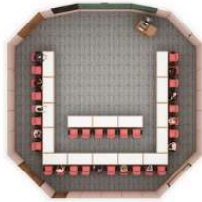
# Enhanced Hybrid Training Rooms

with U & Double U Orientation with Broadcast Quality Trainer & Trainee Tracking System

This solution enables a seamless hybrid training experience by giving trainers, local trainees, and remote participants clear, separate views of the presentation, active speakers, and attendees—ensuring life-like interaction, better visibility, and higher engagement for everyone.

## Key Capabilities of Enhanced Hybrid U & Double U Orientation

- ▶ Trainer can now see all remote participants separately and active remote trainee separately. A confidence monitor for the trainer is also provided.
- ▶ Local trainees can also now see all remote participants separately, active remote life like trainee separately along with seeing the trainers presentation separately without having to look back
- ▶ Remote trainees can also see the trainer view along with separate view of local Trainees' for more interactive trainings.
- ▶ Remote trainees can also see the local question asking trainee too life like.



**U Shaped (25 PAX)**



**Double U Shaped (60 PAX)**



# Enhanced Hybrid Training Rooms

with Vertical Sitting Orientation with Broadcast Quality Trainer & Trainee Tracking System

The solutions enables a seamless Immersive training experience by giving trainers, local trainees, and remote participants clear, separate views of the presentation, active speakers, and attendees—ensuring life-like interaction, better visibility, and higher engagement for everyone.

## Key Capabilities of Enhance Hybrid with Vertical Sitting Orientation

- ▶ Trainer can now see all remote participants separately and active remote trainee separately. A confidence monitor for the trainer is also provided.
- ▶ Local trainees can also now see all remote participants separately, active remote life like trainee separately along with seeing the trainers presentation separately without having to look back
- ▶ Remote trainees can also see the trainer view along with separate view of local Trainees' for more interactive trainings.
- ▶ Remote trainees can also see the local question asking trainee too life like.



The front view from the trainee's Side with greenboard & Displays for gallery view & active speaker view of video trainees



25 PAX



Rear View of the Training room



Front View of the Training room



64 PAX



Rear View of the Training room



# Enhanced Hybrid Training Rooms

with Computer Embedded Trainee Tables Broadcast Quality Trainer & Trainee Tracking System

The computer-embedded solution enhances training flexibility by allowing the trainer to instantly switch between shared common content and individual trainee screens for effective software training. Trainee displays can also be opened or closed on demand, enabling the same room to be seamlessly used for both technical and behavioral training sessions.

## Key Capabilities of Enhance Hybrid with Computer Embedded Tables

- ▶ Each trainer is provided with a complete computer system with large display.
- ▶ These displays can be manually recessed into the trainee tables or extracted out for software learning
- ▶ Trainer can show either common content on all the trainee's displays or every trainee's computer display for software trainings at the press of a button.
- ▶ As Trainee's display can be opened & closed on demand the same room can be used for general behavioral trainings too.



**20 PAX**



**40 PAX**



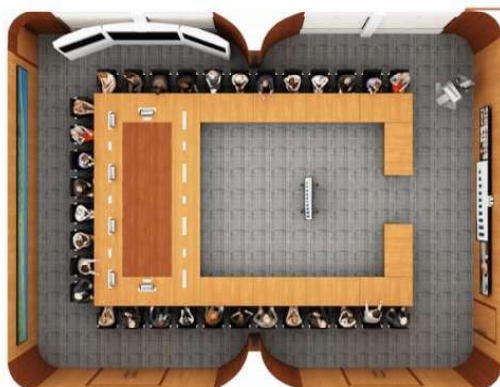
# Enhanced Flexible Hybrid

Training / Seminar & Board Meeting Solution Broadcast Quality Trainer & Trainee Tracking System

A Flexible Combined-Separate Boardroom, Seminar Room, and Training Room is a smart, multi-purpose space designed to adapt instantly to different business needs. With modular layouts, advanced AV integration, and seamless reconfiguration, the room easily transforms from a collaborative boardroom.

## Key Capabilities of Enhanced Flexible Hybrid Training / Seminar & Board Meeting Solution

- ▶ **Dual-Purpose Design:** Seamlessly transforms from a professional boardroom into a full-scale seminar room without changing infrastructure.
- ▶ **Advanced Audio-Visual Integration:** High-definition displays, intelligent cameras, and crystal-clear audio ensure impactful presentations and smooth hybrid interactions.
- ▶ **Quick Reconfiguration:** Modular furniture and smart controls allow fast transitions between meeting and seminar modes, saving time and effort.
- ▶ **Flexible Seating & Layouts:** Supports multiple configurations—U-shape, classroom, theatre, or boardroom—to suit meetings, presentations, or seminars.
- ▶ **Hybrid-Ready Collaboration:** Enables effortless connection with remote participants through video conferencing, screen sharing, and interactive collaboration tools.
- ▶ **Professional Experience:** Delivers a premium, distraction-free environment that enhances decision-making, engagement, and knowledge sharing.



Combined Boardroom / Seminar/ Training Room



Separate Boardroom & Separate Room



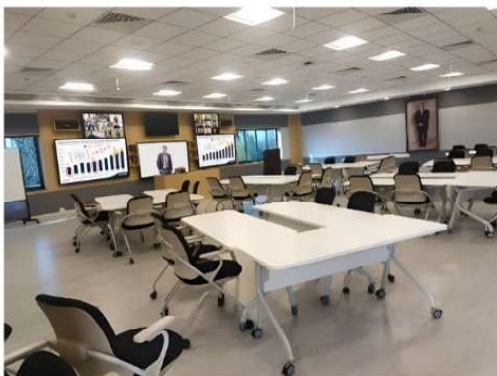
# Enhanced Flexible Hybrid

Training Solutions with with Broadcast Quality Trainer & Trainee Tracking System

This solution enables a seamless hybrid training experience by giving trainers, local trainees, and remote participants clear, separate views of the presentation, active speakers, and attendees—ensuring life-like interaction, better visibility, and higher engagement for everyone with the added bonus of complete flexible solutions.

## Key Capabilities of Enhanced Flexible Training Solutions

- ▶ Trainer can now see all remote participants separately and active remote trainee separately. A confidence monitor for the trainer is also provided.
- ▶ Remote trainees can also see the trainer view along with separate view of local Trainees' for more interactive trainings.
- ▶ Local trainees can also now see all remote participants separately, active remote life like trainee separately along with seeing the trainers presentation separately without having to look back
- ▶ Remote trainees can also see the local question asking trainee too life like.
- ▶ Get all the functionalities of enhanced hybrid classrooms with completely flexible sitting while still getting automatic trainee switching





# Enhanced Flexible Very Large Hybrid Training Solutions

The new paradigms of large face to face collaboration can help you galvanize and energize your worldwide teams in your town halls, trainings & seminars!

## Key Capabilities of **Enhanced Flexible Training Solutions**

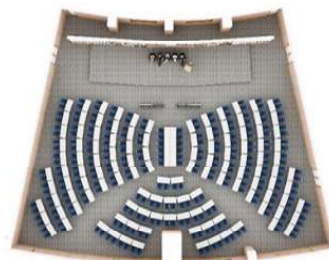
- ▶ **Adaptive Space Configuration** – Easily transform rooms for training, seminars, workshops, or hybrid sessions with flexible layouts and modular furniture.
- ▶ **Seamless Hybrid Learning Experience** – Enable smooth interaction between in-room and remote participants with high-quality video, audio, and intelligent speaker tracking.
- ▶ **Advanced Collaboration Tools** – Support interactive whiteboarding, content annotation, wireless sharing, and real-time collaboration for engaging learning outcomes.
- ▶ **Scalable & Inclusive Design** – Accommodate small groups to large audiences while ensuring clear visibility, audibility, and participation for everyone.
- ▶ **Future-Ready Technology Integration** – Built to support evolving training needs with smart automation, easy upgrades, and compatibility with leading platforms.



Side View of the Training Room



Rear View of the Training Room



Top View of the Training Room



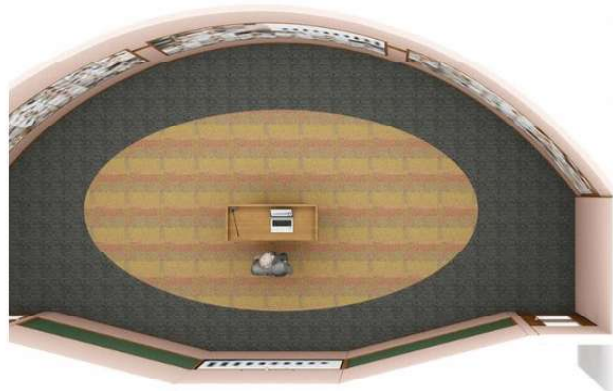
# Immersive Hybrid Training Studio

with Broadcast Quality Trainer & Trainee Tracking System

Immersive Hybrid Training Studio delivers highly interactive hybrid trainings with split gallery views of 90 remote trainees with names on large displays, active trainee tracking, AI based trainer tracking from 3 separate cameras for the operator to select the best view of the trainer coupled with full training studio view for all trainees creates seamless engaging learning sessions.

## Key Capabilities of Immersive Hybrid Training Studio

- ▶ Trainer gets continuous presence of **90 remote trainees** in **split gallery view on 2-3 very large Displays** coupled with **Active Speaker** and **presentation** being shared on ten 65" display for amazing immersive experience.
- ▶ Electronic **interactive Whiteboarding** from podium with the trainees **Ordinary whiteboard & green whiteboard** explanation.
- ▶ **Quick and Easy to Share** the **Physical documents** over the screen to help and understand things in right way.
- ▶ **Wireless white boarding** & content annotation in training by trainer from the **small podium**.
- ▶ Trainer is **automatically in focus** when he/ she moves to explain.
- ▶ Remote trainees are fully immersed in the trainees learning on ..... of seeing the trainers presentation, trainer with a PIP view of the entire room along with a other trainers allows one of its kind immersive remote trainers.



**TOP VIEW**



**Operator Control Center**



**Far trainees view with continuous view of trainer, full studio view of their classmates and the presentation shared by the trainer or a fellow trainee.**



**Trainee's View**



# Immersive Hybrid Training Rooms

with Broadcast Quality Trainer & Trainee Tracking ( 24 PAX to 72 PAX )

Increase the pace & quantum of Effective Learning & Training across your organisation with Immersive Telepresence Training rooms. Conduct an intimate town-hall or training session

## Key Capabilities of Immersive Hybrid Training Solutions

- ▶ The **local trainees** will also feel that the **remote trainees** are also very much in the room.
- ▶ Trainees will also feel that remote trainer is also very much in the room behind the podium with **best seating geometrical arrangement**
- ▶ **Perfect for Medium-scale** training, seminars, and townhalls that demand clarity, inclusivity, and **high-impact presence**.
- ▶ Additionally, give the **power of annotation & whiteboarding** to all your **Trainees**.
- ▶ You can also **join up to two more training rooms** to have **one trainer teaching three classes** at the same time for higher level of effectiveness or additionally can have **one trainer joining 98 remote trainees**.
- ▶ Amazing participants **audio with voice lift** and **automatic trainer trainee tracking**.





## Immersive Hybrid Training Rooms

with Hexagonal & Octagonal Seating with Broadcast Quality Trainer & Trainee Tracking System

The solutions enables a seamless Immersive training experience by giving trainers, local trainees, and remote participants clear, separate views of the presentation, active speakers, and attendees—ensuring life-like interaction, better visibility, and higher engagement for everyone.

### Key Capabilities of Immersive Hybrid Training Rooms with Hexagonal & Octagonal Seating

- ▶ Trainer can now see all remote participants separately and active remote trainee separately. A confidence monitor for the trainer is also provided.
- ▶ Local trainees can also now see all remote participants separately, active remote life like trainee separately along with seeing the trainers presentation separately without having to look back
- ▶ Remote trainees can also see the trainer view along with separate view of local Trainees' for more interactive trainings.
- ▶ Remote trainees can also see the local question asking trainee too life like.

### 120 PAX with Hexagonal shape Orientation



The front view from the trainee's Side with greenboard & Displays for gallery view & active speaker view of video trainees



Layout Plan of the Training Room



The Rear view from the trainer's Desk

### 120 PAX with Octagonal shape Orientation



The front view from the trainee's Side with greenboard & Displays for gallery view & active speaker view of video trainees



Layout Plan of the Training Room



The Rear view from the trainer's Desk



# Immersive Hybrid Training Rooms

with Narrow Width & Long Length with Broadcast Quality Trainer & Trainee Tracking System

The solutions enables a seamless Immersive training experience by giving trainers, local trainees, and remote participants clear, separate views of the presentation, active speakers, and attendees—ensuring life-like interaction, better visibility, and higher engagement for everyone.

## Key Capabilities of Immersive Hybrid Training Rooms with Narrow Width & Long Length

- ▶ Trainer can now see all remote participants separately and active remote trainee separately. A confidence monitor for the trainer is also provided.
- ▶ Remote trainees can also see the trainer view along with separate view of local Trainees' for more interactive trainings.
- ▶ Local trainees can also now see all remote participants separately, active remote life like trainee separately along with seeing the trainers presentation separately without having to look back
- ▶ Remote trainees can also see the local question asking trainee too life like.



**150 PAX**



**26 PAX**





## Immersive Divisible & Flexible Training/Seminar/Townhall Rooms with Broadcast Quality Trainer & Trainee Tracking

Immersive training rooms which can also be combined together to make one large Immersive training room in a few minutes while maintaining same level of impressiveness.

### Key Capabilities of **Immersive Divisible & Flexible Training Rooms**

- ▶ **Dual Immersive Training Rooms** – Conduct two fully independent, immersive training sessions simultaneously without compromising experience quality.
- ▶ **Quick Merge Into One Large Space** – Seamlessly combine both rooms into a single, ultra-immersive training environment within minutes.
- ▶ **Effortless Transformation** – Just press a button on the touch panel to switch between dual-room and single-room modes instantly.
- ▶ **Sound-Proof Partition Technology** – High-grade acoustic partitions ensure zero sound leakage and uninterrupted focus during separate trainings.
- ▶ **Consistent Immersive Experience** – Whether operating as two rooms or one large space, the system maintains the same level of visual and auditory immersiveness.





## Immersive Hybrid Large Training/Seminar/Townhall Rooms

with Broadcast Quality Trainer & Trainee Tracking System

Business Octane introduces Immersive Hybrid Large Training/Seminar/Townhall Rooms - the functionalities rich, aesthetic and easy to use suite of extra-large video enabled conference rooms which are available in standard seating capacities of 72 - 200 Pax.

### Key Capabilities of Immersive Hybrid Large Training Rooms

- ▶ **Dual-Purpose Immersive Spaces** – Transform your immersive training rooms into high-impact venues for large local and hybrid seminars with a head table accommodating 5-7 dignitaries.
- ▶ **Scalable for Large Conferences** – Perfectly suited for hosting expansive local and hybrid conferences, supporting group sizes ranging from 48 to 200 participants.
- ▶ **Optimized for Hybrid Collaboration** – Ensure remote and in-room attendees enjoy the same immersive, life-size presence, making the venue equally powerful for hybrid events.
- ▶ **Versatile Seminar-Ready Setup** – Seamlessly switch from training sessions to professional seminar environments without needing additional infrastructure.
- ▶ **Ideal for High-Level Interactions** – Provide an impressive, immersive setting for CEO townhalls, ensuring clear visibility, engagement, and participation across the room.





## Immersive Amphitheatre Training/Seminar/Townhall Solutions

with Broadcast Quality Trainer & Trainee Tracking

Business Octane introduces Amphitheatre Training solutions for your organization which are functionalities rich, aesthetic and easy to use. These auditoriums solutions can accommodate a large number of participants for your Trainings, Seminars, local events, annual day functions.

### Key Capabilities of **Amphitheatre Training Solutions**

- ▶ **Dual-Mode Events: Physical + Hybrid** – Host trainings, seminars, local events, and annual functions with both in-person and remote participants seamlessly integrated.
- ▶ **Dedicated Displays for Remote Participants** – Gallery view of remote attendees and active speakers is shown on separate screens for enhanced engagement.
- ▶ **Immersive, Inclusive Experience** – Remote participants feel like part of the event, creating a unified, interactive environment for all attendees.
- ▶ **Significantly Increased Attendance** – Hybrid capability allows you to accommodate far more attendees without space limitations.
- ▶ **Stage & Audience-Specific Presentation Views** – Presentations are displayed on dedicated screens for both on-stage speakers and the audience, ensuring everyone sees the right content clearly.





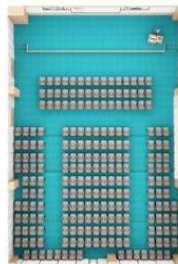
## Immersive Hybrid Auditorium Training/Seminar/Townhall Solutions

with Broadcast Quality Trainer & Trainee Tracking

Business Octane introduces auditorium Training solutions for your organization which are functionalities rich, aesthetic and easy to use. These auditoriums solutions can accommodate a large number of participants for your Trainings, Seminars, local events, annual day functions.

### Key Capabilities of Immersive Hybrid Auditorium Training Solutions

- ▶ **Dual-Mode Events: Physical + Hybrid** – Host trainings, seminars, local events, and annual functions with both in-person and remote participants seamlessly integrated.
- ▶ **Dedicated Displays for Remote Participants** – Gallery view of remote attendees and active speakers is shown on separate screens for enhanced engagement.
- ▶ **Immersive, Inclusive Experience** – Remote participants feel like part of the event, creating a unified, interactive environment for all attendees.
- ▶ **Significantly Increased Attendance** – Hybrid capability allows you to accommodate far more attendees without space limitations.
- ▶ **Stage & Audience-Specific Presentation Views** – Presentations are displayed on dedicated screens for both on-stage speakers and the audience, ensuring everyone sees the right content clearly.



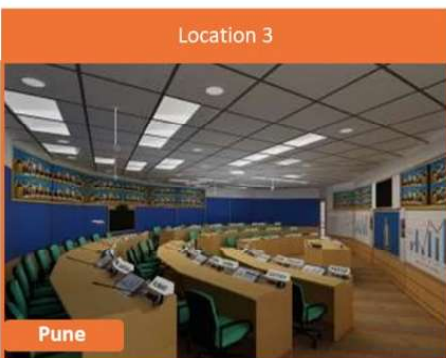
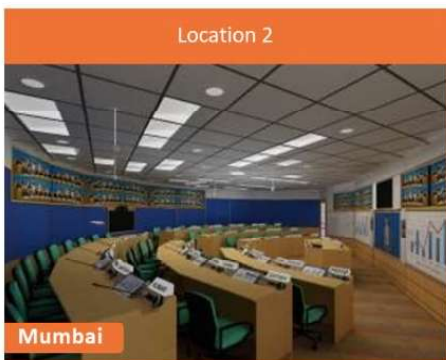


## Ultra Immersive Training/Seminar/Townhall Rooms with Broadcast Quality Trainer & Trainee Tracking

Increase the pace & quantum of Effective Learning & Training across your organisation with Ultra-Immersive Telepresence Training Rooms. Conduct an intimate town-hall or training session

### Key Capabilities of Ultra Immersive Telepresence Training Rooms

- ▶ Trainer at one location and the trainees can join from **multiple similar rooms** along with **upto 441 locations** joining from their **laptops / Training rooms / Conference rooms**.
- ▶ Experience **ultra-immersive communication** where questions, reactions, and interactions feel **naturally in-room**.
- ▶ Every participant is clearly visible ensuring **full engagement across all sites**.
- ▶ A very intructive system that requires No learning for trainer.
- ▶ The **question asking trainee / participant** appears **life size at every location**.
- ▶ Amazing participants **audio with voice lift** and **automatic trainer trainee tracking**.
- ▶ **High quality content visibility** with annotation, **multi location interactive whiteboarding** along with conventional whiteboarding.
- ▶ **Perfect eye contact of trainer, local trainees & remote trainees**
- ▶ Perfect for **large-scale flexible training, seminars, and townhalls** that demand clarity, inclusivity, and **high-impact presence and team collaboration**.





