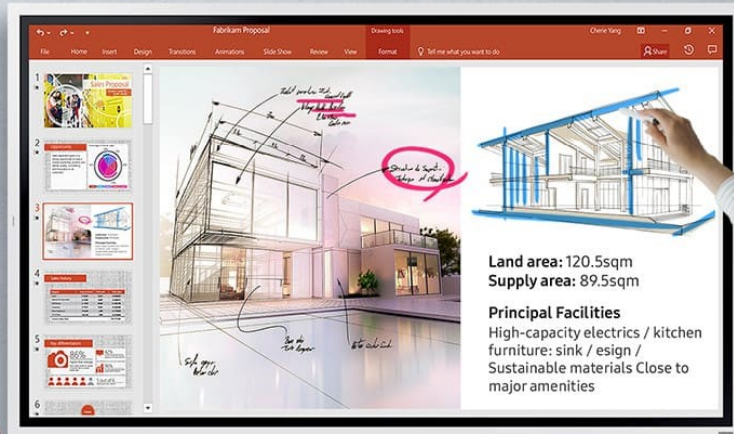


# Closed-loop Electronic Whiteboard (CLEW)



Model: CLEW-Petra-55"/65"/75"/86"/98"

## PRODUCT FEATURES

<b>Eight machines in one</b>	It will become a conference tablet, which integrates the functions of a projector, a screen, an electronic whiteboard, a TV, a computer, a tablet, a set-top box, and a speaker;
<b>Android System</b>	With Strong compatibility, can install various software, meet the needs of office, teaching, training, display, etc., with a wider range of applications.
<b>Writing whiteboard</b>	Using ±1mm high-precision original handwriting writing and pen point personalized writing two technologies, 20-point touch, 1 finger writing, 2 finger zooming, 3 finger dragging, erasing the back of the hand, copying and inserting are free, and you can add pages at will, Preview, writing content can be saved and shared by QR code.
<b>Internal magnetic infrared touch pen</b>	The touch pen is embedded with magnetism, which can directly absorb the positions corresponding to the left and right L and R of the front frame, making it easier to write and place.
<b>Document comments</b>	PPT, Word, Excel, PDF and other file formats can be read directly, and comments can be made in any interface.
<b>Wireless projection</b>	Mobile phone and tablet 5G ultra-fast screen transfer, Android end needs to download the same screen software, IOS end directly transmits the screen through AIR PLAY mirroring; laptop wireless same screen, two-way operation, need to be equipped with a wireless same screen device; support four simultaneous screen casting.
<b>VIP reception</b>	Create a welcome ceremony for every visitor at zero cost.
<b>Enterprise Cloud Class</b>	Practical entrepreneur sharing, 4000+ knowledge points, covering practical content such as entrepreneurship, management, marketing, skills, industry, etc., you can learn at will, and share the most effective experience with those who need it most
<b>One-button start</b>	Three-in-one button (energy saving, environmental protection, increase service life)
<b>Exterior design</b>	1.37CM ultra-narrow design, four-corner arc-shaped humanized design with safety considerations.

DISPLAY PARAMETERS					
LCD screen size	55inch	65inch	75inch	86inch	98inch
Maximum display size (mm)	1210×680	1429×804	1650×928	1895×1066	2158.85 × 1214.35
Resolution	3840×2160	3840×2160	3840×2160	3840×2160	3840x2160
Response time	8ms				8ms
Aspect ratio	16:9				
Refresh rate	60Hz				
Chromaticity	1.07B(10bit)				
Colour gamut NTSC (Typ)	72%				
Contrast (Typ)	1200:1				1200 : 1
Viewing angle	178°(H/V)				
Backlight type	DLED				
Screen brightness (Typ) cd/m2	220	250	350	350	450
Life	≥30000 hours				
Touch writing system					
Principle of Recognition	Infrared recognition				
Support system	Windows10/Windows8/Android/Linux/Mac OS X/Chrome				
Touch points	20points				
Minimum identifier	3mm fine tip				
Support the number of fine pens	Write five 3mm fine pens at the same time				
Input method	Fingers, touch pens and other opaque objects				
Response time	≤10 ms				
Touch accuracy	±1mm (more than 90% touch area)				
Writing height	3.5mm				
Way of communication	Full speed USB				
Surface hardness of writing screen	7H	7H	7H	7H	7H
Output coordinates	32767(W) ×32767(D)	Output coordinates	32767(W) ×32767(D)	Output coordinates	32767(W) ×32767(D)

OS	RAM	8G
	ROM	128G
	USB	USB 2.0 HOST(X2)+USB 3.0 X2
	LAN	100M/1000M Ethernet(Network version screen only)x2
	Multimedia	Video(MPG,AVI,MP4,RM,RMVB,TS),Audio(MP3,WMA),Image(JPG,GIF,BMP,PNG)
	Media Resolution	3840*2160
	Wi-Fi	802.Hb/g/n Ethernet(Network version screen only)
	Operating System	Windows 10 Pro

