

Pro Local Teaching Solutions



Problems in **Local Teaching**

- ▶ The size of the display is not sufficient enough for the students sitting in last 1/2 to 1/3rd of the classroom. 65" & 75" display are used where as bare minimum **86" or 98" or 108" or 135" or 163"** displays are required.
- ▶ **Lot of teachers** still prefer to write on **chalk boards** or **whiteboards** in classes for which no proper arrangement has been made.
- ▶ There is no easy way that teachers can **teach from books and documents**. Further they can not use a piece of **A3 / A4 paper** as **whiteboard on podium**.
- ▶ For annotation on their presentation they have to write on **IFPD** which **reduces eye contact with the students**. Ideally they should **annotate while facing the students**.
- ▶ There is no reliable way to focus the camera continuously on the **teacher** without any **AV assistant** for the purpose of **recording of teaching**.
- ▶ They have no reliable way of **streaming & teaching recording**.
- ▶ It has not been possible till now to **record the teacher** simultaneously with all **students** and **active students** shown separately along with **teachers presentation**.
- ▶ It is very **difficult to pass the mics** around to students in **one large class rooms** so that everyone can understand the **students question**.
- ▶ It is very complicated to **focus the camera** on question **asking students**. Further focusing is **jerky and time taking**.
- ▶ Teacher has to **continuously look back** to the **main screen to teach**.





Enhanced Local Teaching

Increase the effectiveness of teaching in every classroom by removing the obstacles that reduce the effectiveness of learning by the students.

Key Capabilities of **Enhanced Local Teaching**

- ▶ Empower all the students to read the content clearly in full lights with large IFPD / Active LED Displays.
- ▶ Enable teacher to record notes while even writing with chalk in multiple options.
- ▶ Enable Students setting in rear half to hear the teacher & vice versa effortlessly.
- ▶ Empower the teacher to do annotation & whiteboarding while facing the students using podium with large interactive monitors.
- ▶ Empower the teacher to teach using books & white paper as whiteboard in an easy manner.
- ▶ Enable teacher and other trainers to understand every trainee's question clearly.

Options for Displays



Options for Podium



Options for Speakers



Options for Audio System





Improve effectiveness of local teaching while simultaneously recording the lecture with automatic teacher tracking and teacher assisted focus on the active students.

Key Capabilities of **Enhanced Local Teaching with Recording**

- ▶ It has all the functionalities of enhanced local teaching solutions.
- ▶ Keep the camera focused on the teacher as he/she moves in the class irrespective of the fact whether teacher is speaking or not for recording the lecture.
- ▶ Teacher can be shown full body or half body or just the bust while recording the lecture.
- ▶ Teachers can also focus the camera on the students to accommodate students questions in recordings.
- ▶ Recording can be done easily on MS Teams or Zoom or using an external recorder.
- ▶ Teacher can also show and get the ability to record his/her presentation with his camera view in PIP



full-body





half-body





close up framing
























Enhanced Local Teaching with Voice lift

Improve effectiveness of local teaching even in large class rooms by providing the magical functionality of voice lift.

Key Capabilities of **Enhanced Local Teaching with Voice Lift**

- ▶ It has all the capabilities of the enhanced local teaching solutions.
- ▶ Additionally it has 10-12 dbs. voice lift of both the teacher and the students in a large classrooms which allows every student in a large classroom to be heard by all the students irrespective of their sitting position in the class.
- ▶ The voice lift is made possible using worlds best ceiling microphones, digital signal processors, multi zone amplifiers and special speakers.
- ▶ Seamlessly upgrade these local teaching classroom in future to hybrid learning experience capability by adding cameras and the camera tracking system.





Enhanced Local Teaching with Voice Lift & Recording

Improve effectiveness of local teaching even in large class rooms by providing the magical functionality of voice lift as well as with high quality lecture recording with completely automatic trainer and question asking trainee tracking.

Key Capabilities of **Enhanced Local Teaching with Voice Lift & Recording**

- ▶ It has all the key capabilities of the enhanced local teaching solutions with voice lift.
- ▶ Additionally its has the magical capability focusing the right camera completely automatically on the teacher or the question asking student at all times helping you record the trainings without any operator's assistance.





Enhanced Local Teaching with Sound Reinforcement

Improve effectiveness of local teaching even in large class rooms by providing the functionality of Local sound reinforcement.

Key Capabilities of **Enhanced Local Teaching with Sound Reinforcement**

- ▶ Additionally it has up to 20db. voice reinforcement of the students and the teacher using goose neck microphones which are mounted other on trainees tables or in the trainees arm supports.
- ▶ Trainees press to speak and be heard loud & clear by all other trainees and the teacher.





Enhanced Local Teaching

with Sound Reinforcement & Recording

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- ▶ Trainees press the speak and be heard loud & clear by all other trainees and the teacher.
- ▶ Additionally it has the capability of focusing the right camera on the teacher or the question asking students helping you record.





EXPERIENCE THE DIFFERENCE WITH NEXT GENERATION LED DISPLAY

Enhance communication with engaging content.



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



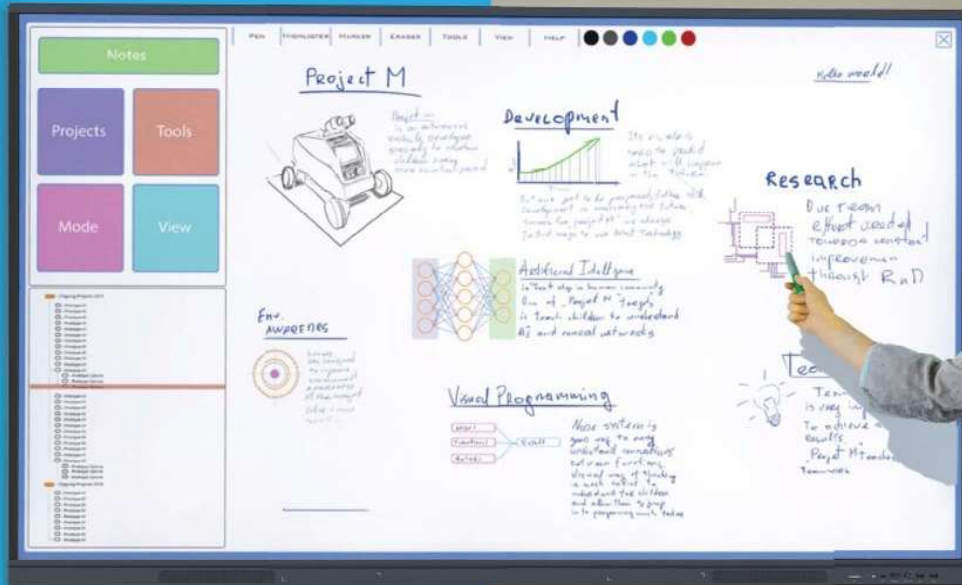
Control your screen



Panel Management

Panasonic
CONNECT

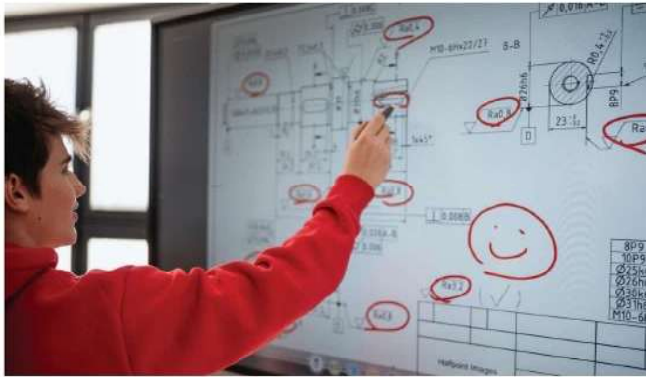
LH-65CT1ND
LH-75CT1ND



NEXT GENERATION
TOUCH SCREEN

**INTELLIGENT
FLAT PANEL
DISPLAY**

EQUIPPED WITH ADVANCED FEATURES

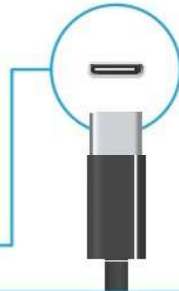


MAGNETIC PENS

- 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



¹ According to Panasonic research for the PT-VMZ71 only among LCD laser projectors in the 7,000-lumens-class or higher as of January 2022.