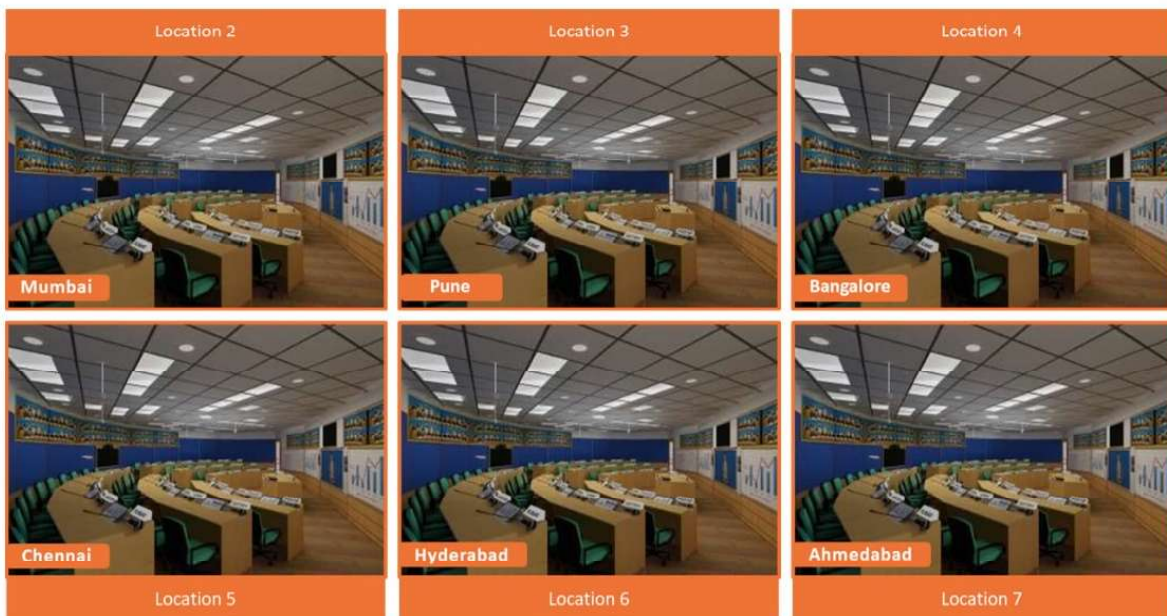
## Super Ultra Immersive Training/Seminar/Townhall Rooms

with Broadcast Quality Trainer & Trainee Tracking

Increase the pace & quantum of Effective Learning & Training across your organization with Super Ultra-Immersive Telepresence Training rooms. Conduct an intimate town-hall or training session

### Key Capabilities of **Super Ultra Immersive Telepresence Training Rooms**

- ▶ For the First Time Ever, **480 team members** can recognize, identify and address every other of **479 participants** by their name.
- ▶ Seamlessly train or address **200-480 employees** across **5-9 locations** with true life-size presence.
- ▶ Every **participant is clearly visible and recognizable**, ensuring full engagement across all sites.
- ▶ **Speaker names** and **participant identities remain readable** in real time, no matter the location.
- ▶ Experience **ultra-immersive communication** where questions, reactions, and interactions feel naturally in-room.
- ▶ Perfect for **large-scale training, seminars, and townhalls** that demand clarity, inclusivity, and high-impact presence.



.....UPTO 10 Locations



# Broadcast Quality Townhalls

## Galvanize & Energize your Teams Like Never Before

Convert your single dimension townhalls in multidimensional townhalls by custom stitching of multiple location key persons into a single frame that was not possible before.

### Key Capabilities of Townhall Solution

- ▶ Immersive Visual Experience with a 196"/135"/108" Active LED displays for vibrant & stunning images.
- ▶ Full-Area Visibility ensured through additional 55" displays, delivering clarity to every corner of the venue.
- ▶ Broadcast-Grade Presenter Tracking powered by an AI PTZ camera, keeping speakers perfectly framed at all times.
- ▶ Comprehensive Audience Coverage with three professional PTZ cameras, enabling multi-angle live capture and seamless switching.
- ▶ End-to-End AV Workflow including an 8-channel HD video switcher/streamer/recorder, Zoom/MTR-ready codec, and a complete audio system with lapel, handheld, wireless podium mics, DSP, amplifiers, and speakers.

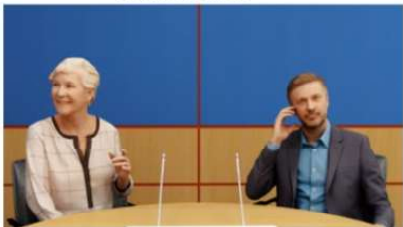


# Two Dimensional / Three Dimensional Video Meeting Experience

Give your far site participants not only one dimensional but multiple dimensional experience for seeing all the participants of Seminar along with seeing the active speaker in Video Conferencing meetings !



Full Room View



Active Speaker View

Dual video streams- one for showing full room view & another one for showing active speaker view.



Dual View on the laptop of the far site VC

Dual dimensional experience



Left Half Room View



Right Half Room View



Separate View of speaker at podium

Triple dimensional experience for remote participants



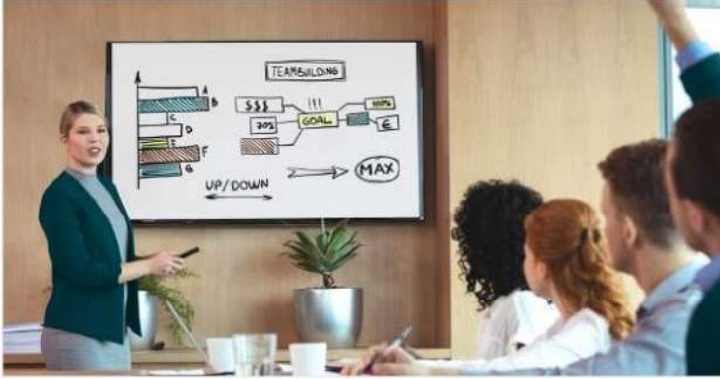
Triple View showing Left Half Room View, Right Half Room View and conference room view on the laptop of the remote participants without any audio disturbance



# EXPERIENCE THE DIFFERENCE WITH NEXT GENERATION LED DISPLAY

Enhance communication with engaging content.

## KEY FEATURES



## ANDROID 11 COMPATIBILITY

Experience seamless productivity with our professional display featuring Android 11 integration, streamlining workflows and enhancing collaboration with vibrant visuals and intuitive functionality.

## EXCEPTIONAL TOUCH CAPABILITIES

Experience seamless and accurate touch and writing functions.



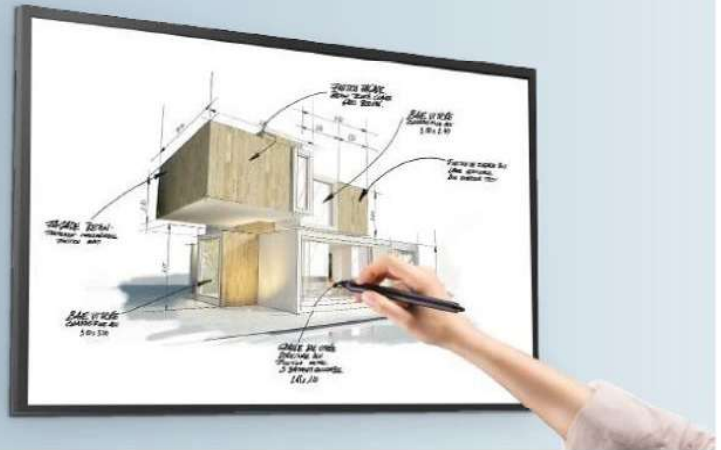
Multi-touch  
(40pt)



Sound  
Absorption



Dual-tip  
Pen



## TYPE-C COMPATIBILITY

Integrate the most useful function for the classroom through a Type-C interface.



Charging  
65W



4K



2.1 Channel  
Stereo



Networking



Audio



Video

## SLIM & SLEEK APPEARANCE



3mm  
glass



Bezel width <15mm



## 4K UPSCALING INPUT

Panasonic's upscaling technology effortlessly enhances image resolution, seamlessly transforming standard input into stunning 4K output, elevating the viewing experience to unprecedented levels of clarity and immersion.



## KEY FEATURES



### BUILT-IN CAMERA AND MIC

With built-in camera and an impressive array of 8 microphones that ensures an extensive coverage area for the microphone, CT series facilitates clear and comprehensive audio capture during office meetings.



### NOISE CANCELLATION AND SOUND LOCALISATION

CT series ensures that background noise is effectively minimised, and voices are accurately captured and localized for crystal-clear audio quality allowing for enhanced communication and collaboration.



### BUILT-IN SPEAKER

Clear and powerful sound output, ensures that everyone in the room can hear presentations and meeting discussions with ease, fostering effective communication and collaboration.

## EASY OPERATIONS



### OPEN FILES

Open your pre-saved files or a new document with a simple touch.



### SAVE FILES

Save the screen captures, notes and written material easily.



### PALM ERASE

Take notes and effortlessly erase them using your palm, just like a conventional whiteboard.



### FLOATING TOOLBAR

Add the floating toolbar anywhere on the screen, facilitating comfortable and intuitive writing on the screen.



Compatible with **SIGNEDGE\***



Remote screen control



United application management



Control your screen



Panel Management

# SPECIFICATIONS

Model **LH-86CT1NDCM**

## Panel

Screen Size	218.4 cm
Brightness (typical)	450 cd/m <sup>2</sup>
Resolution	3840 x 2160
Viewing Angle	178 x 178
Surface Hardness	Toughened Glass with Level 7 of MOHS Standard

## Built-in System

Operating System	Android 11.0
CPU	Octa core processor and with 2.2Ghz (A73x4 + A53x4)
Memory	8 GB
Storage	128 GB
WiFi and Bluetooth	"Wifi 802.11ac/b/g/n/a/axBT 5.2"

## Monitor Connectivity

Input Ports	3 x HDMI (4K upto 60Hz), HDCP 2.1, CEC, ARC (HDMI1), 1 x USB 2.0, 4 x USB 3.0 (Front 2, Rear 2) with autoswitching function, 1 x USB (C Type) Touch, PD65W & LAN network sharing, 1 x Audio IN
Output Ports	Audio Port -1 [SPDIF], 1 x Audio out, 1 x HDMI Out / 2 x Touch Out
External Control	RS-232, RJ 45

## Front Connectivity

IR Receiver	Yes
Speakers Built in	2x25W
Pen	2 x Writing pens
Plug In	Yes

## Touch Technology

Type of Touch Technology	40 touch points
Accuracy	±1.5mm

## Mechanical

Product Dimensions [WxHxD]	1957x1169x86mm
Package Dimensions [WxHxD]	2110x225x1291mm
Product Weight	68.60kg
Package Weight	85.10kg
Vesa Mounting	800x600mm
Bezel Width	Left & right is 17.7mm, Top is 26.7mm, Bottom is 45.7mm
Operating Hours	24 x 7

## Environmental Conditions

Operating Temperature	0°C-45°C
Operating Humidity	10%-90%RH
Power Consumption	Typical 345W Max 540W

## Mechanical Features

Interactive White Board Software	Supports Android and Windows*
Features	Writing, pen, palm eraser, save, screen capture, storage and tool bar. Supports 3rd party applications, recording feature, USB Webcam compatible, PPT, Word, PDF, image, video play, built-in 48M camera, Android 4k photo & video, auto framing, built-in 8 array microphones, intelligent noise reduction, sound localisation, 2.1 channel stereo.
Accessories	2 pens, power cables & wall mount kit.
Device Management / Touch Screen Management	Capability to connect & disconnect all devices / group of devices from central location. Application have capability to share and finish casting of BYOD device and have a robust authorization management. Power off & Reboot devices from central location also control external devices such as USB cameras, speakers, control brightness & clear cache. Device active trend and deactivate displays.

## Certification

BIS	YES	YES
-----	-----	-----

\*For Android it is free, For Windows need to purchase license.

**Panasonic**  
**CONNECT**

Registered Office: Panasonic Life Solutions India Pvt. Ltd., 12<sup>th</sup> Floor, Ambience Tower, Ambience Island, NH-8, Gurgaon-122002, Haryana, India.  
Ph.: +91-124-4871300, Fax: +91-124-4871333 | Website: <https://www.panasonic.com/in/> | Toll Free Number: 1800 4190 373

 @panasonicindia

 @panasonic\_india

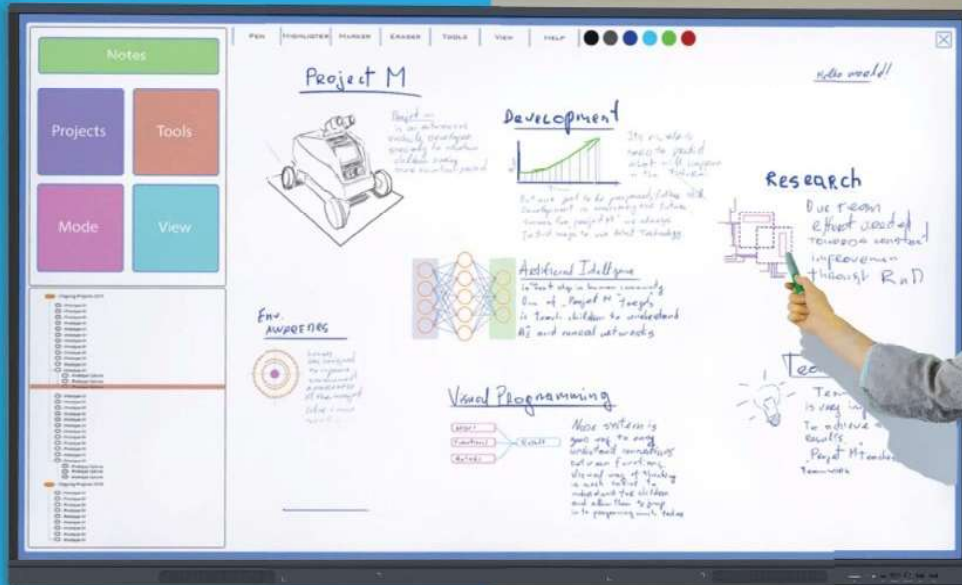
 [www.panasonic.com/in/](https://www.panasonic.com/in/),  
[helpline@in.panasonic.com](mailto:helpline@in.panasonic.com)

 PanasonicIN

 @PanasonicIndia

# Panasonic CONNECT

LH-65CT1ND  
LH-75CT1ND

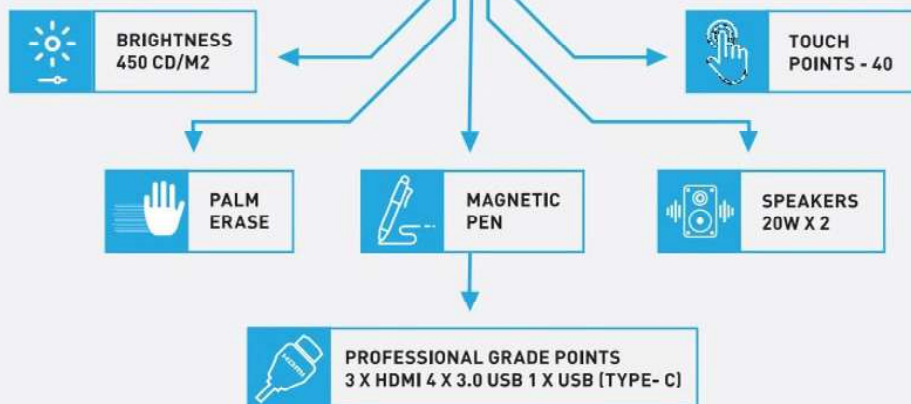


NEXT GENERATION  
TOUCH SCREEN


# INTELLIGENT FLAT PANEL DISPLAY

# NEXT GENERATION CT SERIES

POWERED BY ANDROID 13 OS

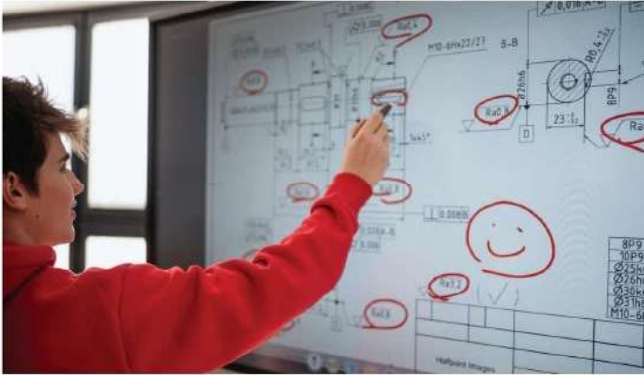


 4 GB RAM

 Quad Core CPU  
With 1.99hz

 32 GB ROM

## EQUIPPED WITH ADVANCED FEATURES

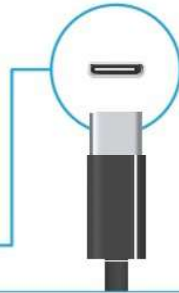


### MAGNETIC PENS

- Latency < 40ms
- Excellent sound absorption
- Dual-tip pen supports writing with two colours simultaneously
- 40-point touch allows multi-users to write, draw & mark simultaneously.

### TYPE-C COMPATIBILITY

Integrate the most useful function for the classroom through a Type-C interface.



Charging  
65W



4K



Audio



Video



Networking

### SLIM, SLEEK APPEARANCE

- Bezel width < 15mm
- 3mm glass
- Gen 1 Zero Bonding



### ROOM-FILLING SOUND

Built-in speakers in the front bezel to deliver audio enjoyment for immersive learning

# SPECIFICATIONS

Model	LH-65CT1ND	LH-75CT1ND
-------	------------	------------

## Panel

	165cm	190.5cm
Brightness (typical)	450 cd/m <sup>2</sup>	450 cd/m <sup>2</sup>
Resolution	3840 x 2160	3840 x 2160
Response Time (typical)	8 ms	8 ms
Viewing Angle	178 x 178	178 x 178
Surface Hardness	Toughened Glass with Level 7 of MOHS Standard	Toughened Glass with Level 7 of MOHS Standard
Panel Technology	IPS	IPS

## Built-in System

Operating System	Android 13	Android 13
CPU	Quad core processor and with 1.9Ghz [A55x4]	Quad core processor and with 1.9Ghz [A55x4]
Memory	4 GB	4 GB
Storage	32 GB	32 GB
WiFi and Bluetooth	Wifi 802.11ac/b/g/n/a/axBT 5.2	Wifi 802.11ac/b/g/n/a/axBT 5.2

## Monitor Connectivity

Input Ports	3 x HDMI (4K upto 60Hz), HDCP 2.1, CEC, ARC (HDMI1), 1 x VGA, 1 x USB 2.0, 4 x USB 3.0 (Front 2, Rear 2) with autoswitching function, 1 x USB (C Type) Touch, PD65W & LAN network sharing, 1 x Audio IN	3 x HDMI (4K upto 60Hz), HDCP 2.1, CEC, ARC (HDMI1), 1 x VGA, 1 x USB 2.0, 4 x USB 3.0 (Front 2, Rear 2) with autoswitching function, 1 x USB (C Type) Touch, PD65W & LAN network sharing, 1 x Audio IN
Output Ports	Audio Port -1 (SPDIF), 1 x HDMI Out, 2 x Touch Out	Audio Port -1 (SPDIF), 1 x HDMI Out, 2 x Touch Out
External Control	RS-232, RJ 45	RS-232, RJ 45

## Front Connectivity

IR Receiver	Yes	Yes
Speakers Built in	20W x 2	20W x 2
Pen	2 x Writing pens	2 x Writing pens
Plug In	Yes	Yes

## Touch Technology

Type of Touch Technology	40 touch points	40 touch points
Accuracy	±1.5mm	±1.5mm

## Mechanical

Product Dimensions (WxHxD)	1488.4x896.6x87.2mm (WxHxD)	1709x1020x88mm(WxHxD)
Package Dimensions (WxHxD)	1628x1005x208mm (WxHxD)	1863x1140x225mm(WxHxD)
Product Weight	34.95kg	47.30kg
Package Weight	44.70kg	60.55kg
Vesa Mounting	600x400mm	800x400mm
Bezel Width	left and right is 16.5mm, top side is 14.6mm and bottom side is 43mm	left and right is 16.5mm, top side is 23.5mm and bottom side is 44.95mm
Operating Hours	24 x 7	24 x 7

## Environmental Conditions

Operating Temperature	00-45 Degree	00-45 Degree
Operating Humidity	10%-90%RH	10%-90%RH
Power Consumption	Typical 200W Max 360W	Typical 200W Max 360W