## CAMERA PARAMETERS

Module No	HJC75-S3-H-V1.0
Module Size	L62mm ×W 9mm ×H6.82 mm (±0.2MM)
Object distance	30CM - ∞
Operating system request	Win 10 or Linux2.6.26. Android 4.0 above
Sensor Type	Sensor Type
Array Size	3264*2448 【H*V】
Pixel Size	1.4μm x 1.4μm
Sensitivity	0.65V/Lux · sec@550nm
550nmMaximum Image Transfer Rate	1080P 30FPS
Lens Construction	4P+IR
F/No	2.0
EFL	3.8mm
FOV	77°
TV Distortion	<1.5
IR Filter	650±10nm
AGC/AEC/Whiter Balance	Auto
Support the compression formats	MJPEG/YUV

## ARRAY MICROPHONE PARAMETERS

Microphone type	Linear Isometric Array Microphone
Number of microphone	6
Signal-to-noise ratio	67db
Sensitivity	-26 ±3db
Pickup distance	10 meters
Sampling Rate	16Khz
Number of samples	16bit
Support function	Echo cancellation, beam forming, environmental noise suppression, sound source localization. Four functions
Number of pickup boards	2
Pickup board size	95*6*1.6mm
Main control board size	100*17*1mm
System compatible	Windows7/10 Android6.0 and above

## FRONT IO INTERFACE

Remote control receiving window	1* [Remote control corresponds to this position operation]
PC-USB3.0 interface	1* [It is the USB input port on the front of the built-in computer]
TOUCH interface	1* [Front touch output interface used in conjunction with front HDMI]
PC-AN/USB	1* [This interface is PC-USB2.0]
PC-AN/USB	1* [Built-in Android system use this USB interface]
HDMI interface	1* [Front touch output interface used in conjunction with front HDMI]

## ANDROID SYSTEM CONFIGURATION

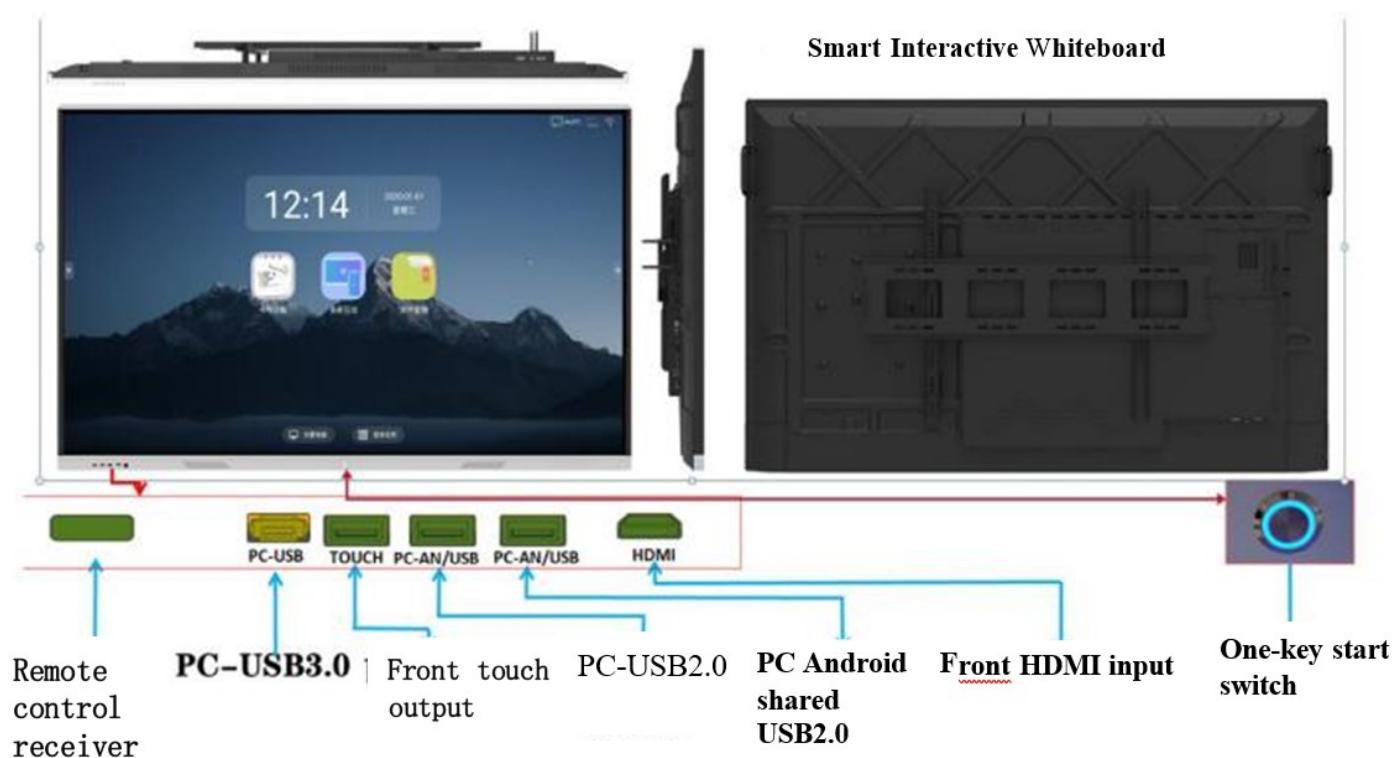
System Version	Android 8.0 / Windows 10	
CPU	ARMCortex-A53*2+A73 or Core i7	
Main frequency	1.5GHz	
GPU	Dual-core Mali-G51	
RAM	3GB DDR4	
ROM	32GB	
Wi-Fi	wireless network	IEEE802.11an 2.4GHz
	Projection hotspot	IEEE802.11 a/b/g/n Dual Band 2.4GHz/5GHz Dual frequency
	Bluetooth module	BT: v2.1+EDR/BT V3.0/BT V3.0+HS/BT V4.0
	Receiving distance	12 m