■ Main Features

01 | Clear Images That Are Easy to See in Bright Rooms

With up to 7,000 lm, 3,000,000:1 contrast², Daylight View Basic, and vivid 3-chip LCD color, images stay clear and bright in well-lit classrooms and meeting rooms. Visually complex images, such as detailed graphics and fine text, are crisp, sharp, and easy to see even to those viewing the screen at a distance.

02 | Installation Flexibility Adapts Projection to Any Space

PT-VMZ71 Series is smallest and lightest LCD projector in its class¹. Compact 7.0 kg³ (15.43 lbs) body, 1.6x zoom, and V/H Lens-Shift streamline installation while new 6-Point Screen Adjustment enables projection into room corners. CEC command compatible⁴ HDMI[®] and DIGITAL LINK⁵ support 4K input signals⁶.

03 | Enjoy Smooth and Effortless Collaboration

Connect smartphone and projector over wireless LAN⁷ via the QR Code displayed on screen and share a wide variety of content without cable mess, or use optional Wireless Presentation System PressIT[®] to share almost any device screen at the press of a button. You can also project content from USB flash drive.



^{*} Supports signals up to 4K/30p. See specifications for details. ^{**} PT-VMZ51S/VMZ41 excluded. ^{***} AI-VMW50 Series Wireless Module required.



White Models



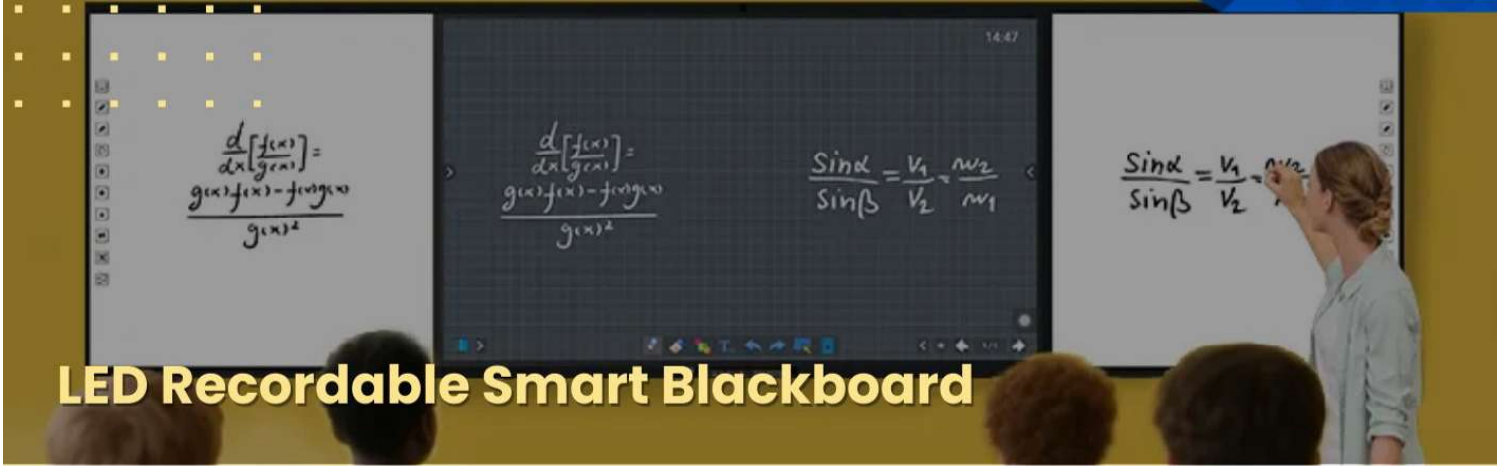
Black Models

Note: PT-VMZ71/VMZ61 only.

PT-VMZ71 Series

	PT-VMZ71	PT-VMZ61	PT-VMZ51/VMZ51S	PT-VMZ41	PT-VMW61	PT-VMW51
Light Output	7,000 lm ⁹	6,200 lm ⁹	5,200 lm ⁹	4,500 lm ⁹	6,200 lm ⁹	5,200 lm ⁹
Resolution	WUXGA				WXGA	

¹ According to Panasonic research for the PT-VMZ71 only among LCD laser projectors in the 7,000 lumens class or higher as of January 2022. ² Full On/Full Off, when [PICTURE MODE] is set to [DYNAMIC] and [DYNAMIC CONTRAST] is set to [1]. Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118: 2020 international standards. Value is average of all products when shipped. ³ For PT-VMZ71 only. For individual model specification, please refer to the specifications table. ⁴ Depending on the connected CEC command compatible device, the link control may not operate normally. ⁵ Excluding PT-VMZ51S and PT-VMZ41. ⁶ Supports signals up to 4K/30p. A signal with different resolution is converted to the number of display dots. PT-VMZ71/VMZ61/VMZ51/VMZ51S/VMZ41: 1920 x 1200 dots, PT-VMW61/VMW51: 1280 x 800 dots. Applicable terminals: DIGITAL LINK terminal/HDMI terminal. ⁷ Requires optional AI-VMW50 Series Wireless Module (sold separately). Availability may vary by country or region. ⁸ For more information on Wireless Presentation System PressIT, please visit <https://panasonic.net/ons/prod/play/pressit>. Availability may vary by country or region. ⁹ Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118: 2020 international standards. Value is average of all products when shipped. When [PICTURE MODE] is set to [DYNAMIC] and [LIGHT POWER] is set to [NORMAL].



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**.

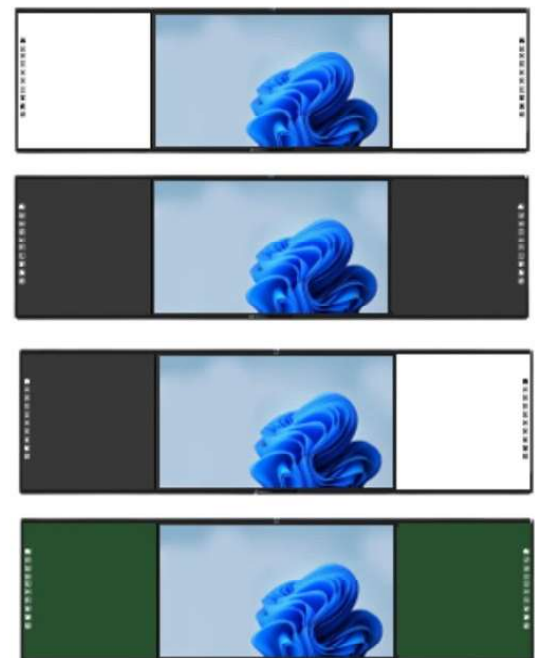
Key Capabilities of LED Recordable Smart Blackboard

- ▶ **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 ²	
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	





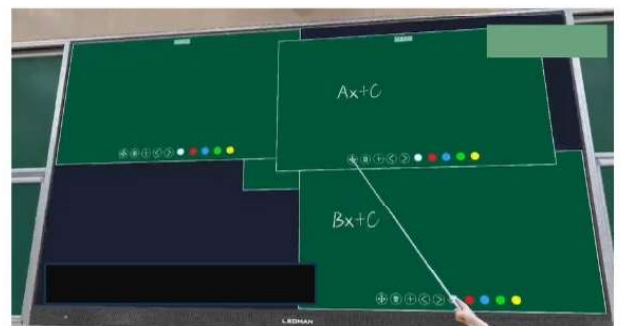
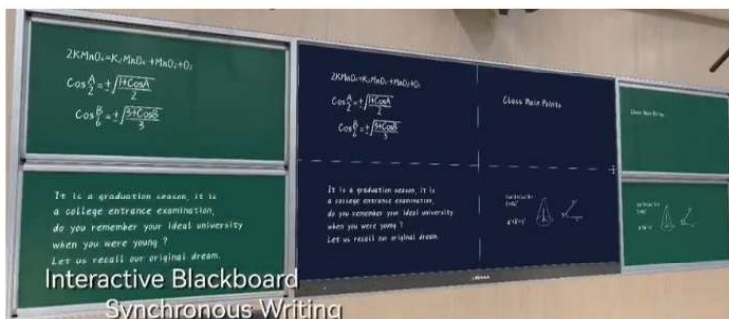
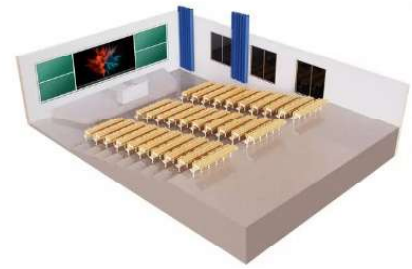
Amazing Touch Interactive