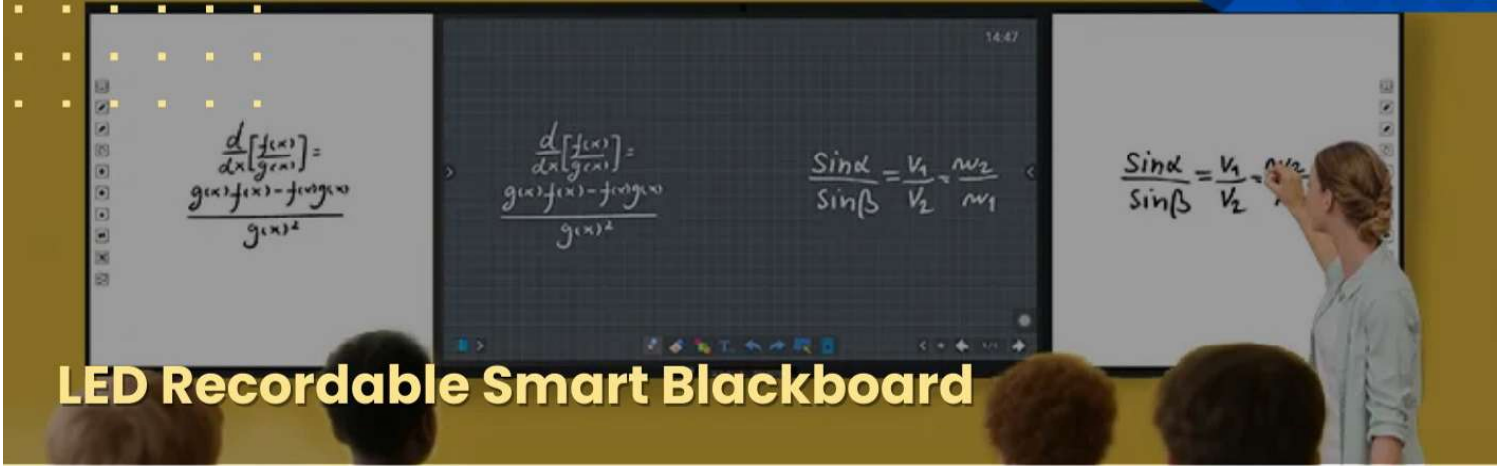
## Mechanical Features

Interactive White Board Software	Support in Androide and Windows*	Support in Androide and Windows*
Features	Writing, Pen, Palm Eraser, Save, Screen Capture, Storage and Tool Bar. Supports 3rd party applications, recording feature, USB WEB Cam Compatible, Support PPT, Word, PDF, Image, Video Play	Writing, Pen, Palm Eraser, Save, Screen Capture, Storage and Tool Bar. Supports 3rd party applications, recording feature, USB WEB Cam Compatible, Support PPT, Word, PDF, Image, Video Play
Accessories	2 Pens, Power Cables & Wall Mount Kit	2 Pens, Power Cables & Wall Mount Kit
Device Management / Touch Screen Management	Capability to connect & disconnect all devices / group of devices from central location. Application have capability to share and finish casting of BYOD device and have a robust authorization management. Power off & Reboot devices from central location also control external devices such as USB cameras, Speakers, control brightness & clear cache. Device active trend and deactive displays.	Capability to connect & disconnect all devices / group of devices from central location. Application have capability to share and finish casting of BYOD device and have a robust authorization management. Power off & Reboot devices from central location also control external devices such as USB cameras, Speakers, control brightness & clear cache. Device active trend and deactive displays.

## Certification

BIS	YES	YES
-----	-----	-----

\*For android it is Free For windows need to purchase license



## LED Recordable Smart Blackboard

LED recordable smart blackboard is a cutting-edge device that transforms traditional classrooms Training/Seminar/Townhall Rooms modern and interactive environments. It is a digital version of the traditional chalkboard, which adds advanced technological features. Available sizes are **162 inch** and **185 inch**.

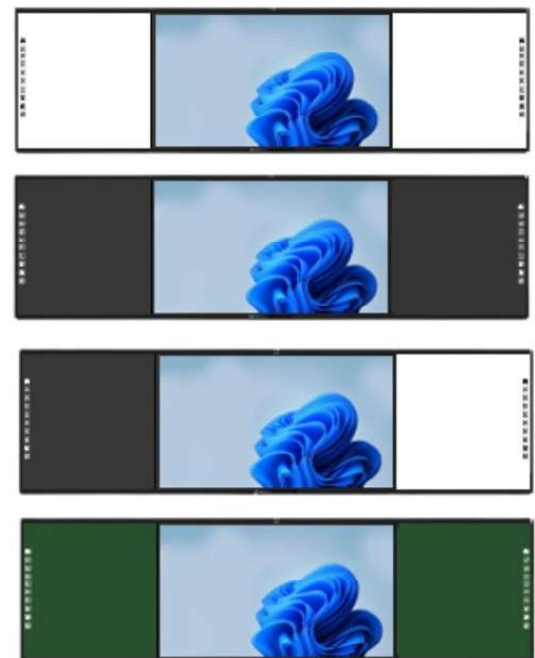
### Key Capabilities of LED Recordable Smart Blackboard

- ▶ **Dual System** – Powered by the latest Android 11.0 with 4G connectivity, 32GB storage, and a Windows dual system, ensuring smooth multitasking, fast performance, and maximum compatibility.
- ▶ **Advanced Interactive Writing Experience** – Supports seamless chalk writing, smart handwriting recognition, touch-screen interaction, and an interactive writing pad for effortless writing, erasing, and collaboration.
- ▶ **Built-in Recording & Playback System** – Embedded powerful recordable software allows you to record, save, and replay presentations, lectures, and whiteboard sessions anytime.
- ▶ **Wireless Connectivity & Collaboration** – Integrated Bluetooth and Wi-Fi enable wireless content sharing, real-time collaboration, and interactive whiteboard animations for engaging presentations.
- ▶ **Smart, Modular & User-Friendly Design** – Features a hidden digital visualizer, pluggable modular design, 10 convenient shortcut keys, and smart classroom technology for easy operation and enhanced teaching efficiency.

### Customized Option

Green board, Blackboard, White board as options to support writing freely by chalk and marker

Item	Model No.	OSL-162-85	OSL-185-98
Dimension	Size	162 inch	185 inch
	Dimension(L*D*H)	3953* 143*1183 mm	4504*161*1336mm
	Sub-screen (L*D*H)	1000* 61.5*1183mm *2pcs	1143*61.5*1336mm *2pcs
	Packing Size(L*H*D)	2110*1375*200mm*1 ctn; 1097*190*1280mm*1 ctn	2410*350*1660mm*1 ctn; 1240*190*1433mm*1 ctn
	Weight (N.W. /G.W.)	105KG/118KG	130KG/152KG
Electricity Performance	Voltage	110-240V(AC) 50/60Hz	
	Power Consumption	≤ 400W(without OPS)	≤ 450W(without OPS)
Display Specification	Main Screen Size (H*V)	1872* 1053mm	
	LCD Main Screen Size	85inch	98inch
	Resolution	3840*2160 (UHD) , 4K/60GHZ	
	Ratio	16:9	
	Contrast	4000:1	
	Brightness	400cd/m <sup>2</sup>	
System Specification	System	Android 11.0 embedded system	
	Processor	Cortex A55*4, 1.5GHz	
	Storage	RAM 4G, ROM 32G	
	OPS for Windows	Intel i3/i5/i7, RAM 4G/8G/16G/32G, Storage 128G/256G/512G/1T, Pre-install Windows 10/11 Pro as option	





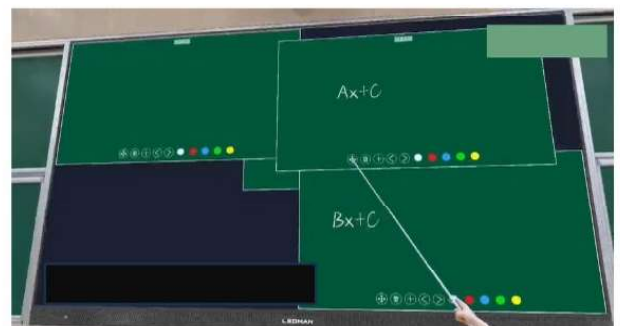
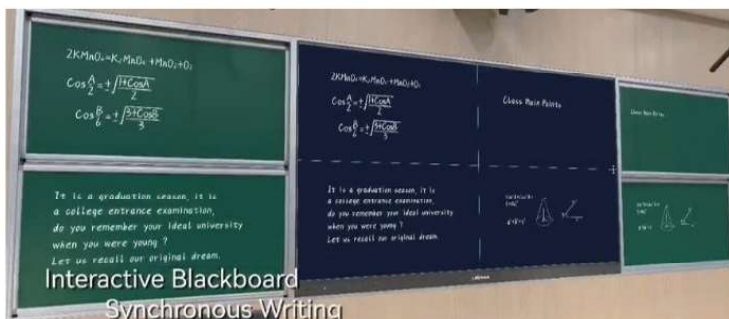
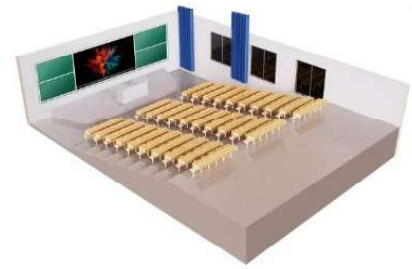
# Amazing Touch Interactive

## Large Led Displays + with Chalk Writing Technology

All front displays, ranging in size from 138" to 165", come with four chalkboards, blackboards/whiteboards for easy writing. Simultaneously, the greenboard notes are displayed on the central touch monitor and emailed to all participants.

### Key Capabilities of LED Display with Chalk writing Technology

- ▶ Experience next-gen teaching with **Interactive 4 Split-Screen Chalk Writing Technology** on LED displays.
- ▶ Empower trainers with massive, dynamic canvases for **clearer, larger content delivery**.
- ▶ **Split Screen Technology** transforms Active LED displays into multi-board interactive workspaces.
- ▶ **Perfect for classrooms and training rooms** where seamless writing, presenting, and explaining matter most.
- ▶ Write on lower whiteboards, swipe them up, and instantly access fresh blank screens.





# SMD Active LED Display

( 108/135/163/190/217/245/272/300/382/464" )

Ideal for 24/7 continuous operation environments, Ösel Primea is a breakthrough product boasting the best narrow pixel pitch LED display technology available in the industry today. With superior signal processing and a high refresh rate ensuring a smooth, seamless visual experience in a demanding control room, you can stay confident of never missing a single detail on the screen.

## Key Capabilities of Surface-Mount Device LED

- ▶ Pixel-Perfect Visuals for stunning clarity and immersive viewing across all environments
- ▶ Fully Integrated Design ensuring a sleek, modern look with simplified installation.
- ▶ Bezel-Free Continuity that delivers a seamless, uninterrupted display canvas.
- ▶ Noise-Free Performance powered by efficient heat management for silent operation.
- ▶ Automatic Calibration for consistent brightness, colour accuracy, and a prolonged lifespan.

### Technical Parameters for SMD ActiveLED

Item	P0.9	P1.1	P1.2	P1.5	P1.8	P2.5
Pixel Configuration	SMD					
Pitch(mm)	0.945	1.18	1.26	1.575	1.89	2.5
Module Resolution(WxH)	320x180	256x144	240x135	192x108	160x90	120x68
Module Size(mm)	302.4x170.1					
Module Weight(Kg)	0.65					
Module Composition(WxH)	2x2					
Cabinet Resolution	640x360	512x288	480x270	384x216	320x180	240x136
Cabinet Dimension (WxHxD, mm)	604.8x340.2x72.5					
Unit Area(m <sup>2</sup> )	0.2058					
Cabinet Weight(Kg/m <sup>2</sup> )	36					
Pixel Density(pixel/m <sup>2</sup> )	1119789	718184	629882	403124	279947	158637
Surface Flatness (mm)	≤0.5					
Brightness Calibration	Yes					
Color Calibration	Yes					
Brightness(nits) (after calibration)	600-800					
Color Temperature(K)	3000-10000 Adjustable					
Horizontal Viewing Angle(°)	160					
Vertical Viewing Angle(°)	140					
Deviation of LED Luminance Center (after calibration)	< 3%					
Brightness Uniformity	≥97%					
Chromaticity Uniformity (after correction)	±0.003Cx,Cy within					
Contrast Ratio	7000:1					
Max Power Consumption(W/m <sup>2</sup> )	650	650	620	600	600	600
Average Power Consumption(W/m <sup>2</sup> )	217	217	208	200	200	200
Power Supply	AC100-240V(50-60Hz)					
Drive Mode	Constant Current Drive					
Frame Rate(Hz)	50/60					
Refresh Rate(Hz)	3000					
Lifetime(hrs)	100,000					
Operation Temperature (°C)	-10-40					
Storage Temperature(°C)	-20-60					
Operation Humidity(RH)	10-80% no condensation					
Storage Humidity(RH)	10-85% no condensation					





# Chip On Board Active LED

(108/136/163")

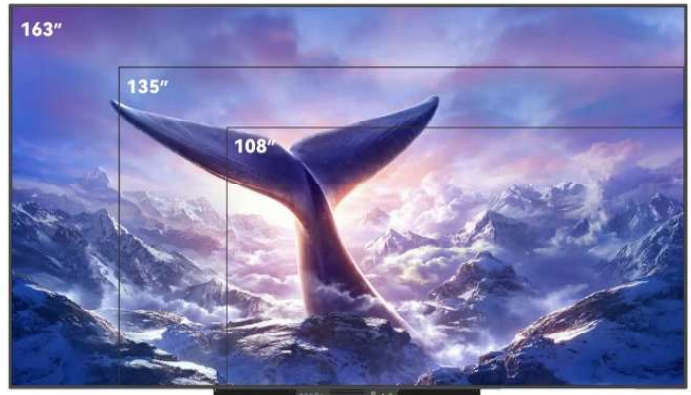
Experience the best micro LED displays like never before. Advanced Chip on Board technology, common cathode technology, and intelligent image processing to dramatically reduce blooming and deliver the most stunning and seamless visuals imaginable.

## Key Capabilities of Active Micro LED (108 / 136 / 163)

- ▶ Enhanced Durability with superior resistance to impact, dust, and moisture for long-lasting performance.
- ▶ Higher Reliability featuring a significantly lower failure rate compared to traditional SMD technology.
- ▶ Ideal for Touch Interaction with a rugged surface perfectly suited for interactive and high-engagement applications.
- ▶ Stable Visual Performance delivering consistent clarity and robustness even in demanding environments.
- ▶ Effortless Maintenance thanks to a design that is easy to clean and service.

### Technical Parameters for Active MicroLED

Pixel Pitch (mm)	1.2	1.5	1.8
Cabinet Size (W x H x D) mm	600 x 337.5 x 39		
Cabinet Weight (kg)	5.2		
Cabinet Resolution (L x W) pixels	480 x 270	384 x 216	320 x 180
Aspect Ratio	16: 9		
Brightness (nits = cd/m <sup>2</sup> )	≤800		
Refresh Rate (Hz)	≤3,840		
Color Temperature (K)	2,500 ~ 10,000		
Features	Common Cathode		
Power Consumption Max (W/m <sup>2</sup> )	≤360	≤350	≤340
Power Consumption Typical (W/m <sup>2</sup> )	≤125	≤117	≤110
Working Voltage	AC: 100 V~240V, 50~60 Hz		
Lifetime (Hours)	1,00,000		
Operating Temp (°C)	-20 ~ +60		
Humidity Range (%)	10 ~ 90		



Large Boardroom



Large Meeting Room



# AltraLECTERN

25/50/75/100

Special lecterns by Business Octane are designed to provide the trainer an easy access to all the AV equipment that he/she requires during training, such as Control system, annotating tablet, PC/Tablet, document visualizer and 18 U rack space which can accommodate all the equipment.

## Key Capabilities of AltraLECTERN 25/50/75/100

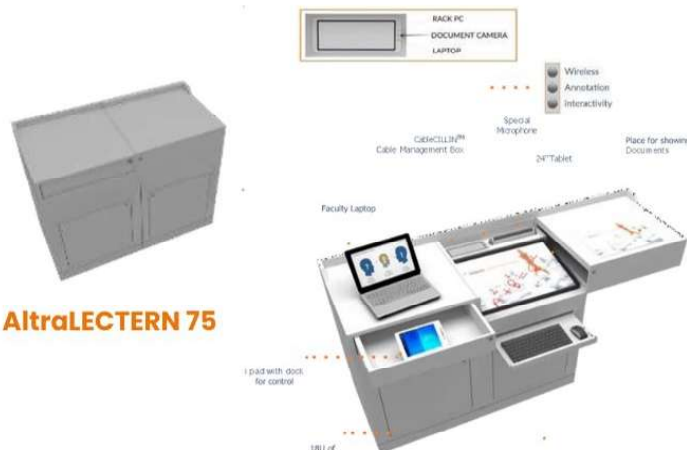
- ▶ Trainer can stand comfortably behind lectern without his back towards students and can write comfortably on touch tablet and share his/her content. Content will appear on Interactive Touch Board, visible to all students.
- ▶ Trainer has the capability to share the content wirelessly. Further we can annotate on the shared content using Touch Interactive Display.
- ▶ Trainer can also annotate on the presentation which is shared locally or from far site.
- ▶ Also, trainer has the capability of sharing hard wired content from laptop.
- ▶ Trainer can also annotate on the presentation which is shared locally or from far site. All the whiteboard notes & presentations can be saved and emailed from one place.



**AltraLECTERN 25**



**AltraLECTERN 50**



**AltraLECTERN 75**



**AltraLECTERN 100**



# AltraSmart 1000

## Podium

The **AltraSMART 1000 – PODIUM**, designed for modern classrooms and boardrooms, integrates seamless controls, intuitive connectivity, and a sleek interface that elevates every session. Empower speakers, enhance engagement, and transform presentations with a podium built for today's digital, collaborative environments.



### Features:

- Built-in **27-inch** capacitive touch screen, just one click and one slide to turn the page easily.
- A high-efficiency microphone transmits sound losslessly.
- High-definition screen, real point-to-point **2160P ultra HD** physical resolution.
- Wireless screen projection with the screen projector, the podium can be wirelessly projected to the large conference screen.
- **1.1m-1.3m** adjustable height ergonomically designed.
- Standard high-looking writing pen, quick response without delay.



# Data Video Broadcast Quality

Presenter Tracking Cameras (12X | 20X | 30X Optical Zoom)



Business Octane introduces broadcast-quality presenter auto-tracking PTZ cameras with **12X, 20X, and 30X optical zoom**, designed for seamless control. This cutting-edge 4K camera series supports dual streaming outputs for versatile A/V market applications, allowing effortless streaming to platforms like Facebook (RTMP), YouTube, and dvCloud.

## Quick Access to Framing Options

 full-body	 half-body	 close up framing
		



**S-Shaped Speed Curve**  
Just like how the lift accelerates or decelerates, the camera lens movement will be smooth, avoiding jerky movements that are visible to naked eyes



## One Ethernet Cable with NDI® | HX Technology

There is no need for multiple cables and a complicated setup. Single-wire concept helps you to transfer video, audio, power, tally, and control over only one Ethernet cable. Power Over Ethernet (PoE) functionality allows you to transmit all the information and power over only one cable. NDI® is a registered trademark of Newtek, Inc.

**NDI HX3**

## Low Noise in Low Light CMOS Effectively Ensures High SNR of Video Quality

Advanced 3D noise reduction technology is also used to further reduce the noise while ensuring image sharpness.



## Broadcast Quality 1/2.8-inch CMOS Sensor

Resolution is up to 1920x1080 with a frame rate up to 60fps.



## Simultaneous Outputs

Connect your PTC-145 to multiple devices in your workflow for flexibility. All the outputs are active at the same time.



## Tally Light

Green and red tally lights to show the preview and program status for broadcast applications.



## Wide 60° Field of View

PTC-145 provides a wide field of view of 60°, easily shooting all the scenes in the field.



# Professional Audio Conferencing Solutions for Training Rooms



# iCast Mini

From small scale corporate training sessions to mid-sized hybrid classrooms or conference halls, the iCAST mini is the perfect fit for your online presentation needs. With the one-button-one-function feature on a unique and easy to use touch panel control, even novice users will be able to operate this device.



Switch rapidly between your presentation and the camera input or overlay a PIP window on the program video. You can also swap between the program out video and the PIP image, thereby enhancing the quality of your presentation.



Using a real image as your key icon allows you to easily identify the camera view that is saved in the key. You can capture camera images and save them as thumbnails which are in turn applied to icons of shortcut keys on the Home screen, simply pressing the thumbnail will send the PTZ camera to the pre-saved position.





**Camera Control**



**PIP Settings**



**Audio Settings**



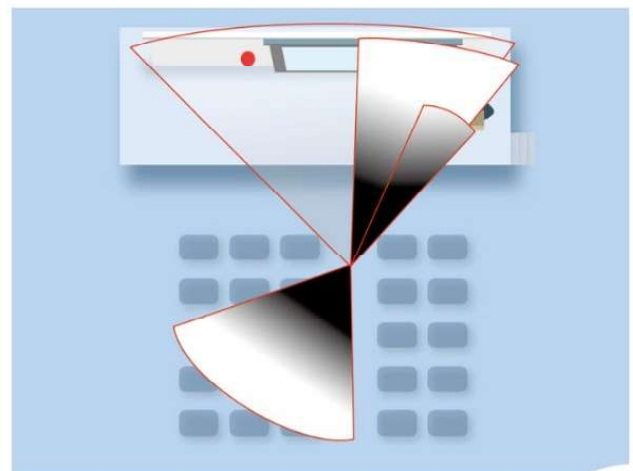
**System Settings**

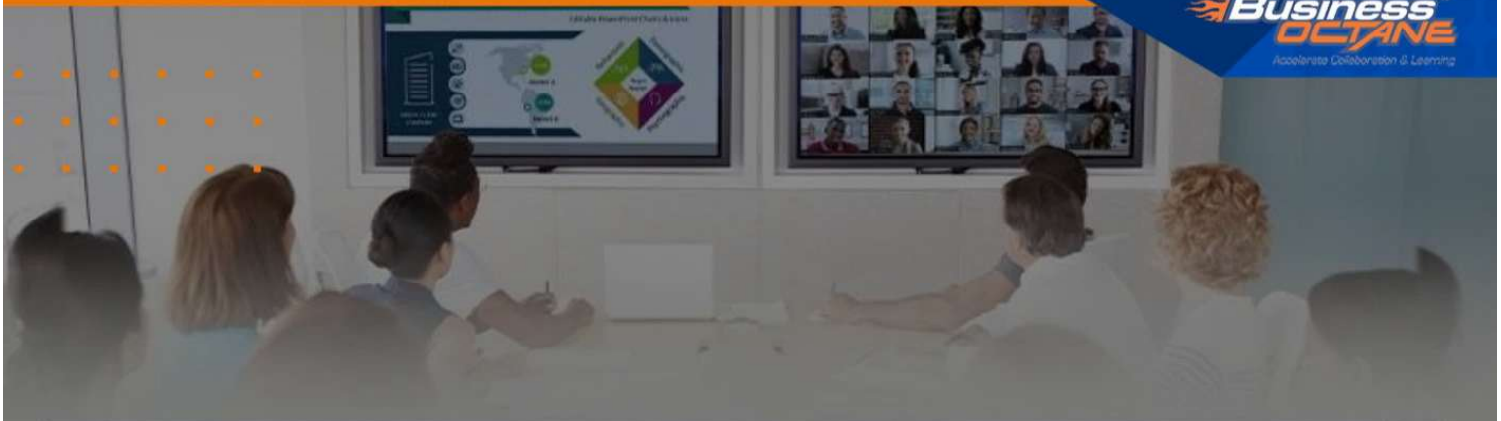


**Graphic icon for keys to simplify workflow**

In addition to image keys, you can use the device's built-in graphical icons for better identification. We have pre-loaded hundreds of these icons on the device for intuitive operation.

Graphical icons can co-exist with the image icons. They not only simplify your workflow but make operation faster and easier.





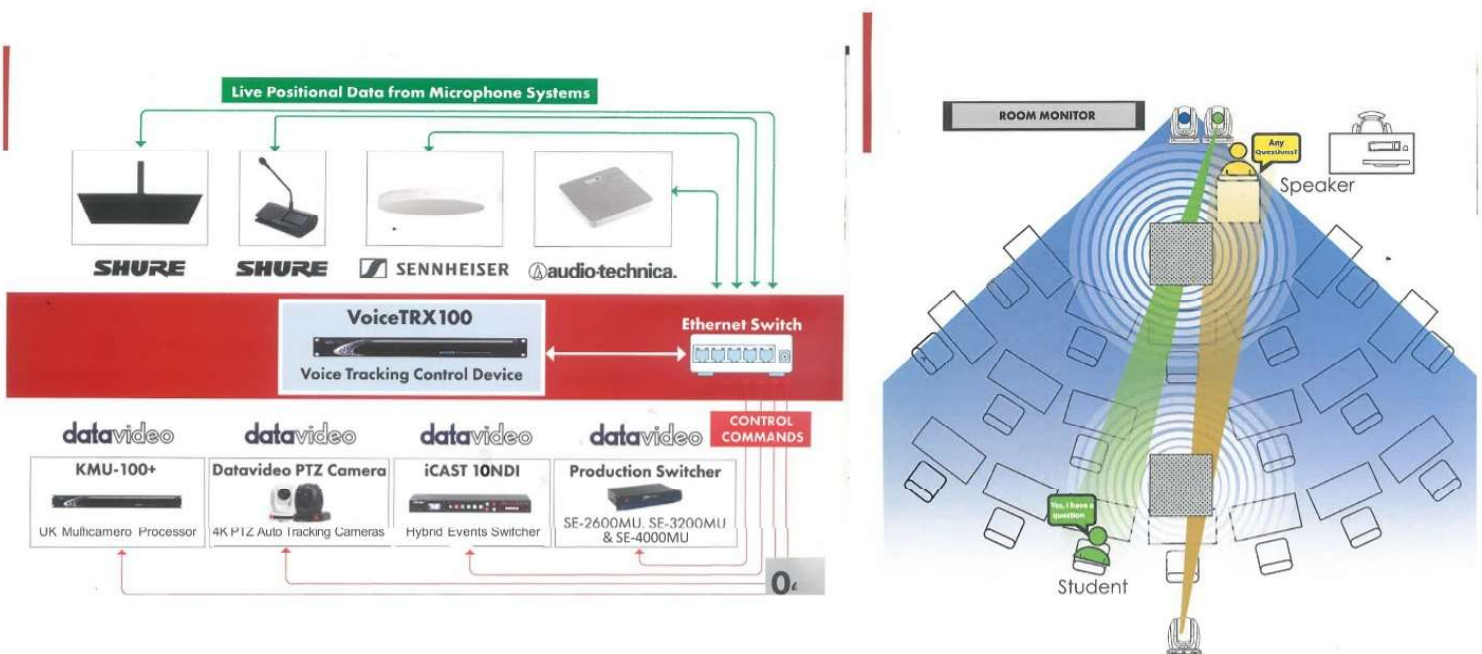
# DATA VIDEO Voice TRX100

## Automated Voice Tracking Solution

The VoiceTRX100 is a voice-activated camera switching and camera movement solution that provides an automated production for conferences, meetings, town halls, and classrooms.

### Key Capabilities of DATA VIDEO Voice TRX100

- ▶ Voice-activated camera switching and movement for fully automated video production.
- ▶ Automatically tracks and frames the active speaker based on their location in the room.
- ▶ Ideal for conferences, meetings, town halls, and classroom environments.
- ▶ Delivers a professional, hands-free production experience without manual camera control.
- ▶ Compatible with ceiling and conferencing microphones from Shure, Sennheiser, and Audio-Technica.





# iCAST 10NDI

The iCAST10NDI 5-channel network IP switcher is an innovative product designed by Data video. It integrates switching, recording, and livestreaming functions, featuring versatile input terminals, making it ideal for system integration with diverse equipment compatibility and convenience.



- 3.5 mm Headphone Jack:** For monitoring the audio of video sources.
- Mini on 2" LED Screen:** In addition to displaying Live system status, you can also monitor various other factors such as streaming, recording, and more.
- Main Selection Knob:** Provides easy access to various Live and video sources. You can also switch between different system statuses.
- HDMI/SDI Switch Buttons:** Press the buttons to switch between HDMI and SDI video sources.
- Program OUT:** Selects the output for which the video buttons are used for switching video sources. You can also switch between HDMI and SDI video sources.
- 4 Channel Multi-view Layout (MVL) Selection Buttons:** Switch between vertical and landscape orientations of the 4-channel quad preview layout.
- Record/Stream Buttons:** Quick access for activating and deactivating the record and stream functions.
- Hard Disk Drive Slot:** Built-in 2.5" SATA 3 video recording. Use to record videos directly on the HDD recorded simultaneously.

### 6 Functions

1. Seamless Switching



2. Multichannel Audio Mixing



3. Video Streaming



4. Multi-Camera Video Recording



5. Character Generator



6. System Control



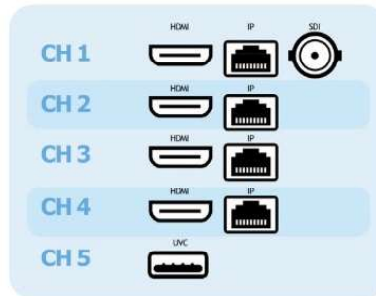
### iCAST 10NDI Rear Panel



- Audio IN:** RCA and 3.5mm jack input for connecting external analog audio inputs.
- UVC Port:** Connects off-the-shelf webcams or document cameras to input sources.
- HDMI/SDI Video:** Supports Connect cameras, webcams or other external video sources. Channel 1 is an HDMI/SDI selector input.
- SDI Loop OUT:** Loop out the SDI video source to an external device.
- Multi-view OUT:** Outputs video sources in a 4x1 vertical or 2x2 landscape quad view for easy monitoring of all video materials.
- Program OUT:** HDMI/PCB OUT can be used for connecting cameras, large screens, external encoders, or projectors.
- RS-232 Port:** A serial port for connecting external devices or functioning as a serial port for system integration.
- WAN/LAN:** WAN or LAN port can be used for IP video streaming or DMP control.

## Multiple Video Input Interfaces

The iCAST 10NDI features five video input interfaces, including four HDMI inputs, with the first interface also supporting SDI input, and one USB 3.0 input. The iCAST 10NDI can support various professional cameras, laptops, and document cameras for audio and video signal input. It can even decode IP audio and video signals through the RJ-45 interface and supports RTMP and SRT protocols. Users can flexibly utilize multiple audio and video transmission interfaces, eliminating compatibility concerns with different AV equipment interfaces.



SRT READY NDI|HX



HDMI/ IP/ SDI



IP



UVC

### Landscape Mode: Stream to standard monitors



The iCAST 10NDI provides an intuitive preview of output videos. You can view them either horizontally or vertically (a new technology for viewing videos on mobile devices) and preview these mode changes on a multiview screen.

Select the fourth or fifth channel at the user's discretion.

### Portrait Mode: Stream to mobile phones



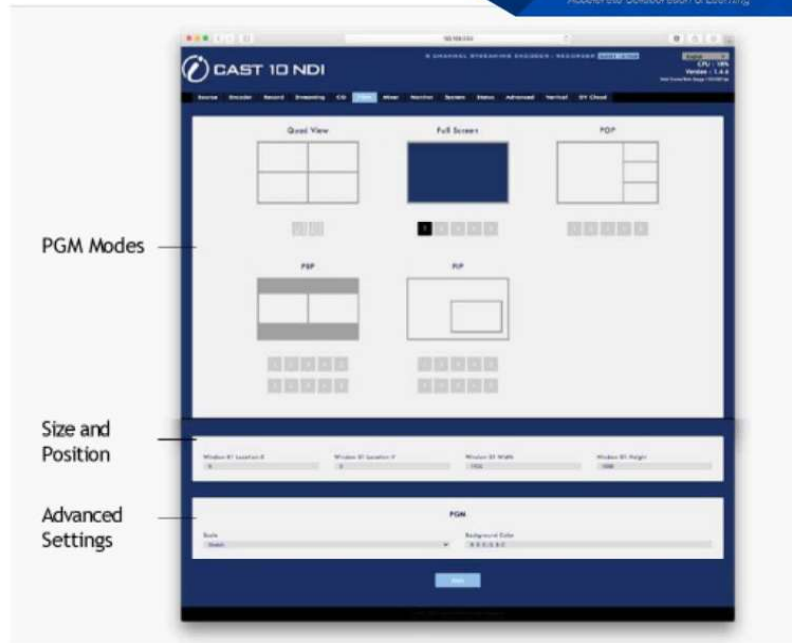
When using the vertical screen mode, ensure that the cameras are shooting vertically, rotate the cameras if necessary. If the camera is shooting horizontally, crop about one-third of the left and right edges of the screen and keep the desired image in the center.

Select the fourth or fifth channel at the user's discretion.

# Multiple PGM Modes

In addition to displaying a full-screen view of the program output video, you can also stream the four input videos live to your audience. The iCAST10NDI offers five multi view layouts, allowing you to display all your input videos simultaneously. The videos can be streamed to audiences worldwide, enabling them to participate in your events with zero delay using a receiver/decoder, personal mobile devices, computers, and more.

To satisfy live audience needs, the iCAST10NDI provides physical HDMI outputs, allowing you to connect to TVs, LCD/LED TV walls, and other displays.



### Side by Side

With two camera images placed side by side, this layout is often used during Q&A sessions at conferences or House and Senate committee meetings.



### Full Screen

This is the most traditional way to deliver the complete image to your audience. It is primarily used in teaching and speech scenarios.



### Quad View

The quad view is typically used for remote meetings, where all participants can show themselves and interact with one another.



### PIP

PIP stands for "picture in picture," allowing the lecturer to display slides, data, examples, etc., in a sub-window. PIP is useful when both data and the lecturer need to be displayed on the screen simultaneously.



### POP

This is a multi view layout with one main window and three sub windows, which is useful in scenarios involving significant interaction, such as corporate meetings, remote lectures, and more.



## Stream Out

You no longer need multiple devices to stream your video to multiple platforms—this is now achievable with just one iCAST 10NDI.



## Vertical Streaming Suitable for Social Media Playback

Upto 50% of videos are viewed on mobile devices, and 94% of mobile users hold their phones vertically to view videos. The iCAST 10NDI provides vertical streaming, which can be setup with just a few basic adjustments.

### Vertical Streaming

Automatically captures the image in the center for vertical streaming.





# Data Video SE-2600

## Switcher series

The 2600 series switcher is an exceptional live production device with 8 inputs, fully supporting 1080p/60 (3G) high-definition video formats, delivering an extraordinary visual experience. Whether it's a large event or a small performance, this switcher enables you to easily create refined and professional live event videos.



### Total Solution

The 2600 series, designed for various applications from OB vans to standalone switchers, allows broadcasters to rapidly initiate live productions on-site with its quick setup and user-friendly interface.



### Advanced Features

Choose from a variety of pre-saved animated stinger transitions and 50 virtual set backgrounds to create advanced effects. You can also import your own stinger transitions and animated logos.



### Built-in Stinger Transitions and Backgrounds

Choose from a variety of pre-saved animated stinger transitions and 50 virtual set backgrounds to create advanced effects. You can also import your own stinger transitions and animated logos.



### Up to 4 Picture-in-Picture

Create a professional esports live video production with up to 4 picture-in-picture frames, each featuring unique 3D borders.



### XPT (Crosspoint Assignment)

Crosspoint assignment (XPT) allows you to reroute each physical input and output to any of the available buttons. No more ducking under the table for quick rerouting!



### Completely Customizable 8-Input Full HD Production Switcher

The 2600 series, designed for various applications from OB vans to standalone switchers, allows broadcasters to rapidly initiate live productions on-site with its quick setup and user-friendly interface.



### 4 Chromakeyers

Up to 4 channels of switchable chromakey with our unique "Key Tie" functionality. Create a complete 4-channel virtual studio and enjoy our super easy-to-use automatic chromakey functions.



### CG Title Creator Interface

Utilize a single HDMI input port to interface with Datavideo's unique CG suites, without consuming 2 SDI inputs or requiring an additional converter box.



### SDI Audio De-embedding

Supports up to 2 stereo XLR audio inputs, in addition to embedded audio on each input. Provides 2 de-embedded output channels to the mixing table, along with delay functionality to create perfect lip-sync.

e-sports events



Sports competition



Live concert





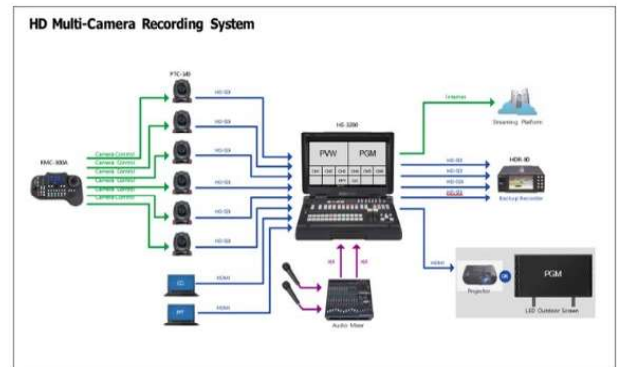
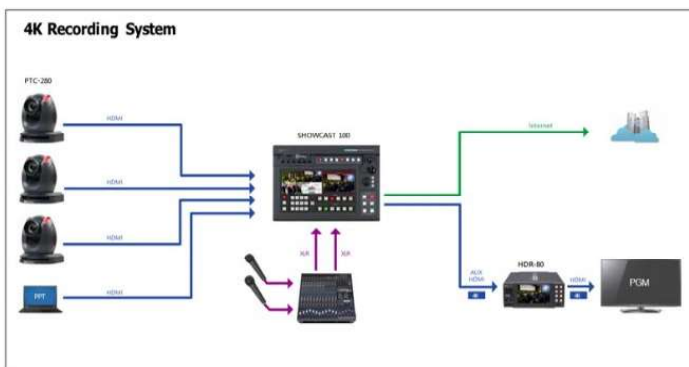
# DATA VIDEO

## HDR-80/90

HDR-80 and HDR-90 are two ProRes4K recorders that record onto two SSD drives. HDR-80 is a desk top model meant to be used on a table top and the HDR-90 is a rack mounted version for OB Vans or other integrated systems.

### Key Capabilities of DATA VIDEO HDR-80/90

- ▶ 5" touch screen LCD with intuitive UI for easy operation. Built-in comprehensive suite of scopes, calibration and focus tools for video monitoring and playback.
- ▶ Support 12G-SDI and HDMI 2.0 connections for all **HD and UDH video** formats up to 2160p60 and Record up to 4 HDMI sources (in 1080p) at the same time as separate ISOs with quad-split preview
- ▶ Monitor audio via 3.5mm headphone jack or built-in speakers.
- ▶ Support ProRes 422 Proxy, ProRes 422 LT, ProRes 422, ProRes 422 HQ, 10 bit 4:2:2 recording.
- ▶ Dual 2.5 SSD for unlimited recording duration; as one drive fills up recording continues on the next drive automatically.
- ▶ Support up to 8 channels of digital audio on SDI and HDMI and balanced analog audio input and output with an on-screen eight-track audio indicator
- ▶ Internal or external LTC time code for tracking recorded videos, perfect for multi-camera setup
- ▶ Compatible with various external controls via DVIP, GPI or RS-232 interfaces.



# ATND1061DAN

## Beamforming Ceiling Array Microphone



### Features

#### / Powerful onboard DSP

Powerful onboard DSP automix, acoustic echo cancelation, noise reduction, automatic gain control, and 4-band EQ.

#### / Digital Microphone Manager

User-friendly Digital Microphone Manager software easily configures single or multiple ATND1061 microphone settings.

### Customisable

Six individual output channels with up to 32 user-defined microphone pickup zones provide the flexibility to cover a wide variety of room sizes and meeting types.

Output Channel 1 can be configured with up to 16 user-defined Coverage Zones to ensure coverage of nonpriority or unplanned participants.

Output Channels 2–6 can be configured with up to 16 user-defined Priority Zones to ensure priority pickup of participants in known locations.

Exclusion zones can be set in the software to avoid known sources of unwanted noise (such as air-handling systems).

### VAD technology

Proprietary voice activity detection (VAD) technology enables the microphone to discern between a voice and unwanted noises such as paper shuffling.