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 ²)	0.2058					
Cabinet Weight(Kg/m ²)	36					
Pixel Density(pixel/m ²)	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 ²)	650	650	620	600	600	600
Average Power Consumption(W/m ²)	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")

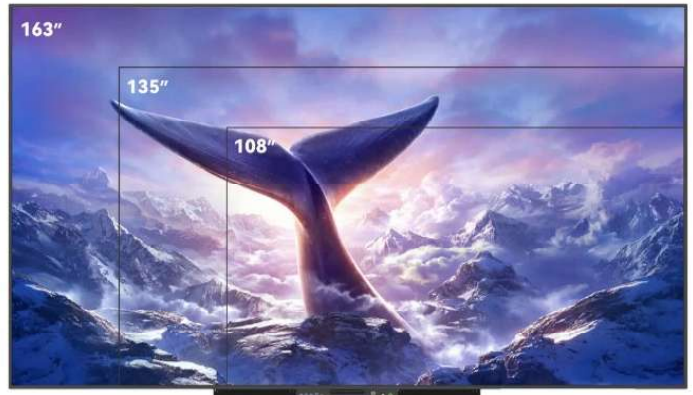
Experience the best micro LED displays like never before. Advanced Chip on Board technology, common cathode technology, and intelligent image processing to dramatically reduce blooming and deliver the most stunning and seamless visuals imaginable.

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 ²)	≤800		
Refresh Rate (Hz)	≤3,840		
Color Temperature (K)	2,500 ~ 10,000		
Features	Common Cathode		
Power Consumption Max (W/m ²)	≤360	≤350	≤340
Power Consumption Typical (W/m ²)	≤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

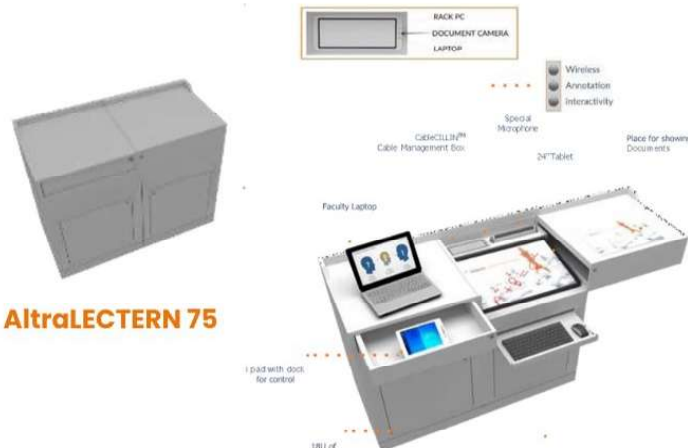
- ▶ Trainer can stand comfortably behind lectern without his back towards students and can write comfortably on touch tablet and share his/her content. Content will appear on Interactive Touch Board, visible to all students.
- ▶ Trainer has the capability to share the content wirelessly. Further we can 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.





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

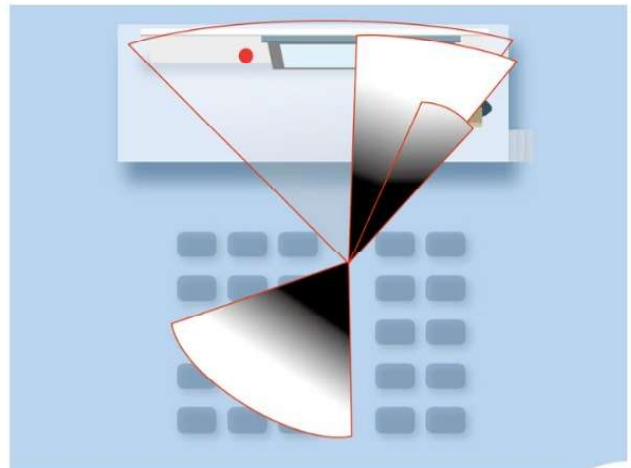


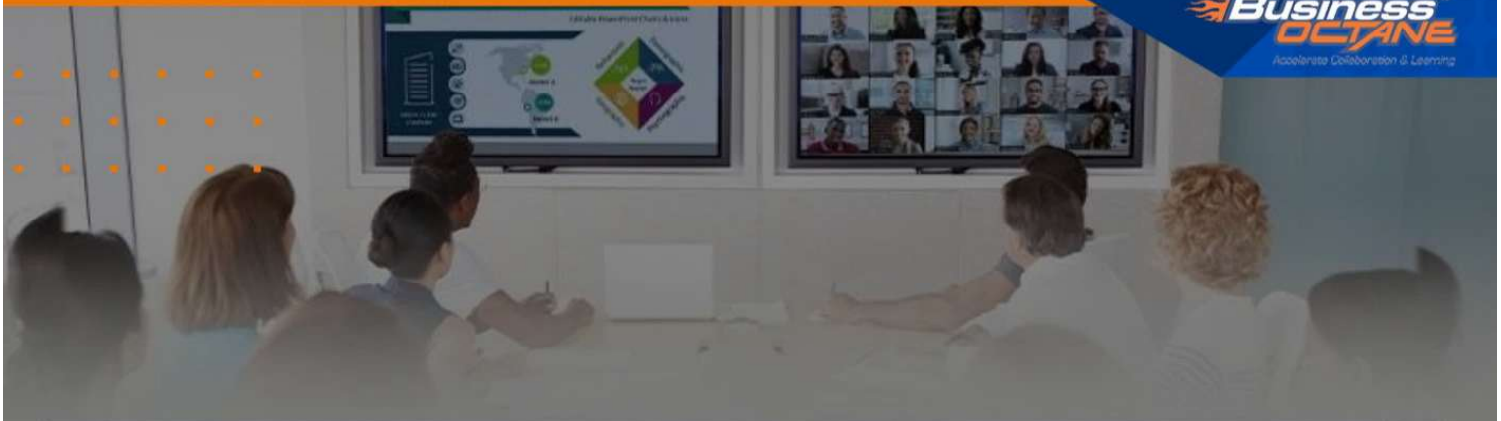
Graphic icon for keys to simplify workflow

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.