### Network and Dante™

Two network ports with Single Cable and Split modes to send Dante audio and microphone control data together or separately over category cable.

- Powered by network PoE.
- Mounting and accessories
- Mounts flush or on the surface of a drop ceiling or hard ceiling, or in open architecture spaces using VESA mount.
- Includes tile bridge, safety wiring, and mounting hardware and accessories.

### Mounting and accessories

Mounts flush or on the surface of a drop ceiling or hard ceiling, or in open architecture spaces using VESA mount.

- Includes tile bridge, safety wiring, and mounting hardware and accessories.



### Specification

#### General

<b>Power Requirement</b>	PoE (IEEE 802.3af Class 0)
<b>Power Consumption</b>	Max. 7 W
<b>Operation Temperature Range</b>	0 C to 40 C (32 F to 104 F)
<b>Operation Humidity Range</b>	25% to 85% (Non condensing)
<b>Dimensions (W x D x H)</b>	227.5 mm (9.0") x 227.5 mm (9.0") x 30 mm (1.2")
<b>Weight</b>	1250 g (44 oz)

#### Microphone

<b>Beam Width</b>	90°
<b>Polar Pattern</b>	Beam pattern
<b>Frequency Response</b>	60 Hz to 18,000 Hz
<b>Sensitivity</b>	-8 dBFS (1 kHz, 94 dB SPL)
<b>Dynamic Range</b>	89 dB (A-weighted)
<b>Signal to Noise Ratio</b>	61.5 dB (A-weighted)
<b>Self-Noise</b>	25 dB SPL (A-weighted)
<b>Maximum Input Sound Level</b>	102 dB SPL

#### Analog audio

<b>Frequency Response</b>	20 Hz to 20 kHz (+1.0/-2.0 dB)
<b>Dynamic Range</b>	100 dB (A-weighted)
<b>Signal to Noise Ratio</b>	80 dB (A-weighted)
<b>Headroom</b>	20 dB
<b>Residual Noise</b>	-75.8 dBu (A-weighted)
<b>T.H.D</b>	<0.1% (1 kHz, unity)

#### Analog Input

MIC Maximum: -30 dBu  
MIC Unity: -50 dBu  
LINE Maximum: +12.2 dBu  
LINE Unity: -10 dBV, Switchable Analog Output

#### Analog Output

OUTPUT Maximum: +19.2 dBu  
OUTPUT Unity: +4 dBu/-10 dBV/-33 dBV, Switchable

#### Other

<b>Network</b>	Dante: 1 Gbps IP control: 100 Mbps
<b>Digital Audio</b>	Sampling rate: 48 kHz Bit depth: 24 bit
<b>Latency</b>	Microphone (CH1 to CH6): 47 msec Microphone (Auto Mix CH): 79 msec Dante: Min. 250 usec, Max. 5 msec
<b>I/O Connector</b>	Network/Dante: RJ-45 Analog input: Euroblock 3 pin Analog output: Euroblock 3 pin GPI: Euroblock 3 pin
<b>Phantom Power</b>	Analog input: 12 V

#### Included Accessories

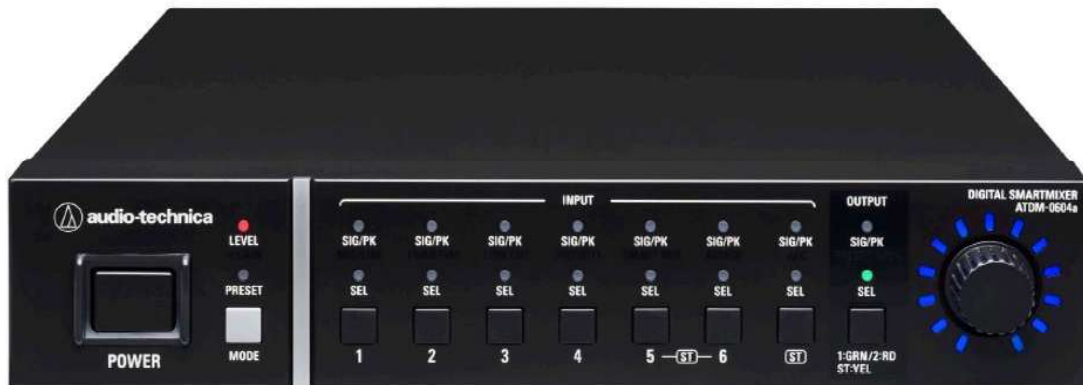
- IR remote controller
- Surface mount adapter
- Screw (M4 x 50 mm) x 4
- Flush mount adapter
- Flush mount cover
- Screw (M4 x 10 mm) x 12
- Hole cover
- Nut x 4
- Snap bushing x 2
- Tile bridge A x 2
- Tile bridge B x 2
- Tile bridge C x 4
- Seismic cable
- Zip tie
- Safety belt
- Euroblock connector x 3
- Installation template

For product improvement, the product is subject to modification without notice.



# ATDM-0604a

## Digital SmartMixer®



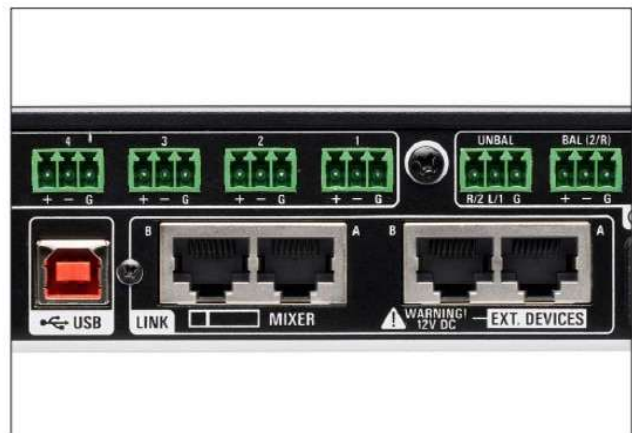
### Overview

Introducing Audio-Technica's new ATDM-0604a Digital SmartMixer® with advanced functionality for use in a wide variety of applications, from meeting spaces to educational facilities. Incorporating user feedback, the enhanced functions of this model bring improved performance for online or live meetings. The main performance improvements and enhancements over the previous model are as follows:

- Improved echo and noise-cancellation performance
- Remote LED control of ES954 hanging microphone array via the GPO terminal
- Ability to cascade up to eight mixers, allowing them to share audio buses and SmartMix controls
- Expanded compatibility with a wide variety of Audio-Technica LINK-enabled products
- Mic/line level support for input channels 1 to 6

### Features

- 6 mic/line inputs and 1 unbalanced stereo input
- 2 balanced outputs and 1 unbalanced stereo output
- USB audio input/output (1 stereo input, 1 stereo output)
- Remote LED control of ES954 hanging microphone arrays using the GPO terminal
- SmartMixer® with selectable gain sharing or gate mode
- High-performance echo canceler for each input channel
- Noise cancellation that can be assigned to any output channel
- Built-in 4-band EQ and compressor/de-esser for each input channel
- Eight 8-band feedback suppressors that can be assigned to mic/line inputs and any output channel
- Built-in 12-band PEQ, compressor, and limiter for each output channel
- Dedicated Audio-Technica LINK terminals, compatible with a wide variety of Audio-Technica LINK-enabled products
- Audio input/output settings can be configured from the front panel in applications where a computer is not available
- Advanced settings can be configured using the web browser or SmartMixer Manager app GUI in applications with a computer
- IP Protocol-based external remote control





# ATDM-0604a

## Digital SmartMixer®

### Audio

<b>Frequency characteristics</b>	20 Hz to 20 kHz (MIC -16 dBu): +1.0 / -1.0 dB 20 Hz to 20 kHz (MIC -60 dBu): +1.0 / -2.0 dB 20 Hz to 20 kHz (LINE 24 dBu): +1.0 / -1.0 dB 20 Hz to 20 kHz (LINE -40 dBu): +1.0 / -2.0 dB
<b>Dynamic range</b>	110 dB or higher, A-weighted/ST
<b>S/N ratio</b>	90 dB or higher, A-weighted/ST
<b>Headroom</b>	20 dB or higher
<b>Input referred noise</b>	-126 dBu or less, Rs = 150 ohm, DIN
<b>Common-mode rejection ratio</b>	80 dB or higher, 1 kHz
<b>Residual noise</b>	-86 dBu or less, A-weighted
<b>Maximum gain</b>	64 dB
<b>Channel separation</b>	-80 dB or less, 1 kHz unity
<b>Total harmonic distortion</b>	0.03% or less, 1 kHz unity
<b>Analog input</b>	MIC 1 to 6 max.: 0 dBu MIC 1 to 6 unity: -40 dBu LINE 1 to 4 max.: +10 dBV LINE 1 to 4 unity: -10 dBV LINE 5 to 6 max.: +24 dBu LINE 5 to 6 unity: +4 dBu / 0 dBV / -10 dBV / -20 dBV ST max.: +10 dBV ST unity: -10 dBV / -20 dBV
<b>Analog output</b>	UNBAL max.: +10 dBV / -13 dBV UNBAL unity: -10 dBV / -33 dBV BAL 1/L, 2/R max.: +24 dBu / +20 dBV / +10 dBV BAL 1/L, 2/R unity: +4 dBu / 0 dBV / -10 dBV

### Other

<b>Phantom power</b>	+48V DC
<b>PAD (Attenuation level)</b>	-24 dB
<b>I/O connector</b>	INPUT ST: Euroblock connectors (3-pin) INPUT MIC/LINE 1 to 6: Euroblock connectors (3-pin) OUTPUT UNBAL: Euroblock connectors (3-pin) OUTPUT BAL 1/L, 2/R: Euroblock connectors (3-pin) GPO: Euroblock connectors (3-pin)
<b>Level indicator</b>	SIGNAL/PEAK: 1 point (Red/Yellow/Green) Peak indicate (red): -5 to 0 dB Peak hold time: 2 sec.
<b>Remote control</b>	IP protocol: RJ-45 x 1 pc IP address: 192.168.33.10 (factory default) Communication speed: 100 Mbps
<b>Network</b>	IP protocol: RJ-45 x 1 pc
<b>Link I/O</b>	Audio-Technica LINK: RJ-45 x 4 pcs Communication speed: 100 Mbps
<b>USB Type B</b>	Channel: Stereo input x 1 ch, stereo output x 1 ch (24-bit) Communication speed: High-speed (480 Mbps)
<b>A/D converter</b>	Resolution: 24-bit Dynamic range: 115 dB
<b>D/A converter</b>	Resolution: 24-bit Dynamic range: 115 dB
<b>Accessories</b>	Euroblock connector x 11 Rack-mount (large, small) Rack-mount screw x 6 Power cable Rubber foot x 4



### Specifications

<b>Dynamic range / S/N ratio</b>	100 to 240 V AC (50/60 Hz)
<b>Power consumption</b>	17 W
<b>Operating temperature range</b>	0 to 40°C (32 to 104°F)
<b>Operating humidity range</b>	25 to 85% (with no condensation)
<b>Dimensions (including protrusions)</b>	219.3 mm (8.6") x 346.3 mm (14") x 44 mm (1.7") (W x D x H)
<b>Weight</b>	1.89 kg (4.2 lbs)
<b>Finish</b>	Front panel: Black with silver lines op/rear/sides: Black



# ATDM-1012

## Digital SmartMixer



### Features

- High-quality mic/line inputs with discrete amplifiers and remotely controllable mic preamps.
- Up to two ES954 Hanging Microphone Arrays (sold separately) can be integrated with the mixer.
- Full-matrix mixer with flexible input/output assignments.
- USB audio I/O (1 stereo input and 1 stereo output).
- Acoustic Echo Cancellation (AEC) and Noise Cancelling (NC) for use with up to 10 mic inputs.
- Audio-Technica LINK support for cascading up to 8 ATDM devices.
- Dante-compatible model (ATDM-1012DAN) available.
- 1U design is 19" rack compatible.

### Specifications

<b>Dynamic range / S/N ratio</b>	110 dB or higher (A-weighted/ST) / 90 dB or higher (A-weighted/ST)
<b>Maximum input level</b>	MIC: -20 dBu LINE: +24 dBu ST: +20 dBV
<b>Maximum output level</b>	Output 1-8 (Balanced): +24 dBu / +20dBV / +10 dBV Output ST (Unbalanced): +20 dBV / +10 dBV / -13 dBV
<b>Maximum gain</b>	64 dB
<b>Input/output terminal</b>	MIC/LINE input 1-10: Euroblock 3 pin ST input 1/2: Euroblock 3 pin Output 1-8, ST output 1/2: Euroblock 3 pin
<b>USB port</b>	USB Type-B (Device): Stereo input x 1 ch, Stereo output x 1 ch (24-bit)
<b>LINK/CHAIN</b>	A/B/C/D terminal: RJ-45 x 4
<b>Network port (ATDM-1012DAN only)</b>	Network port: RJ-45 x 1 (Dante Primary/Secondary, Network port: RJ-45 x 2)
<b>Power supply</b>	100 to 240 V AC (50/60 Hz)
<b>Operating temperature range</b>	0 to 40°C (32 to 104° F)
<b>Dimensions</b>	482.6 mm (19") x 324.3 mm (12.77") x 44 mm (1.73") (W x D x H)
<b>Weight</b>	3.6 kg (7.9 lbs)
<b>Accessories</b>	<ul style="list-style-type: none"> <li>• Power cable</li> <li>• Euroblock connector x 22</li> </ul>

*For product improvement, the product is subject to modification without notice.*





# TeamConnect

## MAS 1 TC | MAS 2 TC - Logic control buttons

### FEATURES

- Rugged mute and hook button
- Unobtrusive and timeless design
- Bi-color status indication
- Made in Germany



Elegant and low-key in its appearance, the sturdy MAS 1 TC and MAS 2 TC logic control buttons make logic control a breeze. Connected to the SL Mic Hub 1 the buttons can control the mute and hook logic functions. For clear status indication the MAS 1 TC comes with a bi-color status indicator.

### DELIVERY INCLUDES

- logic button
- Connection cable
  - MAS 1 TC: XLR-5F / Terminal connector 7-pin, length 3 m
  - MAS 2 TC: XLR-5F / Terminal connector 6-pin, length 3 m
- Mounting material
- Quick Guide
- Safety Guide

### ARCHITECT'S SPECIFICATION

The sturdy logic buttons shall be designed for use with the SL MIC HUB 1 in TeamConnect conferencing applications. A bi-color LED ring shall be provided for status indication. Both buttons shall be connected with a 5-pin XLR cable of approx. 3 m length, terminating in a 7-pin terminal connector (MAS 1 TC) or 6-pin terminal connector (MAS 2 TC). Both buttons shall have an M20 thread. The logic control buttons shall operate on 5V. The TTL levels for LED activation shall be 12V. Dimensions shall be 28.5 mm (1.12") in diameter and 81 mm (3.19") in total height. The installation height shall be 8 mm (0.31"). Weight shall be 60 grams (2.15 oz). Operating temperature shall range from -10 °C to +50 °C ( +14 °F to +122 °F).

The logic buttons shall be the Sennheiser MAS 1 TC and MAS 2 TC.

### SPECIFICATIONS

Supply voltage	5 V (12 mA max.)
Connector	XLR-5M
Pin assignment XLR-5M out	1 = Switch 2 = Switch 3 = LED red - 4 = LED green - 5 = LEDs +5 V in
LED light ring color	red / green
TTL levels for LED activation	12 V

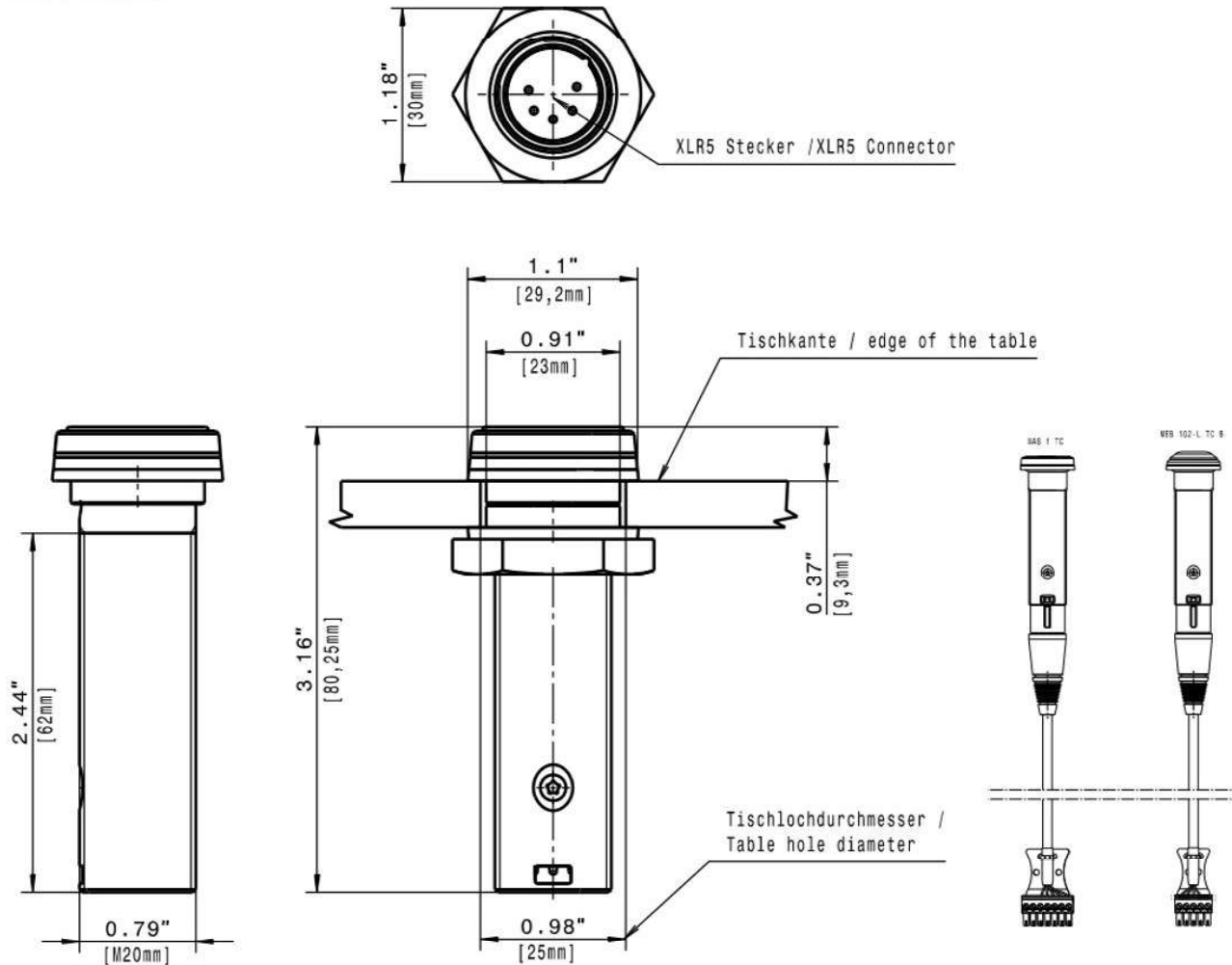
Current consumption LED ring	12 mA
Weight	60 g
Height	81 mm (8 mm above surface)
Diameter	28.5 mm
Thread	M 20
Operating temperature	-10 ° to +50 °C



# TeamConnect

## MAS 1 TC | MAS 2 TC - Logic control buttons

### DIMENSIONS



### PRODUCT VARIANTS

MAS 1 TC B black  
MAS 1 TC W white  
MAS 1 TC G Nextel grey  
MAS 2 TC B black  
MAS 2 TC W white  
MAS 2 TC G Nextel grey

Art. No. 506722  
Art. No. 506723  
Art. No. 506724  
Art. No. 506603  
Art. No. 506604  
Art. No. 506605

### ACCESSORIES

SL Mic Hub 1  
TeamConnect System EU  
TeamConnect System UK  
TeamConnect System US

Art. No. 506606  
Art. No. 506235  
Art. No. 506236  
Art. No. 506237

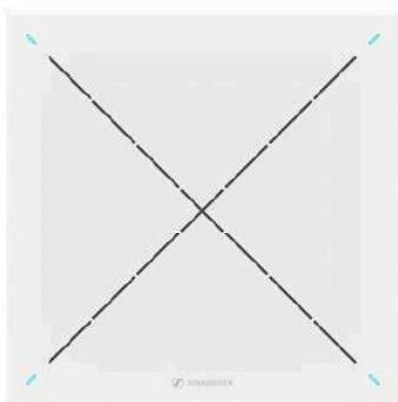


## TeamConnect Ceiling 2

### Ceiling array microphone

#### FEATURES

- Ceiling array microphone with patented automatic speaker position detection and dynamic beamforming for best speech intelligibility
- Analog and digital (Dante™) audio outputs for easy connectivity to video and audio conference systems
- Configuration and monitoring via Sennheiser's unique Control Cockpit software
- Open API for media and camera control applications
- Several installation options via suspension kit, flush-mount or surface bracket



TeamConnect Ceiling 2 offers superior audio quality for voice and video conferences. Thanks to Sennheiser's patented adaptive beamforming technology it automatically follows the active speaker's voice, letting people speak naturally – whether they are sitting, standing or walking around the room. TeamConnect Ceiling 2 offers great versatility and interoperability with support for Dante™ networks and Power over Ethernet. It is compatible with Sennheiser's Control Cockpit software for efficient remote management, and offers remote configuration and monitoring via an open media control protocol (API), allowing for easy integration into media systems and camera control applications.



#### SPECIFICATIONS

Dimensions (L x B x H)	590 x 590 x 43 mm (23.2" x 23.2" x 1.7")
Weight	6 kg (13.2 lbs)
Audio Output	1 x 3-pin terminals (fits Phoenix contact MCVW 1.5-3-ST-3.81) 2 x Digital Dante Network Audio (RJ45)
Ethernet / Control	1 x RJ45 Ethernet Port for PoE power supply and data / control communication
Supply voltage	44 – 57 V DC (via PoE)
Temperature	Operation: 0 – 40 °C (32 - 104 °F) Storage: -10 – 60 °C (14 - 140 °F)
Relative humidity	20 – 95 %, non condensing
Microphone type	pre-polarized condenser microphone
Sensitivity	-1 dBV/Pa (930 mV/Pa)
Number of KE 10-237 microphone capsules	28

Pick-up pattern	Beam pattern
Max. sound pressure level	119 dB SPL
Dynamic range	99 dB(A)

#### DELIVERY INCLUDES

- SL Ceiling Mic 2
- Mounting instructions
- Drilling template

#### ACCESSORIES

SL CM FB	Mounting bracket	Art.-No. 506846
SL CM EB US	Extension brackets	Art.-No. 508528
SL CM EB 625	Extension brackets	Art.-No. 508290
SL CM SK	Suspension kit	Art.-No. 508291

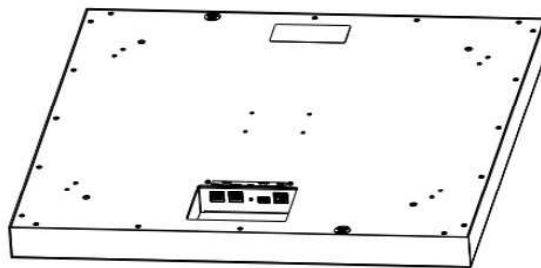
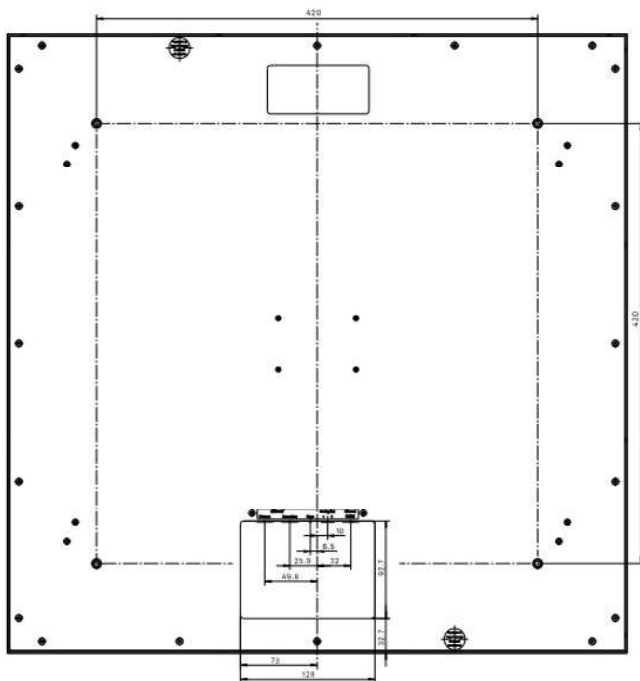
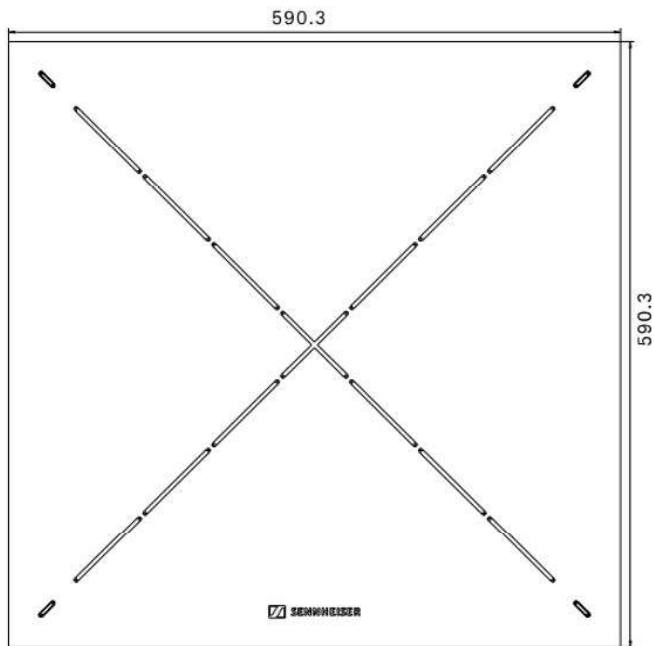


# TeamConnect Ceiling 2

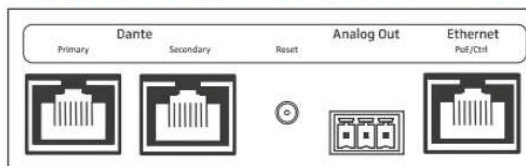
## Ceiling array microphone

### DIMENSIONS

#### SL Ceiling Mic 2



### CONNECTIONS AND OPERATING ELEMENTS

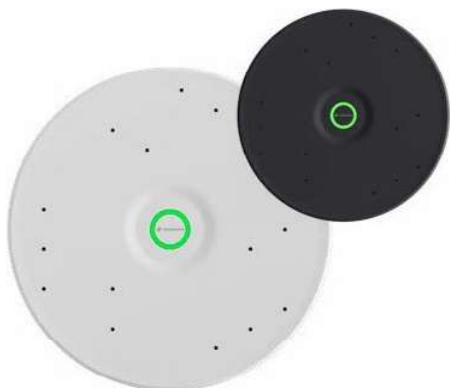


- Dante** Dante™ interface with two RJ 45 sockets **Primary** and **Secondary**
- Reset** Factory reset switch
- Analog Out** 3-pin terminal for analog audio out
- Ethernet** RJ 45 socket for network control



# TeamConnect Ceiling Medium

Ceiling microphone array (Firmware  $\geq$  1.2.7)



Sennheiser  
Control Cockpit

## FEATURES

- Patented automatic dynamic beamforming
- TruVoicelift
- 15 SMD Electret condenser capsules made in Germany
- Perfect speech intelligibility
- Dante or Analog Output
- PoE
- Exclusion Zones
- Priority Zone
- Camera Control via talker position data
- IEEE 802.1x
- TLS 1.2
- 5 years warranty (with registration)

## DELIVERY INCLUDES

TCC M-F-W (Art. no. 700170)

TCC M-F-B (Art. no. 700234)

Ceiling Mic Flush Mount Kit

- Microphone
- Front plate
- Flush Mount kit
- Chicago plenum connection box cover plate
- Phoenix connector
- Mounting rope
- Suspension kit

TCCM CT-W (Art. no. 700517)

TCCM CT-W 2FT (Art. no. 700518)

Ceiling Mic Flush Mount Kit (Ceiling Tile)

- Microphone
- Ceiling Tile mounting plate
- Phoenix connector
- Mounting rope
- Suspension kit

With a coverage of up to 50 m<sup>2</sup>, our ceiling microphone TeamConnect Ceiling Medium is the right choice for mid-sized meeting rooms and lecture or collaboration spaces.

With this solution, Sennheiser provides an additional design option to seamlessly include our audibly superior ceiling microphone into your meeting room.

With all the great features of our trusted TeamConnect Ceiling 2 but in a more compact form, the TeamConnect Ceiling Medium microphone is a real problem-solver that allows cable-free tables and flexible furniture arrangement, while offering all of the TeamConnect Ceiling Solutions benefits like Trusted Sennheiser Audio Quality, efficient setup, brand agnostic integration, simple management and control, a sleek design and a sustainable impact.

TCC M-S-W (Art. no. 700294)

TCC M-S-B (Art. no. 700295)

Ceiling Mic Housing Kit

- Microphone
- Front plate
- Design housing
- Chicago plenum connection box cover
- Phoenix connector
- Mounting rope
- Suspension kit

## CONTROL SOFTWARE

Sennheiser Control Cockpit

free download at:

[www.sennheiser.com/control-cockpit-software](http://www.sennheiser.com/control-cockpit-software)





# TeamConnect Ceiling Medium

## Ceiling microphone array (Firmware ≥ 1.2.7)

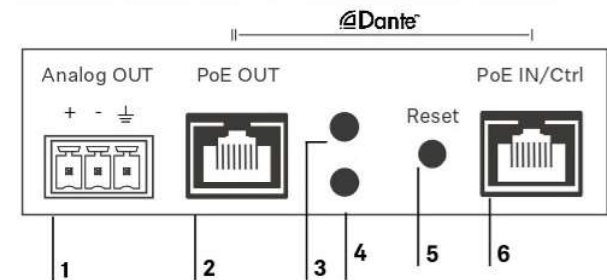
### SPECIFICATIONS

Product properties	
Dimensions (Ø x H)	407 x 46 mm Ceiling Tile: 590,8 mm x 590,8 mm x 45,8 mm Ceiling Tile US: 606,5 mm x 606,5 mm x 45,8 mm
Weight	max. 4,9 kg (10.8 lbs) Ceiling Tile: 4,5 kg (9.9 lbs) Ceiling Tile: US 4,6 kg (10.1 lbs)
Audio Output	1 x 3-pin terminal (fits Phoenix contact MCVW 1.5-3-ST-3.81) 1x Digital Dante™ Network Audio (RJ-45)
Ethernet / Control	1 x RJ-45 Ethernet Port for PoE power supply and data/control communication
Supply voltage	PoE IEEE 802.3af Class 3 or PoE IEEE 802.3at / Type 2 / Class 4 (when cascaded)
Power consumption	approx. 8 W
Safety certification	<b>Plenum tested</b> IEC/EN 62368-1 (including UL 2043 testing and compliance)
Acoustic properties	
Transducer principle	Pre-polarized condenser microphone
AF frequency response	100 Hz - 16.000 Hz
Sensitivity	0 dBV/Pa (1020 mV/Pa)
Signal-to-noise ratio	77 dB (A)
Equivalent noise level	17 dB (A)
Number of microphone capsules	15
Pick-up pattern	Beam Pattern
Max. sound pressure level	98 dB SPL
Dynamic range	81 dB (A)
Ambient conditions	
Temperature	Operation: 0 - 40°C (32 - 104 °F) Storage: -10 - 60°C (14 - 140 °F)
Relative air humidity	20 - 95 %, non-condensing

### ACCESSORIES

Article	Description	Art. no.
TCC M SK	Ceiling Mic M Suspension Kit 3x Ceiling installation threads 3x 16.4 ft/ 5m length steel cables 3x Ceiling housing threads	700237
TCC M SFP-W	Ceiling Mic Spare Front Plate white	700235
TCC M SFP-B	Ceiling Mic Spare Front Plate black	700236
TCC M H-W	Ceiling Mic Housing white	700238
TCC M H-B	Ceiling Mic Housing black	700239
TCCM CT-FP-W	TCCM square front plate 60 cm	700515
TCCM CT-FP-W 2FT	TCCM square front plate 2ft	700156

### CONNECTIONS AND OPERATING ELEMENTS



- 1 Analog Out** 3-pin terminal for analog audio out
- 2 PoE OUT** Daisy Chaining / Dante™ II
- 3 LED** Status
- 4 LED** PoE+
- 5 Reset** Factory reset switch
- 6 PoE IN/CTRL** PoE / Control / Dante™ I



# TeamConnect Ceiling Medium

Ceiling microphone array (Firmware ≥ 1.2.7)

## INSTALLATION VARIANTS



**Surface Mounted**  
mounted directly below the ceiling  
TCC M-S is used to surface mount or suspend the TeamConnect Ceiling Medium. It comes with a black or white TeamConnect Ceiling M and matching housing.



**Suspended**  
suspended from the ceiling  
The TCC M SK Ceiling Mic Suspension kit is for use when installing the TeamConnect Ceiling Medium in high-ceilinged rooms. It consists of three 16.4 ft (5m) steel cables that can be adjusted to fit the required installation height.



**Flush Mounted**  
installed flush in a grid ceiling  
The TCC M-F Flush Mount Kit is used to install the TeamConnect Ceiling Medium flush to the ceiling. It comes with a TeamConnect Ceiling M and flush mount accessories.



**Ceiling Tile**  
Installed flush with mounting plate in a grid ceiling  
The TCC M CT ceiling installation set is used for installation in suspended grid ceilings. It is supplied with a TeamConnect Ceiling Medium and a square front plate (in a 2-foot or 60 cm version).

## PORT-INFORMATION

### Application layer

Port	Protocol	Service	Product
443	HTTPS	Web UI	Sennheiser Control Cockpit
443	HTTPS	SSC update service	Sennheiser Control Cockpit

### Transport layer

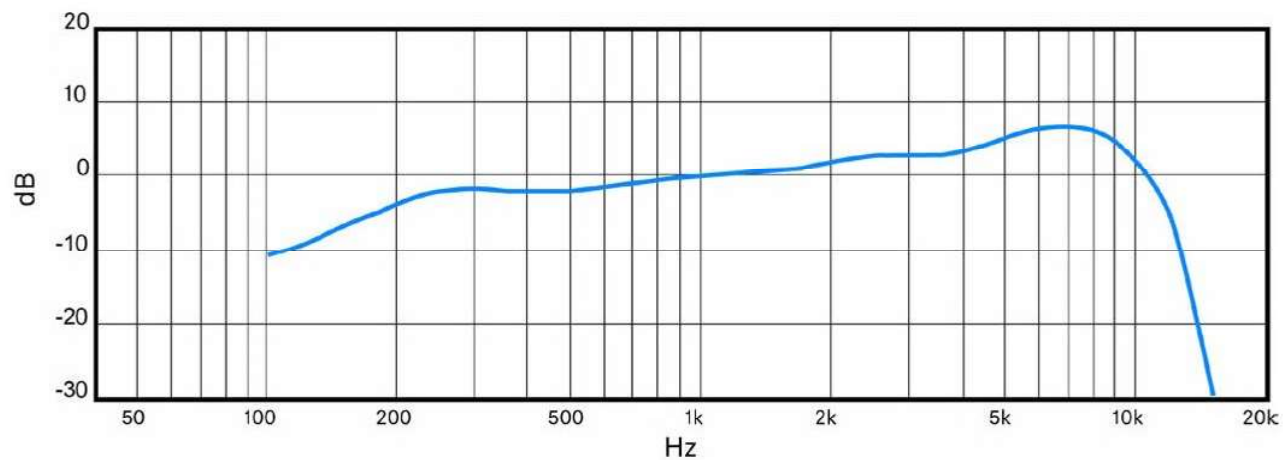
Port	Protocol	Service	Product
22	SCP/SSH	Certificate management	TeamConnect Ceiling Medium
443	TCP	Firmware update	TeamConnect Ceiling Medium
443	TCP	SSC Sound Control Protocol v2	TeamConnect Ceiling Medium
5353	UDP	mDNS (Multicast 224.0.0.251)	TeamConnect Ceiling Medium



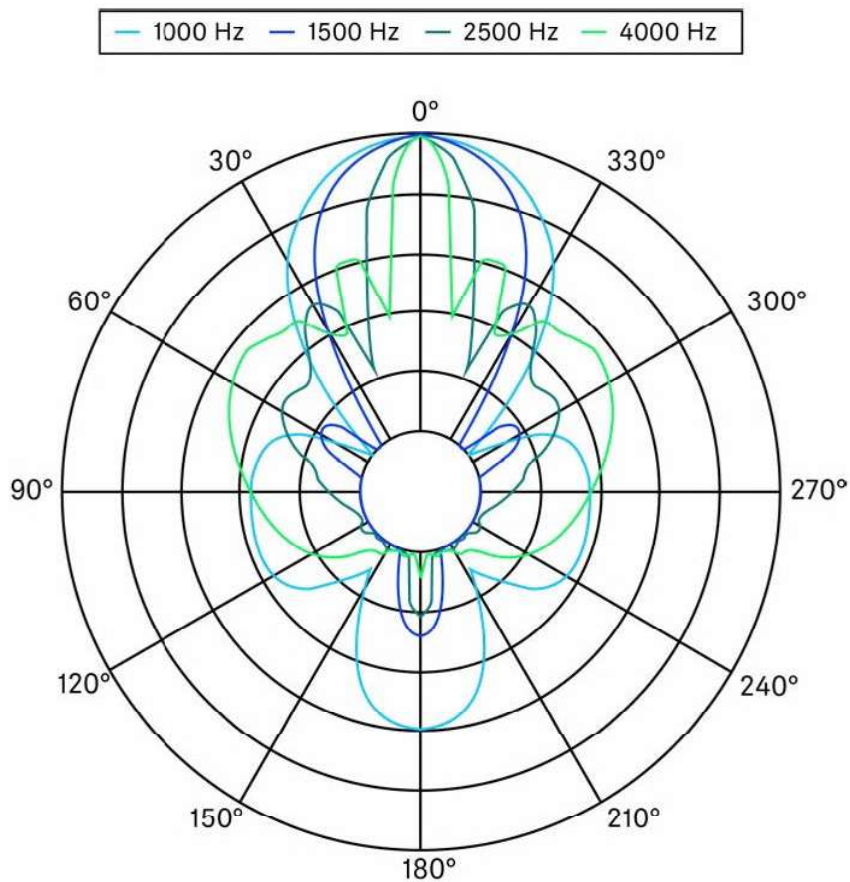
# TeamConnect Ceiling Medium

Ceiling microphone array (Firmware  $\geq$  1.2.7)

## FREQUENCY RESPONSE



## POLAR PATTERN





# WS-400 Series

## Wireless Microphone Systems



Powerful set of features combined with exceptional performance and cost efficiency

# Your *ideal choice* of **Wireless Microphone Systems**

## Product Features

- Available in dual channel and single channel models
- Handheld Microphone and beltpack provides up to 10 hours continuous usage with the use of only 1 x AA battery ensuring long term cost efficiency
- Long operating range of approx. 100 m (line of sight)
- IR Sync
- Single Channel: Selectable Up to 4 simultaneous channels  
\* depending on region
- Dual Channel: Selectable Up to 16 simultaneous channels  
\* depending on region



## Dual Channel Wireless Microphone System

WS-402

WS-422

WS-432

## Single Channel Wireless Microphone System

WS-420

WS-430



## F-2352C

### PANEL CONE SPEAKER



The F-2352C ceiling and wall-mounted speaker covers an extremely wide area and can be used for 25, 70 and 100 V line applications. Well-balanced sound can be heard uniformly at any location.