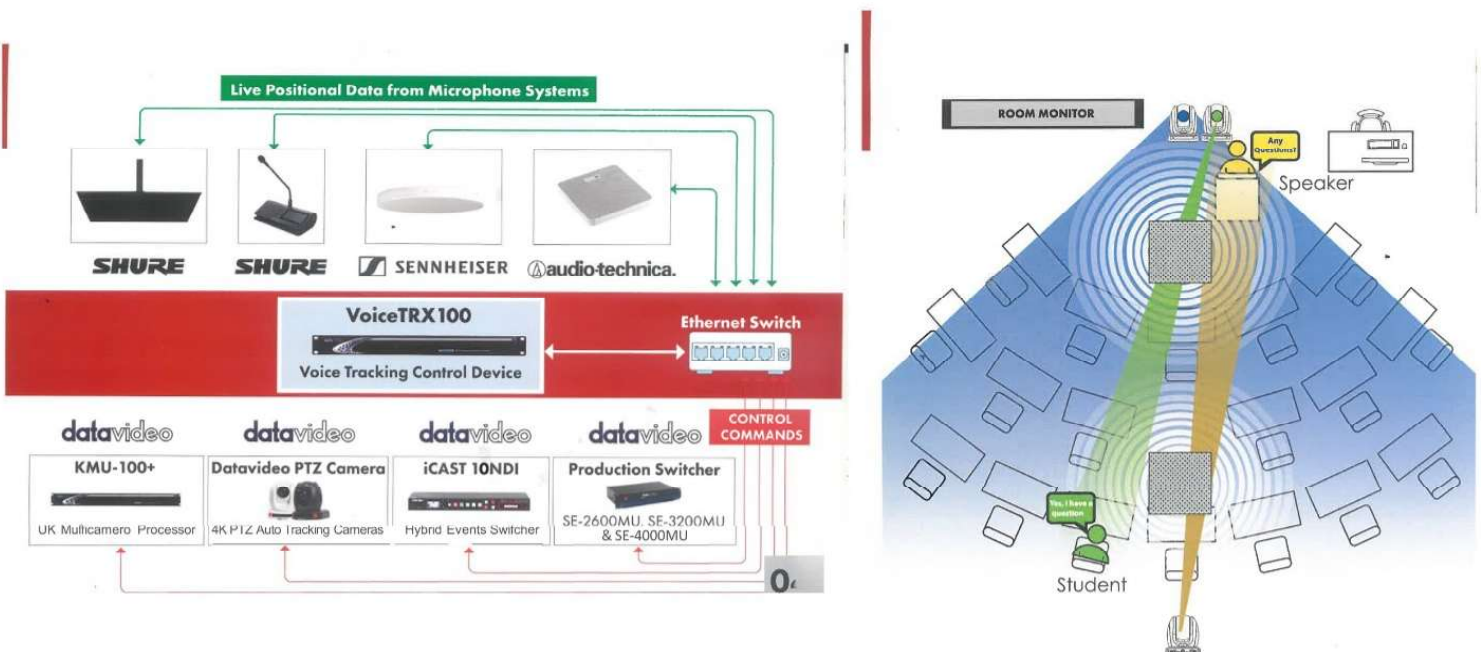
DATA VIDEO Voice TRX100

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 video output status, you can also monitor various other functions such as streaming, recording, and menu.
- Main Selection Knob:** Provides easy access to various functions and options. You can also switch between different system status.
- 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 for Program OUT or recording PP/POP images.
- 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 channels 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



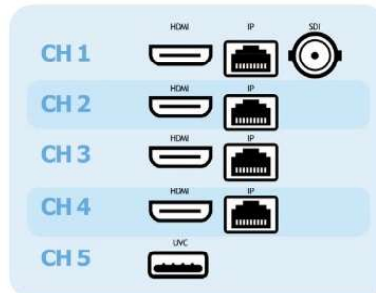
iCAST 10NDI Rear Panel



- Audio IN:** RCA and 3.5mm jack input for connecting external analog audio inputs.
- SVC Port:** Connects external shelf cameras or other video sources.
- HDMI/SDI Video:** Supports 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 monitors, 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



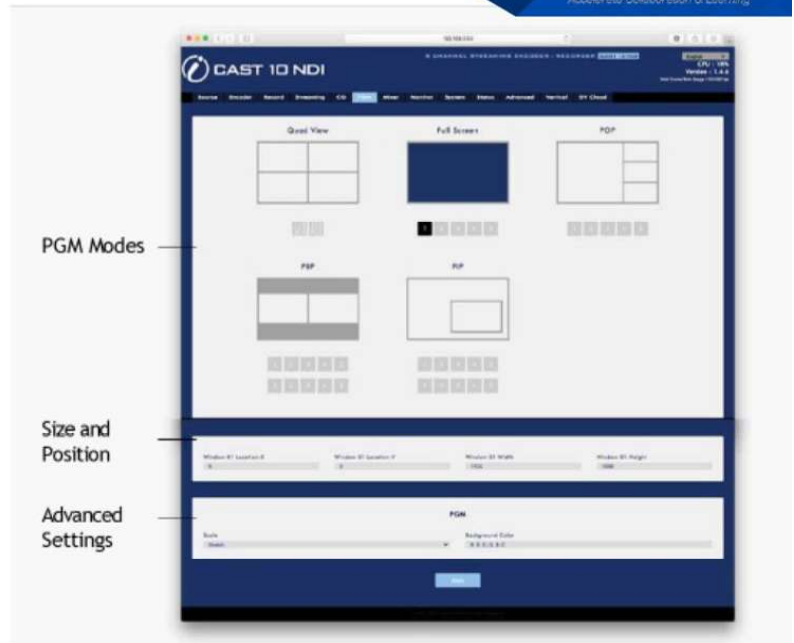
When using the vertical screen mode, ensure that the cameras are shooting vertically, rotate the cameras if necessary. If the camera is shooting horizontally, crop about one-third of the left and right edges of the screen and keep the desired image in the center.

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.





iCast 10NDI + TPC-700P

The iCAST10NDI app is installed on the TPC-700 touch pane controller, along with many frequently used control settings. The responsive touch panel allows you to easily switch between different control modes, adding versatility to video production and reducing operational complexity.

Shortcut key mode 1



Shortcut key mode 2



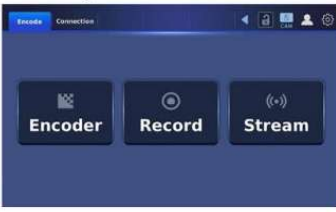
Camera Control



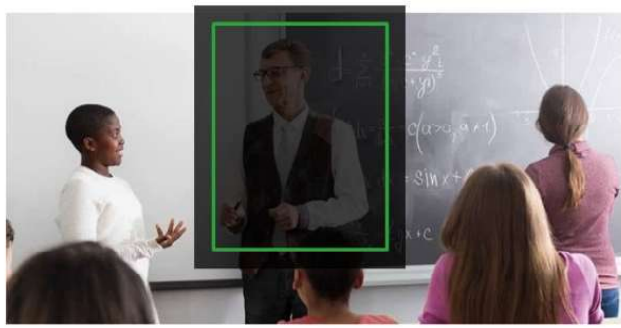
Video Switching



Video encoding, recording and streaming

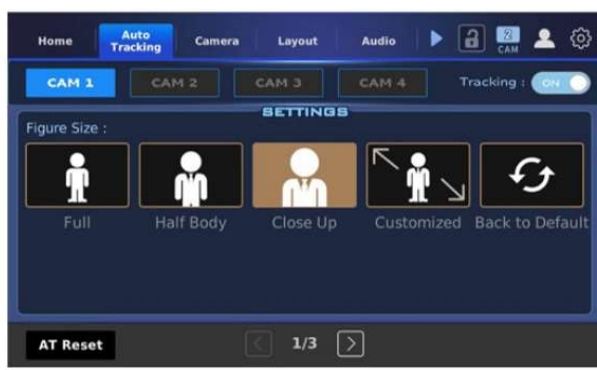


Audio mixing and synchronization



Quickly Activate Auto-Tracking

Datavideo offers a range of devices, such as the TPC-700 series, that allow you to quickly enable or disable the AI auto-tracking function of cameras. When paired with the iCAST 10NDI and TPC-700, you can easily control Datavideo's tracking PTZ cameras for quick activation and control.





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





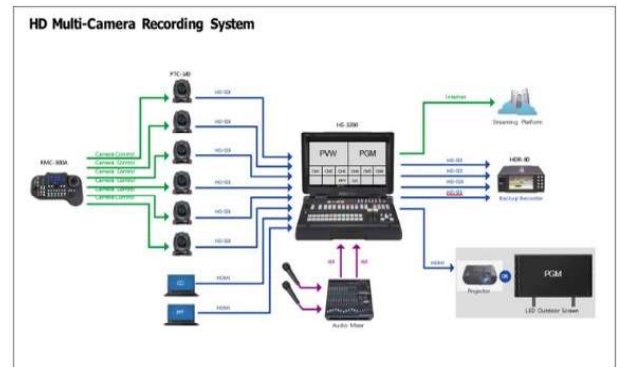
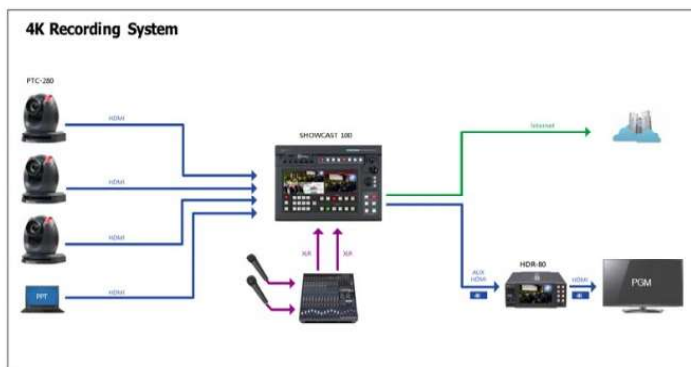
DATA VIDEO

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.



A-3224DM-AS 1

DIGITAL MIXER AMPLIFIER



A-3224DM is a high performance yet cost-effective mixer power amplifier equipped with MP3 and Bluetooth function. Ideal for broadcasting, paging, or background music in schools, offices, shops, houses of worship and large ballrooms.

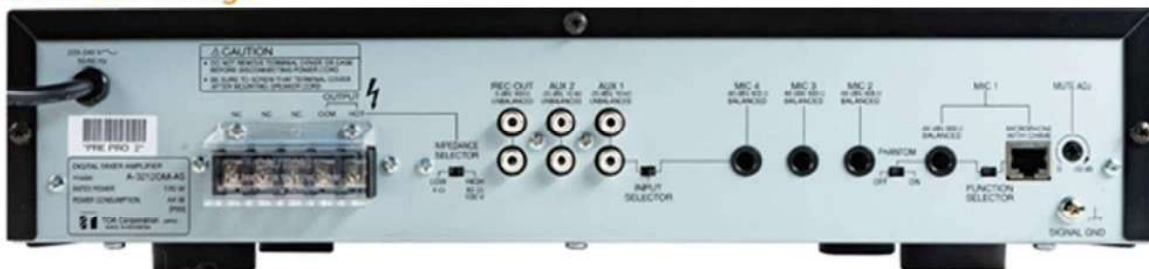
Key features

- High performance yet cost-effective mixer power amplifier
- 5 mixing inputs - 3 electronically balanced inputs for microphone, 1 selectable input from MIC 4 or AUX 1 and 1 unbalanced input for AUX
- Phantom power provided to MIC 1
- Priority function - MIC 1 mutes other inputs by 0 to 30 dB (adjustable)
- 100V line or 4 Ω speaker outputs
- Recording output
- Wide tone-control adjustment range of ± 10 dB for both bass and treble
- Fan cooling system to prevent over-heating
- Equipped with FM radio tuner
- Incorporated MP3 player supports playback of digital audio from USB memory, SD/MMC card and bluetooth device

Specifications

Power Source	100 - 240 V AC, 50/60Hz
Rated Output	240 W
Power Consumption	62 W (AC operation at 1/8 maximum output without clip)
Frequency Response	50 - 20,000 Hz
Total Harmonic Distortion	Under 1% at 1 kHz, 1/3 rated power
Signal to Noise Ratio	Over 60 dB
Input	MIC 1: 1 mV (-60 dB ¹), 600 Ω, balanced, phone jack, selectable to RJ45 MIC 2-3: 1 mV (-60 dB ¹), 600 Ω, balanced, phone jack, selectable to AUX 1 MIC 4: 1 mV (-60 dB ¹) 600 Ω, balanced, phone jack, selectable to AUX 1 AUX 1: 100 mV (-20 dB ¹), 10 kΩ, unbalanced, RCA pin jack, selectable to MIC 4 AUX 2: 100 mV (-20 dB ¹), 10 kΩ, unbalanced, RCA pin jack MP3: LED Display, Support USB, SD/MMC card (up to 32GB), Bluetooth, Radio FM, Record
Output	Speaker out: Speaker Output in screw type terminal Direct line (selectable): 42 Ω (100 V) or 4 Ω Rec out: 0 dB ¹ , 600 Ω, unbalanced, RCA pin jack
Phantom Power	DC +21 V (MIC 1)
Tone Control	Bass: ± 10 dB at 100 Hz Treble: ± 10 dB at 10 kHz
Muting	MIC 1: Mutes other input signals by 0-30 dB attenuation
Indicator	Power, Signal, Peak, Protect
Ventilation	Fan Cooling
Finish	Panel: ABS resin, black Case: Steel plate, black
Dimensions	420 (W) × 100.9 (H) × 357 (D) mm
Weight	4.9 kg

Product rear image



A-3248DM-AS 1

DIGITAL MIXER AMPLIFIER



A-3248DM is a high performance yet cost-effective mixer power amplifier equipped with MP3 and Bluetooth function. Ideal for broadcasting, paging, or background music in schools, offices, shops, houses of worship and large ballrooms.

Key features

- High performance yet cost-effective mixer power amplifier
- 5 mixing inputs - 3 electronically balanced inputs for microphone, 1 selectable input from MIC 4 or AUX 1 and 1 unbalanced input for AUX
- Phantom power provided to MIC 1
- Priority function - MIC 1 mutes other inputs by 0 to 30 dB (adjustable)
- 100V line or 4 Ω speaker outputs
- Recording output
- Wide tone-control adjustment range of ±10 dB for both bass and treble
- Fan cooling system to prevent over-heating
- Equipped with FM radio tuner
- Incorporated MP3 player supports playback of digital audio from USB memory, SD/MMC card and bluetooth device

Specifications

Power Source	100 - 240 V AC, 50/60Hz
Rated Output	480 W
Power Consumption	99 W (AC operation at 1/8 maximum output without clip)
Frequency Response	50 - 20,000 Hz
Total Harmonic Distortion	Under 1% at 1 kHz, 1/3 rated power
Signal to Noise Ratio	Over 60 dB
Input	MIC 1: 1 mV (-60 dB*), 600 Ω, balanced, phone jack, selectable to RJ45 MIC 2-3: 1 mV (-60 dB*), 600 Ω, balanced, phone jack, selectable to AUX 1 AUX 1: 100 mV (-20 dB*), 10 kΩ, unbalanced, RCA pin jack, selectable to MIC 4 AUX 2: 100 mV (-20 dB*), 10 kΩ, unbalanced, RCA pin jack MP3: LED Display, Support USB, SD/MMC card (up to 32GB), Bluetooth, Radio FM, Record
Output	Speaker out: Speaker Output in screw type terminal Direct line (selectable): 21 Ω (100 V) or 4 Ω Rec out: 0 dB*, 600 Ω, unbalanced, RCA pin jack
Phantom Power	DC +21 V (MIC 1)
Tone Control	Bass: ±10 dB at 100 Hz Treble: ±10 dB at 10 kHz
Muting	MIC 1: Mutes other input signals by 0-30 dB attenuation
Indicator	Power, Signal, Peak, Protect
Ventilation	Fan Cooling
Finish	Panel: ABS resin, black Case: Steel plate, black
Dimensions	420 (W) × 100.9 (H) × 357 (D) mm
Weight	5.0 kg

Product rear image



TZ-S60W AS

SLIM ARRAY SPEAKER



TZ-S60W Slim Array Speaker, equipped with 9 vertically arrayed 8cm speaker units, delivers high clarity sound with a 90° horizontal x 0° vertical directivity control. This feature enables it to project clear sound even in rooms with reverberation problem. Two TZ-S60W can be stacked to improve sound transmission distance and the vertical coverage area. For installation flexibility, both low impedance and high impedance is available by a rotary switch.

Key features

- 90° horizontal x 0° vertical directivity control
- Low impedance and high impedance selectable by a rotary switch
- Accessory speaker brackets provide installation flexibility
- TZ-S60W x 2pcs can be stacked for wider coverage

Specifications

Enclosure	Bass Reflex Type
Maximum Input Level	120 W (Continuous pink noise)
Rated Input	60 W
Rated Impedance	Low Impedance: 8Ω/100 V line: 167 Ω (60 W), 330 Ω (30 W), 500 Ω (20 W), 1 kΩ (10 W); Selectable
Sensitivity	95 dB (1 W, 1 m)
Frequency Response	180 Hz - 15,000 Hz
Directivity Angle	Horizontal: 90° / Vertical: 0°
Speaker Component	8 cm (3") cone-type x 9
Impedance Change	Rotary Switch (Selectable)
Connection	Push-In Terminals
Operating Temperature	-10 °C - +50 °C
Finish	Enclosure: MDF, Wet Paint, White
Dimensions	100 (W) x 883 (H) x 130 (D) mm
Weight	8.2 kg (unit only)
Included Accessories	Speaker Bracket x 1, Joint Bracket x 1, Wall Bracket x 1, Fixing Bolt (M5 x 60) x 1, Hexagon Bolt (M6 x 12) (with plain washer and spring washer) x 2, Machine Screw (M5 x 15) (with plain washer and spring washer) x 4
Optional Accessories	HY-S60W: Side Stack Bracket x 2, Rear Stack Bracket x 1

F-05BT

SPEAKER SYSTEM



F-05BT is a 2-way surface-mount speaker system designed to deliver high-quality audio for a variety of applications. This versatility makes it ideal for foreground or background music playback, as well as public address announcements. The F-05BT boasts a sleek aesthetic that seamlessly integrates with walls and ceilings hardware incorporates a temporary hanging feature, allowing for easy and secure single-handed installation with effortless wiring and angle adjustments.