### Key features

- Ported bass-reflex design
- Co-axial: 5" cone driver and dome tweeter
- Special diffuser provides wide off-axis high frequency response
- Metal back-can and safety cable
- Removable terminal block with loop-through terminations
- Overload protection circuitry
- For medium ceiling height (2 to 4 m)

### Specifications

Enclosure	Bass reflex type
Rated Input	30 W (High Impedance)
Power Handling	Continuous pink noise: 60 W (8 Ω) Continuous program: 120 W (8 Ω)
Impedance	100 V line: 330 Ω (30 W), 1 kΩ (10 W), 3.3 kΩ (3 W), 10 kΩ (1 W) 70 V line: 170 Ω (30 W), 330 Ω (15 W), 1 kΩ (5 W), 3.3 kΩ (1.5 W), 10 kΩ (0.5 W) 25 V line: 170 Ω (3.7 W), 330 Ω (1.9 W), 1 kΩ (0.6 W), 3.3 kΩ (0.2 W), 10 kΩ (0.06 W) 8 Ω
Sensitivity	90 dB (1 W, 1 m)
Frequency Response	70 Hz - 20 kHz (-10 dB), 50 Hz - 20 kHz (-20 dB) at installation in 1/2 free sound field (Measured by installing the unit in the center of a ceiling.)
Speaker Component	High frequency: Balanced dome-type, Low frequency: 12 cm cone-type
Mounting Hole	Ø200 mm (Maximum ceiling thickness: 37 mm)
Input Terminal	Removable locking connector with screw-down terminals (2 input terminals and 2 bridge terminals)
Cable Requirements	Solid copper wire: Ø0.5 - Ø1.6 mm (equivalent to AWG No. 24 - 14) Stranded copper wire: 0.2 - 2.5 mm <sup>2</sup> (equivalent to AWG No. 24 - 14)
Finish	Enclosure: Steel plate, plating Baffle: Fire-resistant ABS resin (resin material grade: UL-94 V-0), black Rim: Fire-resistant ABS resin (resin material grade: UL-94 V-0), white, paint Punched net: Steel plate, white, paint
Dimensions	Ø230 x 229 (D) mm
Weight	3.7 kg (including mounting accessories)
Included Accessories	Panel .....1, Ceiling reinforcement ring .....1, Safety wire .....1, Paper pattern ...1
Optional Accessories	Anchor hanging bracket: HY-AH1, Back can: HY-BC1, Tile bar bridge: HY-TB1, Trim ring: HY-TR1



Digital communications, coupled with TOA audio quality provides an outstanding conference system that can be adapted to fit any size room.

# DIGITAL CONFERENCE SYSTEM

TS-D1100 Series



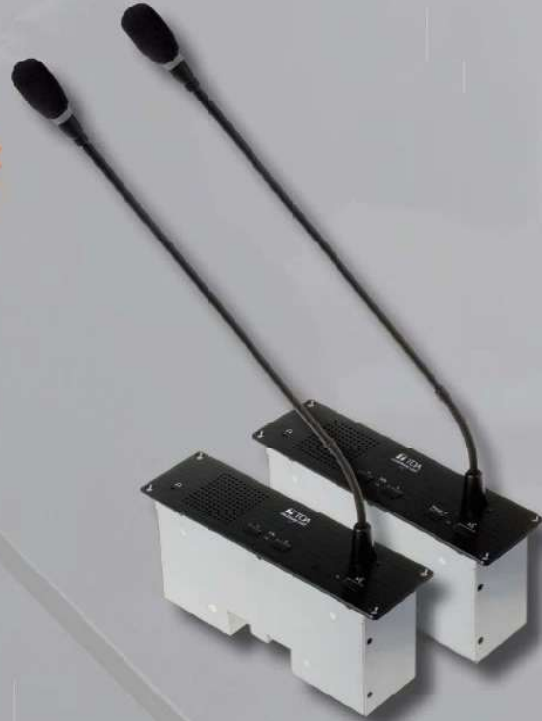
# Professional and Passionate

A conference system amplifies the power and influence of your speech.

**NEW**

**TS-D1000-CF Chairman Unit**  
**TS-D1000-DF Delegate Unit**  
**Flush Mount Type**

Flush mount devices are ideal for use in permanent installations, creating individual participant positions.



**TS-D1000-CU Chairman Unit**  
**TS-D1000-DU Delegate Unit**  
**Desktop Type**

Conference units are designed to facilitate effective communication and collaboration in meetings. Allowing participants to speak, listen, and interact seamlessly.



**NEW**  
**TS-D1100-MC**  
**Microphone Unit**

The TS-D1100-MC Microphone Unit is integrated with a gooseneck microphone, and specifically designed for use with TOA's TS-D1100 Series Digital Conference System, using CAT5e STP LAN cables.



**NEW**  
**TS-D1100-SP**  
**Speaker Unit**

The TS-D1100-SP Speaker Unit is specially designed for use with TOA's TS-D1100 Series Digital Conference System. This single speaker unit provides clear conference audio to all participants within a radius of approximately 3 meters.

**TS-D1100-MU**  
**Master Unit**

The TS-D1100-MU Master Control Unit of TOA Digital Conference System is designed with simple connection to it's Chairman and Delegate units using CAT5e STP LAN cables.



# Designed for meeting facilitators



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Intelligible conversations in conference or board rooms for up to 246 participants.



---

Long microphone option to make a room for your laptop or documents.





## Facilitator-supporting function

### Chairman's Unit Priority Function

- Chairman Unit has priority override control.
- Smooth operation of the conference is assured by a Chairman Unit's priority function.

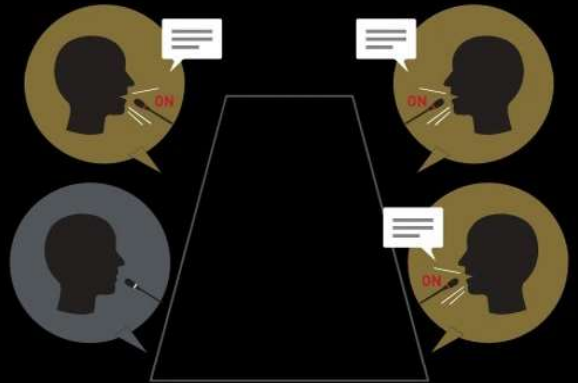
### Setting for Number of Open Microphones

- The Chairman can select the number of delegates who speak simultaneously to guide the discussion.
- Up to eight Delegate Units for simultaneous operation is allowed and if one or two Chairman Units are included, they may speak simultaneously.

## Participant-supporting feature

### Voice Activation Mode

Start talking instead of pressing the button.  
Microphone can be activated in response to a person's voice.



## Administrator-supporting feature

### Easy Maintenance

A Shielded CAT5e STP cable carries signals between conference units or between the Master Control Unit and a conference unit.



### Flush Mount Type

Microphone latch lock. Use the hex wrench M3 (accessory of TS-D1000-CF) to push into this latch lock hole to dismantle the microphone.



## Master Control Unit | Key Functions



Built-in volume control for monitor speaker.

### Operation Mode

**STANDARD** : Optimized for a meeting where the chairman assigns who will talk the next.

**OVERRIDE** : Optimized for a meeting where the participants talk in order.

**VOICE ACTIVATION** : Optimized for an open discussion (all conversations are sent to record output).

**CHAIRMAN ONLY** : Optimized for a presentation style meeting. The presenter will reach every participant clearly thanks to a built-in speaker on each unit.

### Energy Saving Mode

Conference system automatically switched off after 2 hours of inactivity.

TS-D1100-MU



### Built-in Audio Recording

Meetings can be recorded in mp3 format on USB drive or internal memory\*.

\*Internal recording up to 18 hours at 128 kbps.



### Hybrid Conference

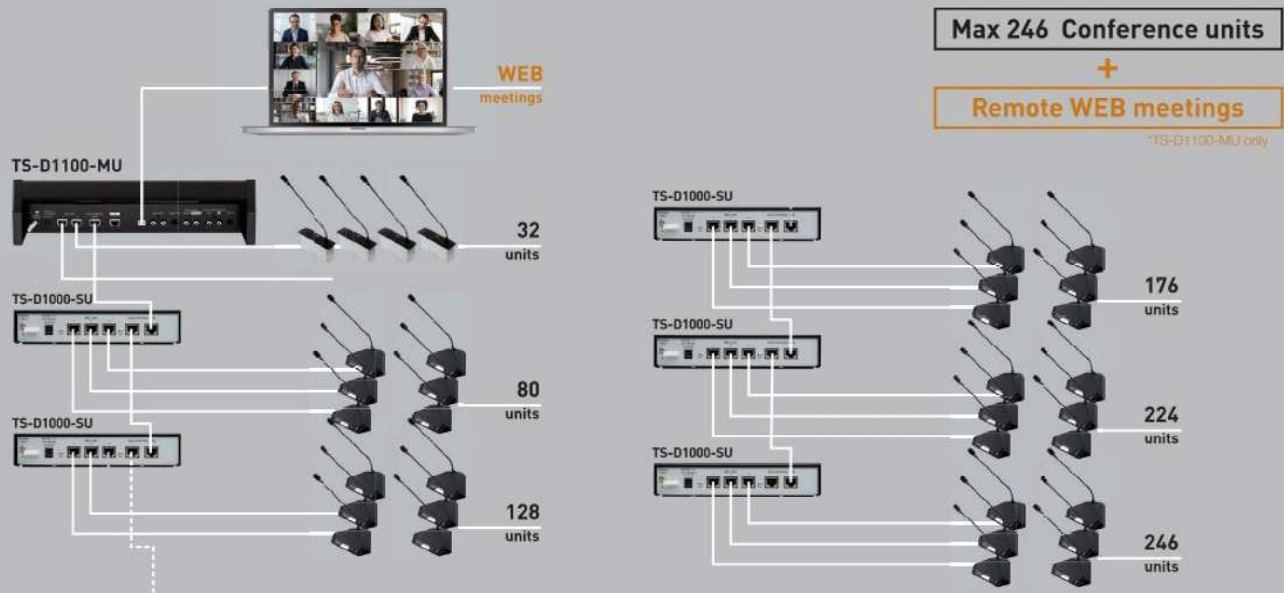
Connection to a PC enables audio input and output during Web meetings and conferences.



### Web Browser Application

Built-in web browser application is available. Advanced settings can be made from a PC or tablet.

# System Configuration



# Space-Saving System Configuration



## More Compact Size

To build a more space-efficient conference system, we offer compact microphone units along with speaker units capable of covering a 6-meter-square conference room with a single device.

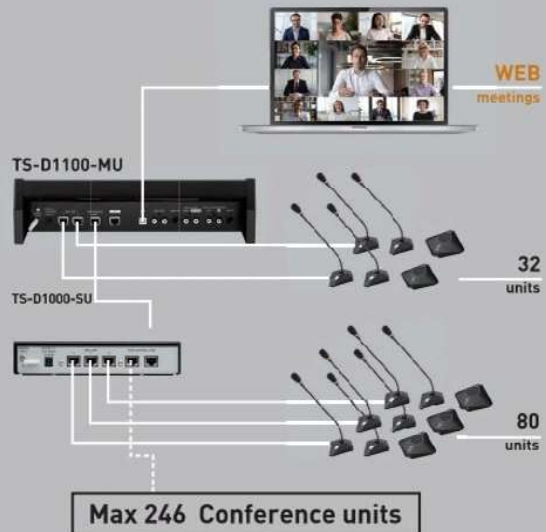
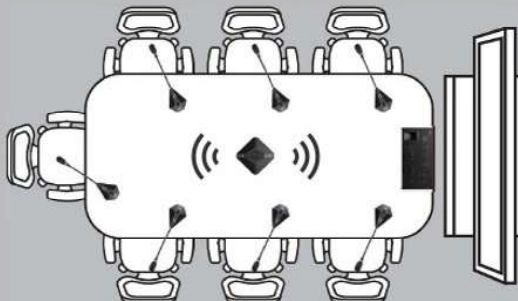
TS-D1100-MC

TS-D1100-SP



## Compact yet Powerful

Utilizing compact individual microphone units alongside a shared speaker unit allows for more efficient use of conference table space. Additionally, it supports connection of up to 246 conference units, catering to various meeting formats.



**TS-D1100-MU Master Control Unit**

- USB Audio In/out (USB 2.0 type-B port)
- Supports up to 32 conference units
- Mic In, Aux In, Line Out, Rec Out, Headphone monitor out, EQ in/out
- Function setting : Number of open microphones, Auto mic-off function, Microphone priority selector
- Rack-mountable with optional MB-TS920 bracket

**TS-D1000-SU Sub Control Unit**

- Controls up to 48 Conference Units
- Up to 5 Sub Control Units connectable to the Master Control Unit with the supplied LAN cable.
- Only 22 conference units can be connected to the 5th Sub Control Unit

**TS-D1000-CU Chairman Unit**

- Chairman unit for basic discussion
- Priority button
- 0.4W monitor speaker
- 2 headphone jacks with individual volume control
- PoE powered

**TS-D1000-DU Delegate Unit**

- Delegate unit for basic discussion
- 0.4W monitor speaker
- 2 headphone jacks with individual volume control
- PoE powered

**TS-D1000-CF Chairman Unit**

- Flush-mount Chairman unit for basic discussion
- Priority button
- 0.4W monitor speaker
- Volume control keys
- PoE powered

**TS-D1000-DF Delegate Unit**

- Flush-mount Delegate unit for basic discussion
- 0.4W monitor speaker
- Volume control keys
- PoE powered

**TS-D1000-M1 Microphone**

- Gooseneck microphone
- Unidirectional electret condenser microphone
- LED shows microphone status
- XLR-3-32 connector
- Sensitivity:-37 dB (1 kHz, 0 dB = 1 V / PA)
- Frequency response: 100 Hz - 13 kHz
- Length: 518 mm (1.7 ft)

**TS-D1000-M2 Microphone [Long]**

- Gooseneck microphone
- Unidirectional electret condenser microphone
- LED shows microphone status
- XLR-3-32 connector
- Sensitivity:-37 dB (1 kHz, 0 dB = 1 V / PA)
- Frequency response: 100 Hz - 13 kHz
- Length: 668 mm (2.19 ft)

**TS-D1000-M1S Microphone**

- Gooseneck microphone
- Unidirectional electret condenser microphone
- LED shows microphone status
- XLR-3-32 connector
- Sensitivity:-37 dB (1 kHz, 0 dB = 1 V / PA)
- Frequency response: 100 Hz - 13 kHz
- Length: 368 mm (1.2 ft)

**TS-D1100-MC Microphone Unit**

- Compact gooseneck microphone unit
- Unidirectional electret condenser microphone
- LED shows microphone status
- Sensitivity:-37 dB (1 kHz, 0 dB = 1 V / PA)
- Frequency response: 100 Hz - 13 kHz
- Length: 518 mm (1.7 ft)
- PoE powered

**TS-D1100-SP Speaker Unit**

- Speaker unit for basic discussion
- 1W monitor speaker
- Individual 6-level volume control
- PoE powered

**TS-D1000-EX Extension Unit**

- Provides up to 150m distance over Shielded CAT5e

**MB-TS920 Rack Mounting Bracket**

- For use with TS-D1100-MU





# CL511

## 4K Ceiling Camera



Lumens' first 4K ceiling camera with 300x zoom, HDMI, VGA, USB, and IP streaming.

Equipped with a Sony 1/2.8" image sensor, the CL511 is designed to provide overhead video from a height of up to 2m. Its wide shooting area and 300x total zoom enables it to capture large objects such as maps and technical drawings, or zoom in on for use in culinary demonstrations, medical training or educational use.

### Key Features

- 4K UHD 30fps Resolution
- 300x Total Zoom
- Supports RTSP streaming and PoE+
- Central Laser Marking Positioning
- 5-year warranty\*



### Sharp 4K UHD Overhead Video

Lumens CL511 can be suspended from, or embedded into the ceiling. It provides presenters an unobstructed top view of a table top, podium, or demonstration area. The camera can shoot documents or objects larger than A0 size (over 88" x 48" / 2.2m x 1.2m) at up to 4K resolution.



### Accurate Positioning

The CL511 can project mark the middle of the shooting area with a targeting laser, making it quick and easy to position objects accurately in the center of the frame. With 300x close-up capabilities, the camera is ready to capture the finest details.



### Step-Up Onboard Collaboration

The CL511 supports a wireless mouse to access onboard collaboration tools for spotlighting a particular area. It also enables free drawing without a PC or any software. The addition of Lumens Ladibug program gives users access to advanced features such as text overlay, 4K recording, and use with a touch panel.



### Fast & Easy Installation

Featuring HDMI, USB, VGA, and Ethernet video outputs, users can output to video conferencing platforms, projectors and large format displays, and devices connected to the local network. The CL511 also supports Power over Ethernet (PoE+). Using a standard network cable, the visualizer can be operated without additional power supplies. These features significantly reduce installation time and costs.

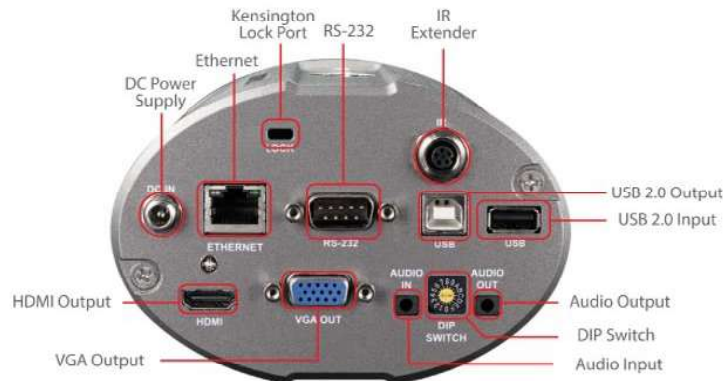


# Product Specifications

Camera	
Sensor	1/2.8" 8.6MP CMOS
Video Format	2160p: 30 / 25 1080p: 60 / 50 720p: 60 / 50 XGA
Video Output Interface	VGA / HDMI / USB / Ethernet
Total Zoom	300x
Zoom	60x
Digital Zoom	15x
Sharpness	MTF 1100 lines
Shooting Area at 2m Height	Max: 2235 x 1211mm Min: 136 x 76mm
Center Laser Mark for Positioning of Objects	Yes
Auto Tune	Yes
Picture in Picture (PIP)	Yes
Slide Show	Automatically or Manually
Image Rotation	0° / 90° / 180° / 270° / Flip / Mirror
Pan Across the Screen	Yes
Output	
HDMI	2160p30 / 1080p60
VGA	1080p60
IP Streaming	2160p30
IP Compression	H.264
USB	H.264 2160p30 / MJPEG 1080p30
USB Video Format	H.264 / MJPEG / YUV
Input	
USB Host	Type-A x1 Supports USB 2.0 Flash Drive USB Mouse and Keyboard
USB Flash Drive	Up to 4TB

Capture & Recording	
Image Capture	Single or Continuous Capturing
Built-in Memory	100 JPEG images
Video Recording	Yes
Recording Format	H.264 1080p60
Video Playback	Yes
Ethernet	
IP Protocol	RTSP
PoE	PoE+ (IEEE802.3at)
Audio	
Audio In	Line In Phone Jack 3.5mm x1
Audio Out	Line Out Phone Jack 3.5mm x1
Audio Compression Format	USB: PCM
Camera Control	
Interface	RS-232 / Ethernet / USB
UVC	1.1
UAC	Yes
General	
Anti-Theft	Kensington Lock
IR Extender	Yes
Ladibug Software Included	Ladibug Software (Supports Windows 10, 8, 7 Mac OS X, Chrome OS)
DC In	12V DC (100~240 VAC)
Power Consumption	PoE: 13W DC In: 12W
Weight	1.76lbs (800g)
Dimensions (W x H x D)	4.96" x 3.39" x 5.59" (126 x 86 x 142mm)

## I/O Connections



# Lumens®

Lumens Integration, Inc.  
4116 Clipper Court  
Fremont, CA, 94538  
Phone: +1-866-600-0988  
Fax: +1-510-252-1389

Lumens Europe  
De Nayerstraat 17 9470  
Denderleeuw Belgium  
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Fax : +32-2-452-76-00



www.MyLumens.com



## DC-F20

### HD/2K USB Document Camera



Lumens DC-F20 document camera captures bright and vivid colors HD/2K images and video. It is foldable, portable, and lightweight. Perfect for teachers and presenters, plug in the USB cable and it's ready to go. DC-F20 works well with video conference software such as Zoom, Meet, Skype, or Teams. With the included Ladibug software, users can easily position and zoom the lens position, and highlight parts of the document. It is perfect for distance learning and live demonstrations.

#### Key Features

- 2K / 1080p Full HD
- USB Plug & Play
- Electronic Pan, Tilt and Zoom up-to 16x Total Zoom (via Software)
- > A3 Shooting Area
- Built-in Microphone
- 5-year warranty\*



#### Grab & Go Design

The foldable and lightweight design makes DC-F20 very easy to carry. A portable demonstration tool, it's perfect for teachers and business professionals.