Key features

- Versatile 5-inch 2-way surface-mount speaker system
- Perfect for music and announcements
- Sleek design for seamless integration with walls and ceilings
- Safe and easy installations with included mounting bracket
- Temporary docking feature allows effortless wiring and positioning
- Flexible angle adjustment for both wall and ceiling mounts
- Ideal for permanent installs or portable setups

Specifications

Enclosure	Bass-reflex type
Rated Input	30 W (100 V line, 70 V line)
Power Handling	Rated noise power: 60 W (8 Ω) Continuous program: 120 W (8 Ω)
Rated Impedance	8 Ω 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)
Sensitivity	90 dB (1 W, 1 m) at installation in 1/2 free sound field
Frequency Response	60 Hz - 20 kHz, -10 dB at installation in 1/2 free sound field
Crossover Frequency	4.5 kHz
Directivity Angle	Horizontal: 100°, Vertical: 100°
Speaker Component	Low frequency: 13 cm (5") PP cone-type High frequency: 25 mm (1") dome tweeter
Input Terminal	Push-in Terminal
Installation Environment	Indoor installation
Operating Temperature	-10 °C to +50 °C (14 °F to 122 °F)
Finish	Enclosure: HIPS, black (RAL 9011 equivalent), paint Grille: Aluminum, black (RAL 9011 equivalent), paint Speaker bracket: Die-cast aluminum, black (RAL 9011 equivalent), paint Base bracket: Steel plate, t4, black (RAL 9011 equivalent), paint Base bracket cover: HIPS, black (RAL 9011 equivalent)
Dimensions	162 (W) x 274 (H) x 164 (D) mm (6.38" x 10.79" x 6.46")
Weight	2.7 kg (5.95 lb)
Included Accessories	Speaker bracket x 1, Base bracket x 1, Base bracket cover x 1, Bracket fixing screw x 1 set
Optional Accessories	Adapter plate: HY-F05B Speaker stand: ST-34B Note: K&M 19780 or K&M 19610 is required.

(*1) Rated noise power is defined by IEC60268-5. Continuous program is 3 dB above Rated noise power.

Note: Bolts and nuts for mounting the bracket to the wall or ceiling are not included. Prepare them separately.

F-08BT

SPEAKER SYSTEM



F-08BT is a 2-way surface-mount speaker system designed to deliver high-quality audio for a variety of applications. This versatility makes it ideal for foreground or background music playback, as well as public address announcements. The F-08BT boasts a sleek aesthetic that seamlessly integrates with walls and ceilings hardware incorporates a temporary hanging feature, allowing for easy and secure single-handed installation with effortless wiring and angle adjustments.

Key features

- Versatile 8-inch 2-way surface-mount speaker system
- Perfect for music and announcements
- Sleek design for seamless integration with walls and ceilings
- Safe and easy installations with included mounting bracket
- Temporary docking feature allows effortless wiring and positioning
- Flexible angle adjustment for both wall and ceiling mounts
- Ideal for permanent installs or portable setups

Specifications

Enclosure	Bass-reflex type
Rated Input	60 W (100 V line, 70 V line)
Power Handling	Rated noise power: 90 W (8 Ω) Continuous program: 180 W (8 Ω)
Rated Impedance	8 Ω 100 V line: 170 Ω (60 W), 330 Ω (30 W), 670 Ω (15 W), 3.3 kΩ (3 W) 70 V line: 83 Ω (60 W), 170 Ω (30 W), 330 Ω (15 W), 670 Ω (7.5 W), 3.3 kΩ (1.5 W)
Sensitivity	91 dB (1 W, 1 m) at installation in 1/2 free sound field
Frequency Response	50 Hz - 20 kHz, -10 dB at installation in 1/2 free sound field
Crossover Frequency	3 kHz
Directivity Angle	Horizontal: 100°, Vertical: 100°
Speaker Component	Low frequency: 20 cm (8") PP cone-type High frequency: 25 mm (1") dome tweeter
Input Terminal	Push-in Terminal
Installation Environment	Indoor installation
Operating Temperature	-10 °C to +50 °C (14 °F to 122 °F)
Finish	Enclosure: HIPS, black (RAL 9011 equivalent), paint Grille: Aluminum, black (RAL 9011 equivalent), paint Speaker bracket: Die-cast aluminum, black (RAL 9011 equivalent), paint Base bracket: Steel plate, t4.5, black (RAL 9011 equivalent), paint Base bracket cover: HIPS, black (RAL 9011 equivalent)
Dimensions	251 (W) x 392 (H) x 216 (D) mm (9.88" x 15.43" x 8.5")
Weight	5.2 kg (11.46 lb)
Included Accessories	Speaker bracket x 1, Base bracket x 1, Base bracket cover x 1, Bracket fixing screw x 1 set
Optional Accessories	Adapter plate: HY-F08B Speaker stand: ST-34B Note: K&MM 19780 or K&M 19610 is required.

(*1) Rated noise power is defined by IEC60268-5. Continuous program is 3 dB above Rated noise power.

Note: Bolts and nuts for mounting the bracket to the wall or ceiling are not included. Prepare them separately.

PE-304

PENDANT SPEAKER 30W 2WAY



The PE-304 is a pendant speaker designed for ceiling suspension installations. Considered in architectural design, it can blend in with lighting equipment. A directly-attached 5 m (16.4 ft) cable allows the speaker to be suspended from the high ceiling. The PE-304 is driven on both high-impedance (100 V and 70 V) and low-impedance (8 Ω) lines. The input power (impedance) can be easily changed at the upper side of the speaker. The speaker is easy to repaint so as to meet a wide range of design needs.

Key features

- Ideally suited for BGM and announcements
- Stylish and outstanding design inspired by the finest lighting fixtures
- Excellent sound quality
- Sturdy cable extendable up to 5 meters
- Paintable
- Input impedance easily changeable
- Bass-reflex type

Specifications

Enclosure	Bass-reflex type
Rated Input	30 W (100 V, 70 V line, 8 Ω)
Rated Impedance	100 V line: 330 Ω (30 W), 500 Ω (20 W), 670 Ω (15 W), 1 kΩ (10 W), 2 kΩ (5 W) 70 V line: 170 Ω (30 W), 250 Ω (20 W), 330 Ω (15 W), 500 Ω (10 W), 1 kΩ (5 W) 8 Ω
Sensitivity	91 dB (1 W, 1 m) (500 - 5,000 Hz, pink noise)
Frequency Response	70 - 20,000 Hz (peak -20 dB)
Speaker Component	12 cm (5") cone-type + balanced dome-tweeter
Speaker Cable	2-core cabtyre cord 5 m (16.4 ft)
Cable Requirements	600 V vinyl-insulated cable (IV wire or HIV wire) Solid copper wire: Ø0.8 - Ø1.6 mm (equivalent to AWG 20 - 14) 7-core twisted copper wire: 0.75 - 1.25 mm ² (equivalent to AWG 18 - 16)
Connection	Push-in connector (bridging terminal-2 branch type)
Finish	Enclosure: HIPS resin, off-white (RAL 9010 or equivalent color) Grille: Surface-treated steel plate net, off-white (RAL 9010 or equivalent color), paint
Dimensions	Ø186 x 251 (H) mm (Ø7.32" x 9.88") (unit only)
Weight	2.1 kg (4.63 lb) (unit only)
Included Accessories	Ceiling bracket x 1, Mounting hanger x 1, Ceiling cover x 1, Speaker mounting screw (4 x 16) x 4

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 ² (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	Panel1, Ceiling reinforcement ring1, Safety wire1, Paper pattern ...1
Optional Accessories	Anchor hanging bracket: HY-AH1, Back can: HY-BC1, Tile bar bridge: HY-TB1, Trim ring: HY-TR1



WS-400 Series

Wireless Microphone Systems



Powerful set of features combined with exceptional performance and cost efficiency