#### Superb Image Quality

DC-F20 delivers vivid and colorful images. It is perfect for projection or product demonstrations with 1080p resolution and higher (up-to 2K).



#### Dual Document Camera - Webcam Design

Equipped with one-touch image rotation, DC-F20 simply flips from use as a document camera to a webcam. It's a great piece of technology for hybrid classrooms which combine in-class teaching with distance learning.



#### Three-Level LED Lighting as Fill Light

With a built-in light, DC-F20 can even be used in rooms with poor lighting. Adjust the level of lighting to illuminate documents or faces, when used as a webcam.



#### Collaboration Tool for Windows, MAC, and Chrome

Ladibug's creative tools elevate your presentation to engage more fully with students. The application runs on Windows, MacOS, and Chrome OS.

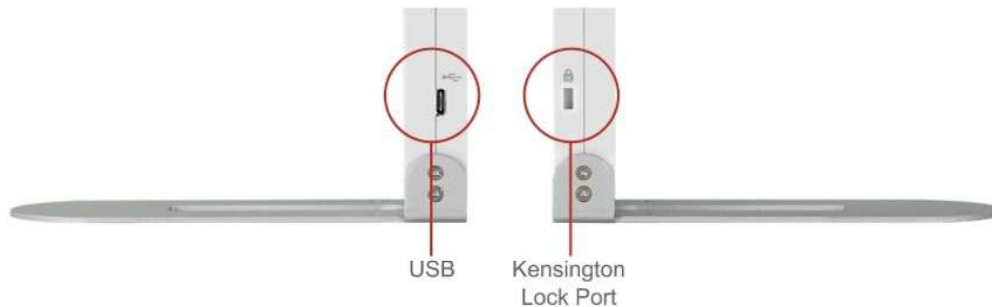


## Product Specifications

Camera	
Sensor	1/4" 5M CMOS
Total pixels	5MP
Total Zoom	16x
Digital Zoom	16x (via Software)
Mechanical Zoom	6x
Output Resolution	2592x1944, 2560x1440, 1600x1200, 1920x1080, 1280x720, 1024x768, 960x540, 640x480, 640x360
Frame Rate	1080p / 720p 30fps
Close-up	6 cm
Shooting Area Max.	453mmx340mm (17.8" x 13.4")
Sharpness	MTF 1100 Line
Focus Mode	Auto / Manual
Image Rotation	0° / 180° / Flip / Mirror
Lamp	LED lamp on camera head Three-stage brightness adjustment
Arm	Mechanical Arm
Input & Output	
Power Supplied	USB Bus Power
Output	USB Type-C
Control	USB
USB	
USB Image Transmission	USB 2.0 (480 Mbps)
Driver	UVC / UAC
USB Video format	MJPEG / YUV

Audio	
Built-in Microphone	Yes
Features	
Auto Tune	Yes, One Button for Optimization Image
Video / Audio Recording	Yes (via Software)
Image Mode	Photo / Text
Pan	Yes
Freeze	Yes
Mask / Spotlight	Yes (via Software)
Image Capture	Single or Continuous Capturing (via Software)
Lumens™ Software	Support Windows 11, 10, 7 Mac OS X, Chrome OS
General	
Anti-Theft	Kensington Anti-Theft Lock Device
Included Accessories	USB Cable
Power Consumption	2.25W (Max.)
Dimensions: (WxHxD)	Folded : 2.56" x 10.43" x 0.97" (65 x 265 x 24.5 mm) Open : 4.2" x 15" x 13.8" (65 x 175.1 x 392.5 mm)
Weight	0.8 lbs (0.36 Kg)

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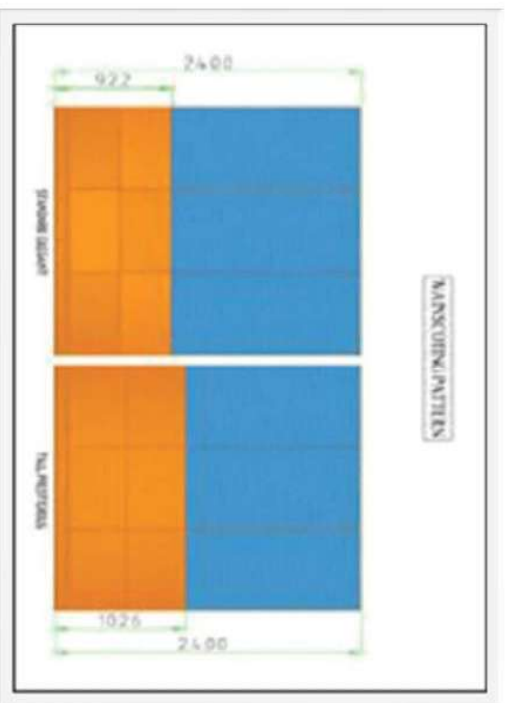
## Special Features

Special interior construction pack for upgrading your immersive visual collaboration experience

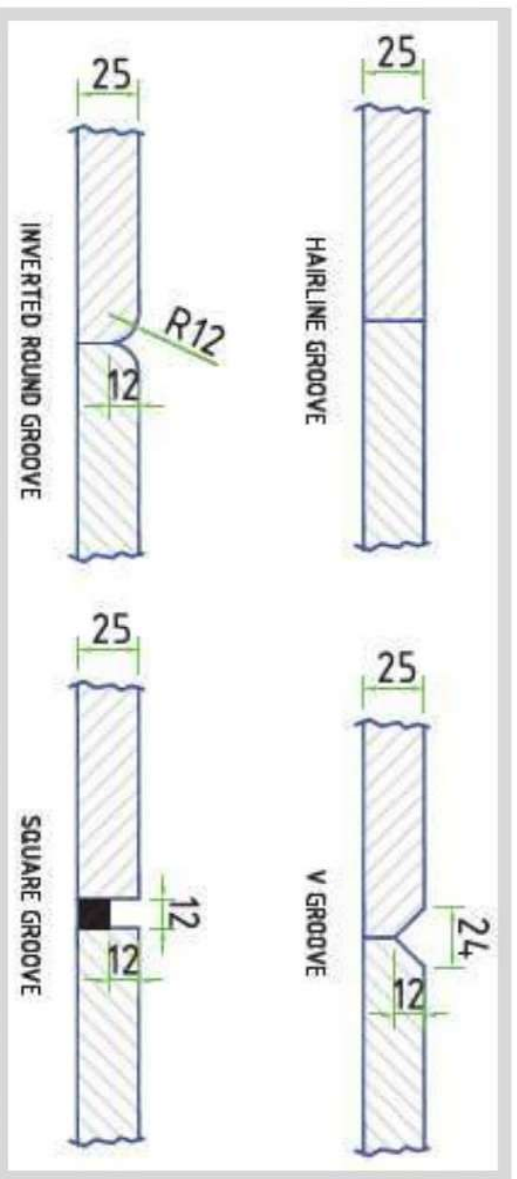


## How can you customize your conference room?

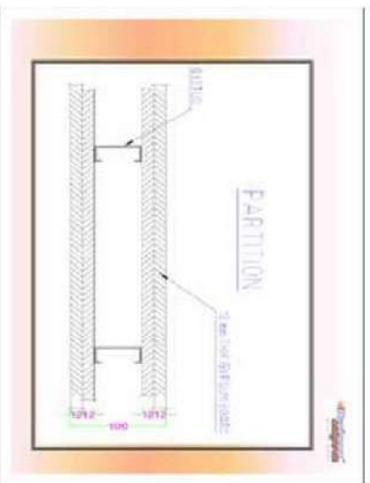
Customization in the wall panelling for room interiors



Wainscoting level can also be customized from 900mm to 1026mm.

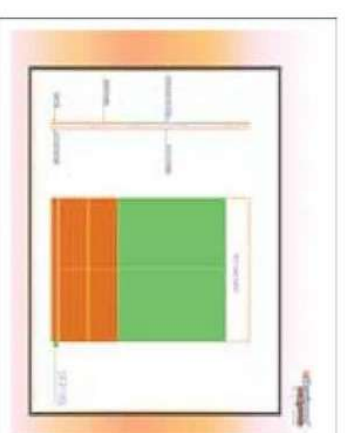


Appearance of grooves between acoustic panels can also be customized.

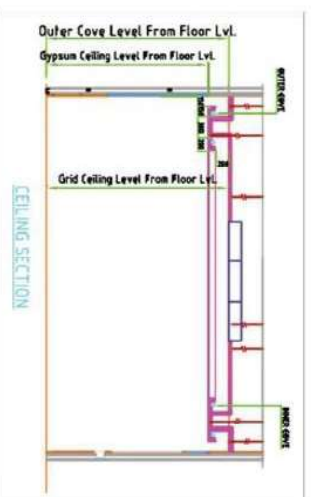


- a) 125mm thick partition
- b) Double layer of 12mm thick gypsum board on either side
- c) GI structure of floor channel, ceiling channel & GI stud
- d) 50mm thick glass wool fitted inside partition for high level of noise isolation
- e) Partition: Sound reduction coefficient Rw of partitions is 51dB

**Typical partition construction**



**Typical wall elevation**

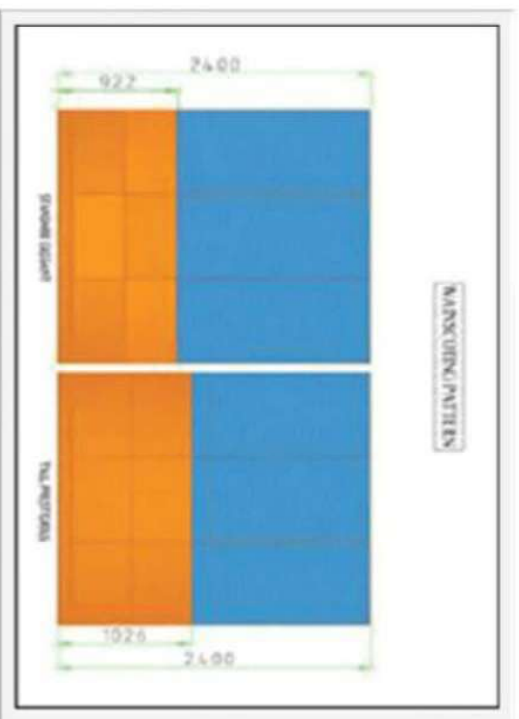


Two level ceiling with specially designed covers for indirect lighting in the room to help show well lit faces. The 2/2 grid compressed glass wool ceiling is excellent for room acoustics

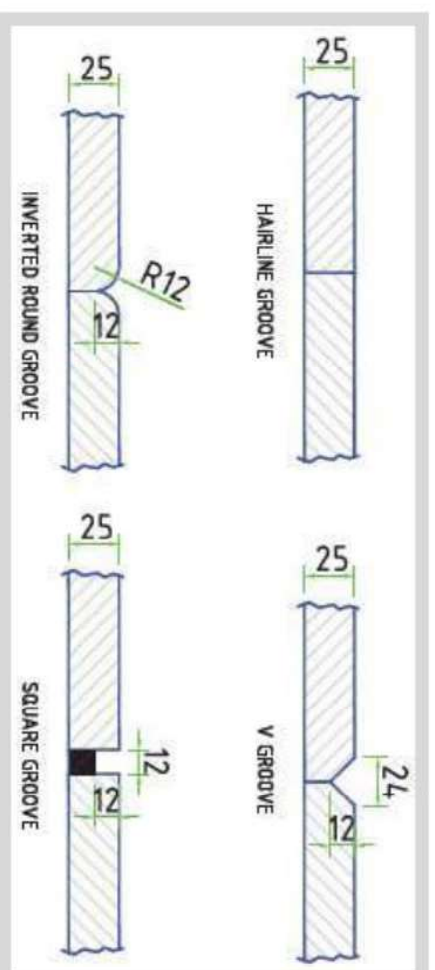
**Typical ceiling construction**

## How can you customize your conference room & training room?

Customization in the wall panelling for room interiors



Wainscoting level can also be customized from 900mm to 1026mm.



Appearance of grooves between acoustic panels can also be customized.

# Interior Design & Quality Supervision Professional Services (IDQSPS)

Why compromise on the functionality & aesthetics of your meeting rooms, conference rooms & training rooms, which would reduce your organization's productivity?



Why not instead choose Business Octane's IDQSPS for all your new/to be renovated meeting & training spaces to get high productivity along with high aesthetics?



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# Aesthetic Flush Display Paneling (AFDDP)™



Business Octane Presents Aesthetic Flush Display Paneling (AFDDP) for flushing displays & cameras in the partition & adding aesthetics to the partition walls as well as adding acoustic treatment on the chosen wall in Training Rooms & Conference Rooms

## Special Features

### Key Benefits of Aesthetic Flush Display Paneling (AFDP)

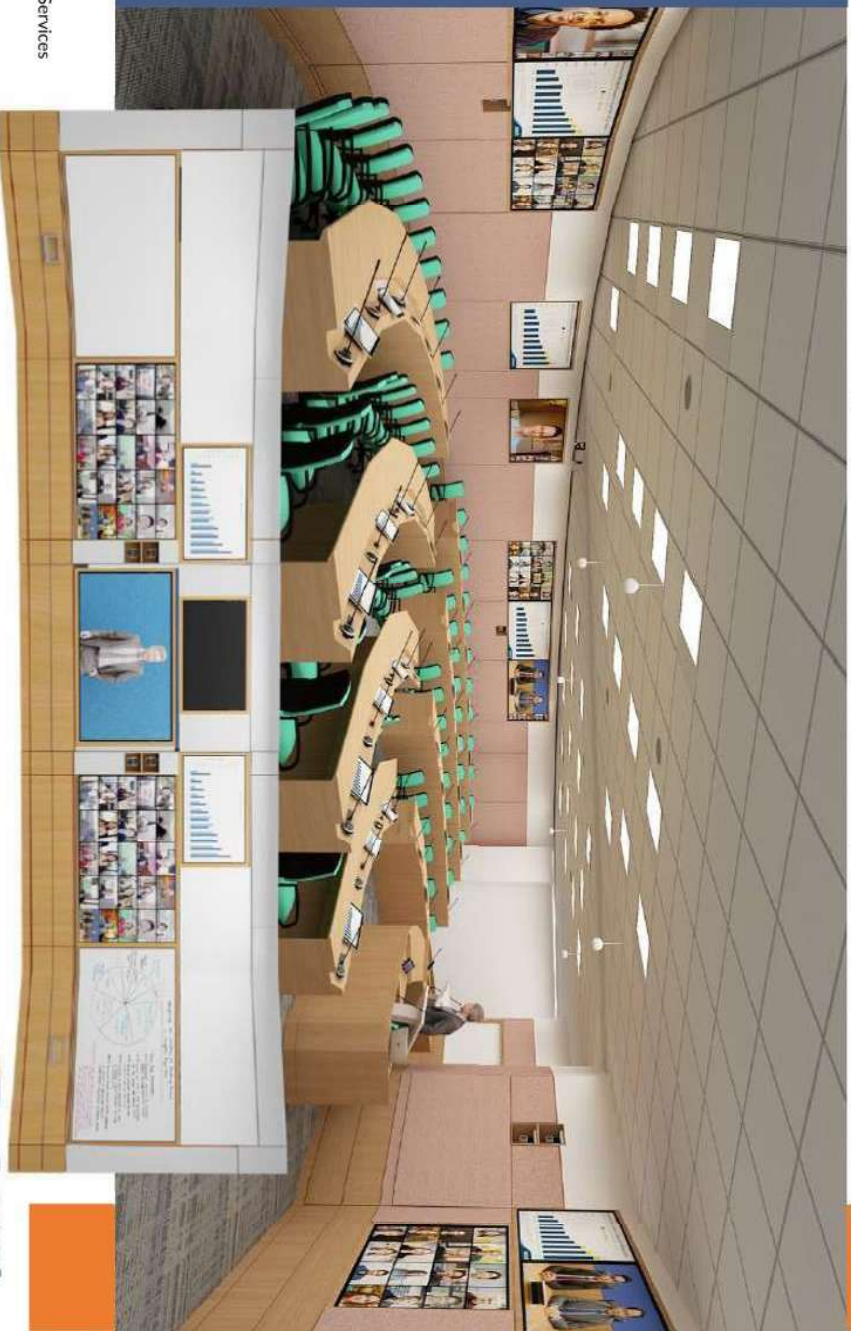
**Aesthetic Flush Display Paneling (AFDP) not only allow to make your meeting room and training room walls look absolutely neat & beautiful but also would provide with right kind of acoustic treatment giving desired collaboration & learning experience.**

1. Improve conference room & training room aesthetics and acoustics by embedding all wall mounted equipments i.e. displays, cameras, speakers, whiteboards, etc into Aesthetic Flush Display Paneling (AFDP) as the non display area is finished with sound absorbing panels having noise reduction coefficient (NRC) 0.9.
2. The flush mounting of the devices are provisioned for - no protruded or overhung equipment on partition wall, load bearing of device, easy maintenance, no visible cable & connections, heat dissipation of devices, sound reduction in partition, etc.
3. Minimalistic Design with combination of Skirting, Hard PVC Veneer Panel up to dado level & Soft Fabric Acoustic Panels for highly aesthetic finish of partition wall with enhanced acoustic property.
4. Erected against the existing partition or brick wall with heavy duty boxes for displays with removable frames.

\* Does not include chairs, furniture, flooring & ceiling.

\*\* To be ordered along with Interior Design & Quality Supervision Professional Services (IDQSPS)

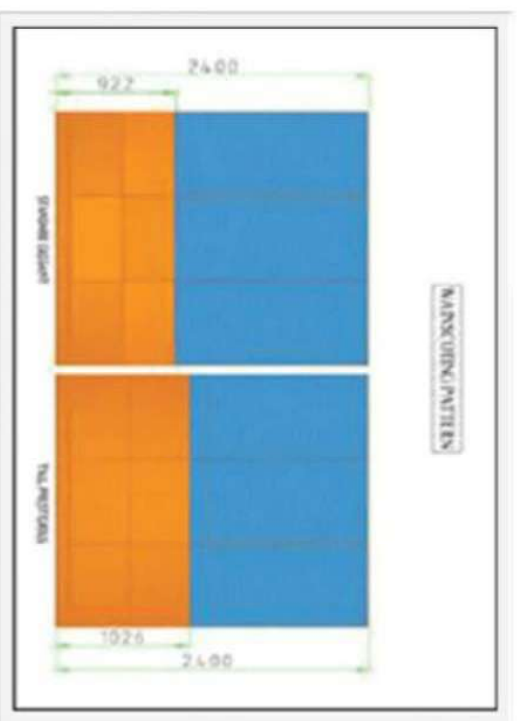
\*\*\* MOQ for AFDP is 620 sq.ft. (When ordered separately).



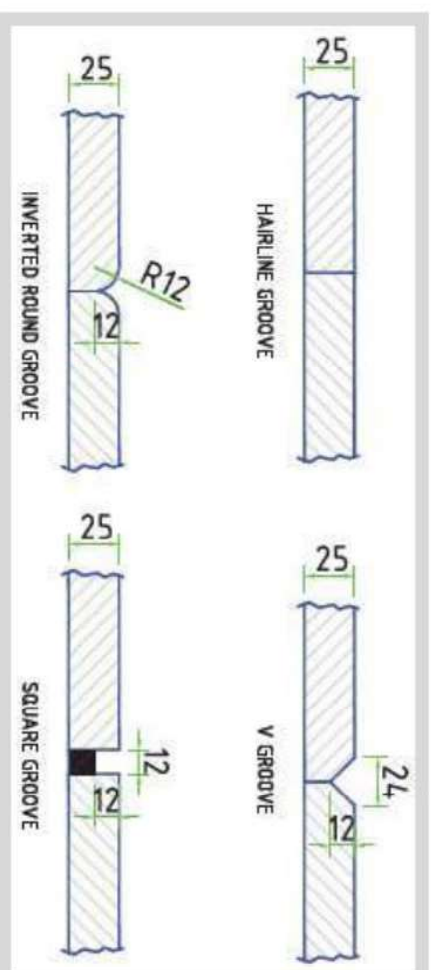
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## How can you customize your conference room & training room?

Customization in the wall panelling for room interiors



Wainscoting level can also be customized from 900mm to 1026mm.



Appearance of grooves between acoustic panels can also be customized.