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

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

Microphone

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

Analog audio

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

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

Included Accessories

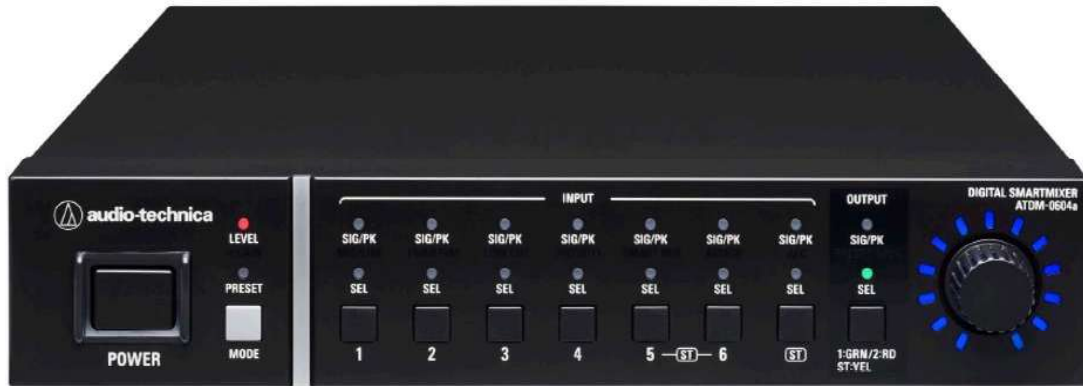
- IR remote controller
- Surface mount adapter
- Screw (M4 x 50 mm) x 4
- Flush mount adapter
- Flush mount cover
- Screw (M4 x 10 mm) x 12
- Hole cover
- Nut x 4
- Snap bushing x 2
- Tile bridge A x 2
- Tile bridge B x 2
- Tile bridge C x 4
- Seismic cable
- Zip tie
- Safety belt
- Euroblock connector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

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

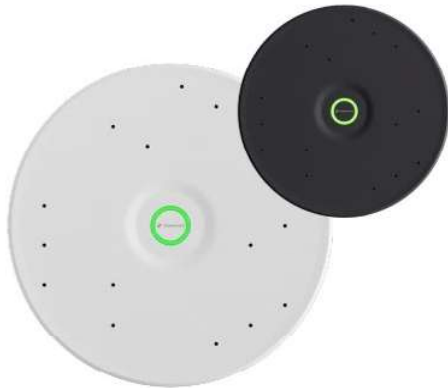
For product improvement, the product is subject to modification without notice.





TeamConnect Ceiling Medium

Ceiling microphone array



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

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
- Safety rope
- Suspension kit

With a coverage of up to 40 m², 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
- Safety rope
- Suspension kit

CONTROL SOFTWARE

Sennheiser Control Cockpit



free download at:

www.sennheiser.com/control-cockpit-software

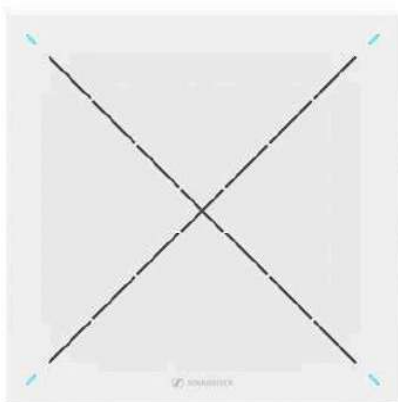


TeamConnect Ceiling 2

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 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
443	HTTPS	Web UI
443	HTTPS	SSC update service

Product
Sennheiser Control Cockpit
Sennheiser Control Cockpit

Transport layer

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

Product
TeamConnect Ceiling Medium
TeamConnect Ceiling Medium
TeamConnect Ceiling Medium
TeamConnect Ceiling Medium



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



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



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 its Chairman and Delegate units using CAT5e STP LAN cables.





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.

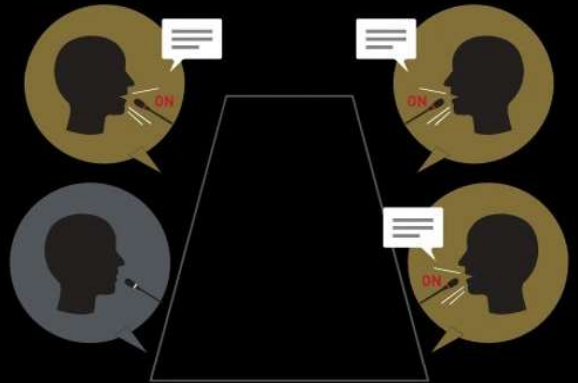
Setting for Number of Open Microphones

- 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.

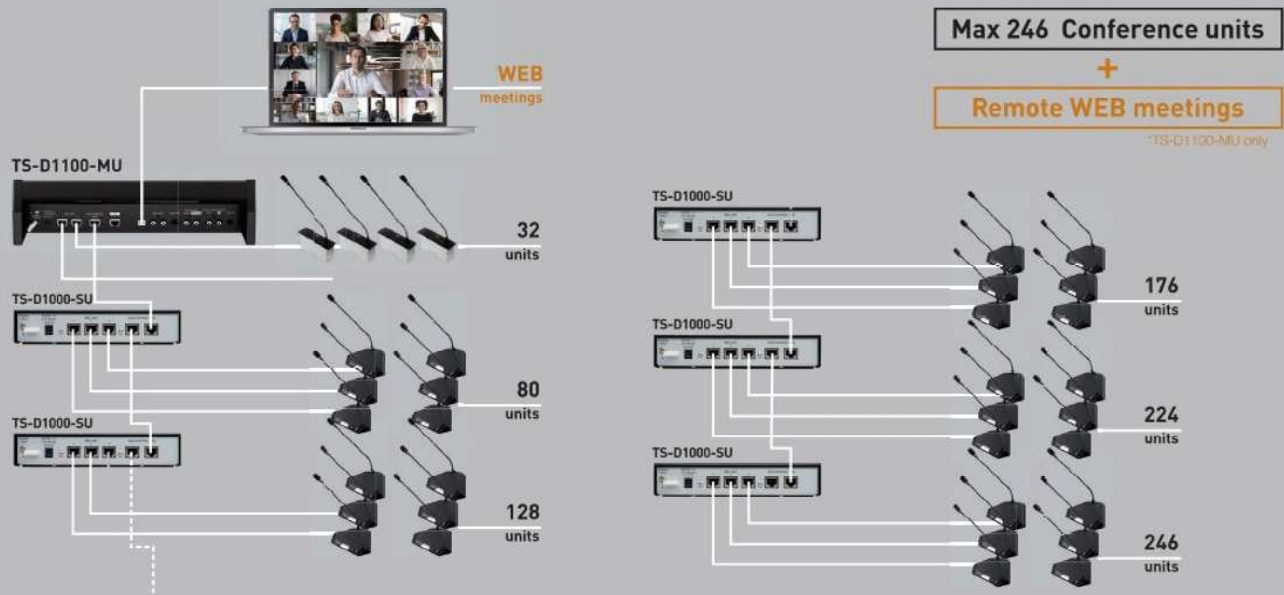


Flush Mount Type

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



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.

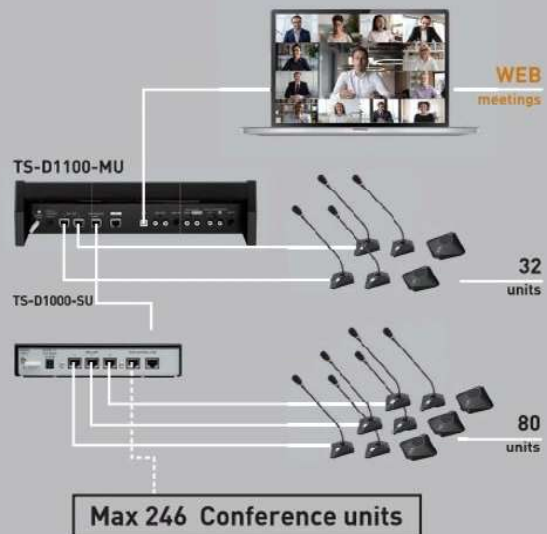
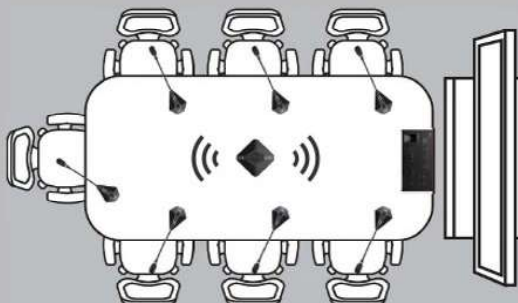
TS-D1100-MC

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.

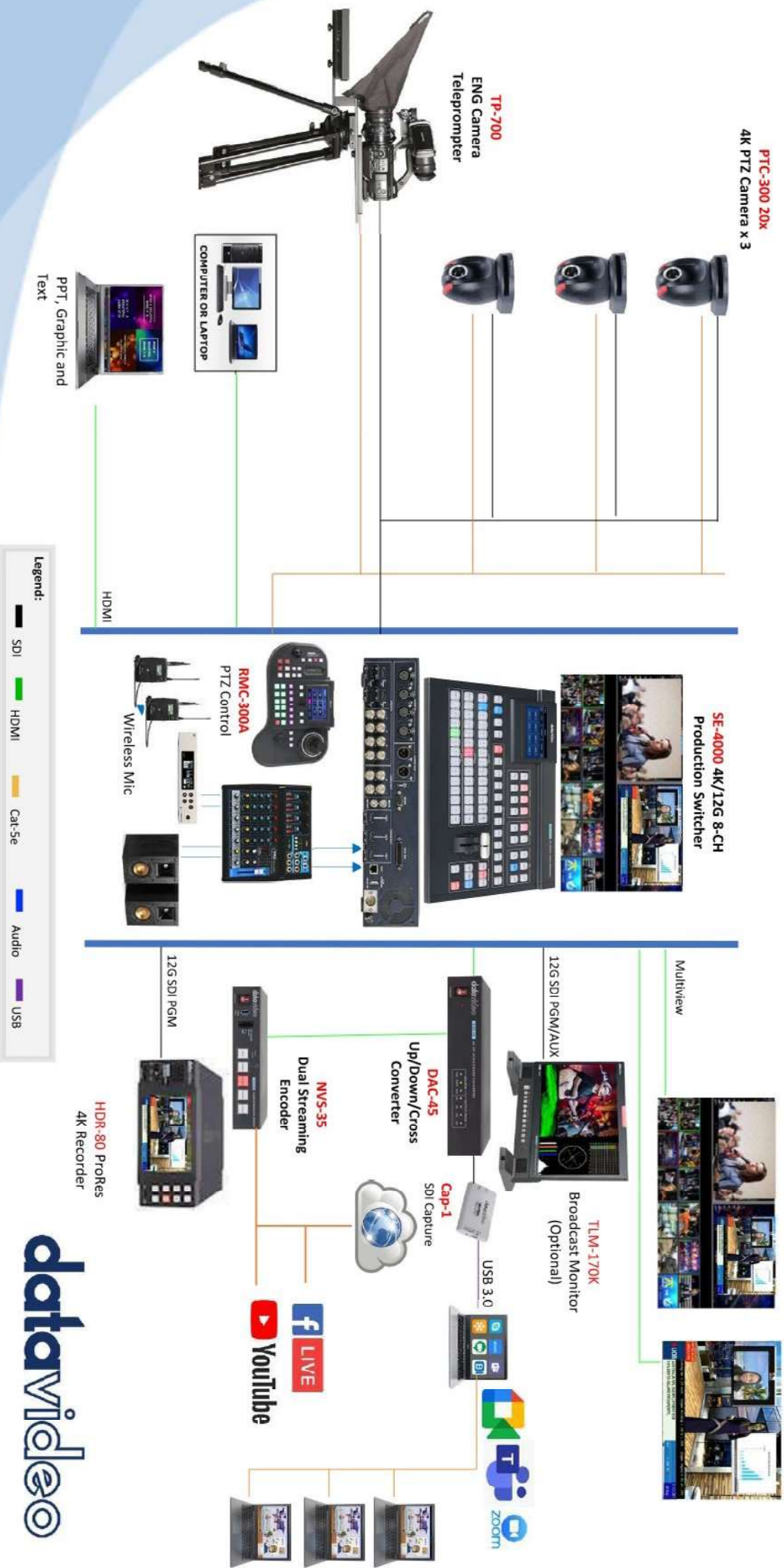


Datavideo SE-3200 Educational Studio Recording & Streaming solution

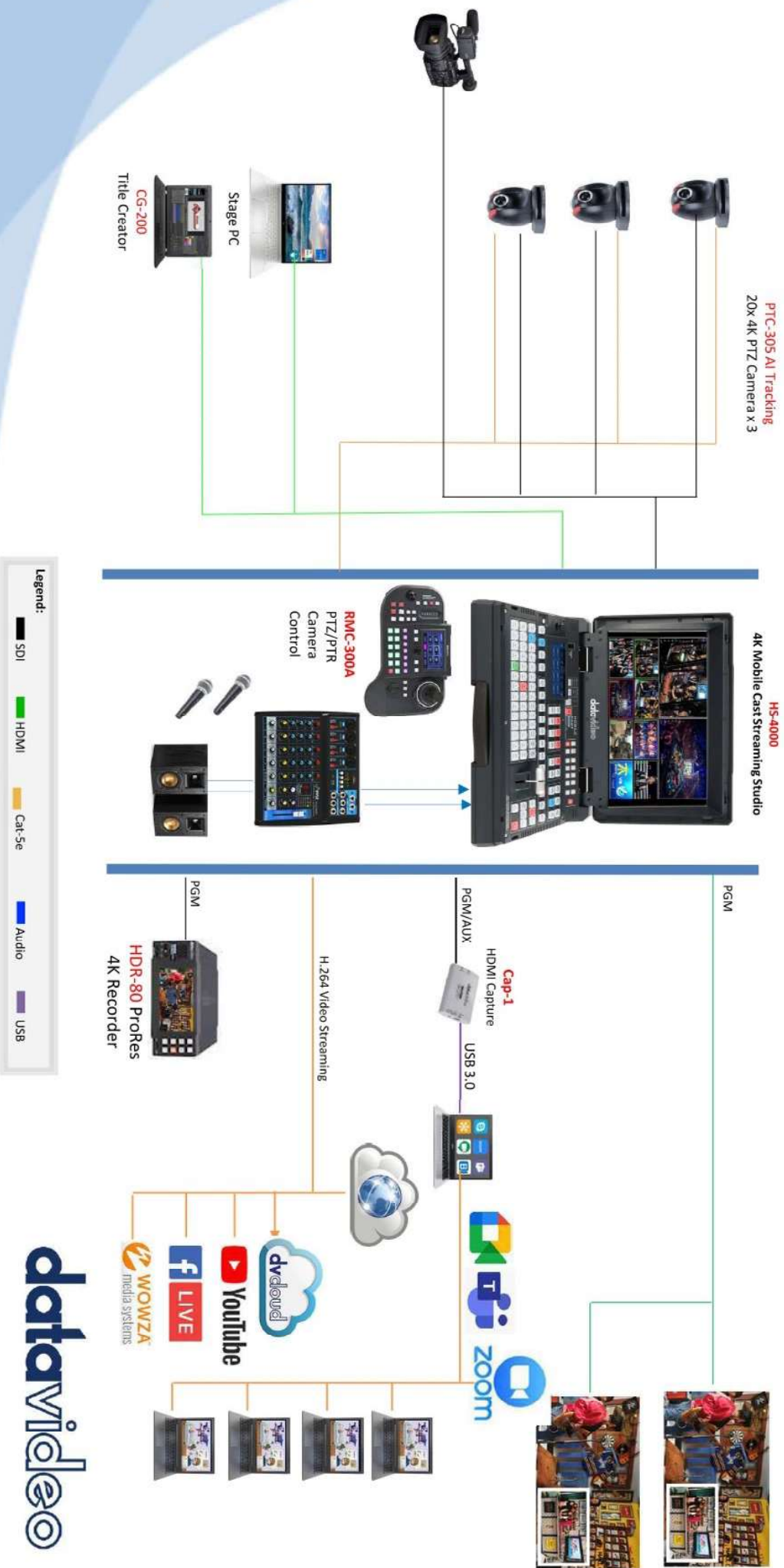


datavideo

Datavideo SE-4000 4K Recording Studio Solution



Datavideo HS-4000 4K Recording Studio Solution



TVS-2000A Solution for Content Creation



PTC-305 x 2
4K PTZ Camera



TP-900 with PTC-305



DAC-70



DAC-70
VGA/DVI to SDI



TLM-170V
17" Scope View
Production Monitor



TVS-2000A
Virtual Studio System



AD-300



Legend:

- SDI
- HDMI
- Cat-5e
- Audio
- USB

PGM



DAC-8PA
SDI-HDMI Converter



PGM/Foldback Display

Mp4/MOV Recording



NLE

PGM to SE-4000