## ANDROID EFFECTIVE INPUT AND OUTPUT PERIPHERALS PORTS

TV-RF input	1 * Support IEC header, 75ohm
YPBPR input	1 * Earphone terminals (black)
CVBS video input	1 * Three-in-one terminal (black)
VGA input	1 * D-SUB 15Pin terminal (blue); 1 2*10p-2.0 header
PC-RGB audio input	1 * Headphone terminal (black)
HDMI input	2* HDMI2.0 terminal
TF card input	1 * TF card slot
USB input	2 * Horizontal USB2.0 terminal
R232 control interface	1 * D-SUB 9Pin terminal (black)
RJ45 input	1 * Ethernet port terminal
Headphone sound output	1 * Earphone terminals (black)
TOUCH output interface	1 * Standard B-type seat
CVBS video output	1 * Earphone terminals (black)
Coaxial output	1* RCA terminal (yellow)



> Front interface



POWER PARAMETERS					
Size	55inch	65inch	75inch	86inch	98inch
Power input	100-240V~50/60Hz				
Maximum power consumption of the whole machine (without PC)	95W	≤135W	≤195W	≤285W	≤360W
Standby power consumption	≤0.5W				

## AUDIO AND VIDEO PARAMETERS

Soundtrack		Two-channel
Power		2×12W (full frequency)

## ENVIRONMENTAL FACTORS

Operating temperature	0°C~40°C
Operating humidity	10%~90%RH
storage temperature	-20°C~60°C
Storage humidity	10%~90%RH
Altitude	Below 5000 m

### > Appearance Size Packaging Specifications

Size	55inch	65inch	75inch	86inch	98inch
Shell material	Aluminum profile metal				
Front frame colour	Upper and lower silver, left and right black [standard], all black and all silver can be customized				
Overall dimensions (length × width × thickness)	1257.6*743.6*84.7mm	1482.7*879.5*91.8 mm	1704.6*1006.9*91.8mm	1950.8*1145.5*91.8mm	2216.0*1313.5*131.3mm
Packing size (length × thickness × height)	1370*880*180 mm	1600*1000*200 mm	1800*1130*200 mm	2060*1270*200 mm	2320*1430*230 mm
VESA hole specification (length × width)	400×400mm	400×500mm	400×600mm	400×800mm	400x1000mm
net weight	27KG	40KG	56KG	72KG	87kg
Gross weight	32KG	48KG	66KG	83KG	101kg



> There are three themes interfaces in the Android System which can be switched



Golden Conference Mode



Conference Mode



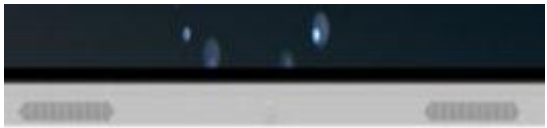







Teaching mode

> Multi-screen interactions: Screen Projection from Android Phones, iPhones, and Laptops to the large-screen display



## > 55/65/75/86 Product Appearance Characteristics

Ultra-narrow bezel design	
Outer corner protection, arc-shaped, 0 seams	
Front speaker sound cavity design	
One-key start switch	
Front three-way usb3.0 follow + Type C	
The pen is attached to the front frame for easy access	
Built-in 8 million camera design in the front frame	
Built-in isometric array 6 microphone design	

## > Packaging Accessories

Internal magnetic infrared writing pen	X1
Remote control	X1
Manual	X1 [Includes warranty card]
Certificate of conformity	X1
Power cable	X1

## > Two Installation Methods



Wall Mount



Mobile Stand

RECOMMENDED MEETING TABLE SIZE				
Recommended model size	55 (inch)	65 (inch)	75 (inch)	86 (inch)
Area	10-20 m <sup>2</sup>	20-30 m <sup>2</sup>	30-40 m <sup>2</sup>	≥50 m <sup>2</sup>
Number of people	5-8	20	35	≥50

## > With Universal All-In-One Wall Mount Bracket (For 55-86 inches)



1. Level measurement



2. drawing



3. drilling



4. Install the rack



5. Install the all-in-one

## > Universal All-In-One Wall Mount Bracket Parameters

Bracket model	HY-B01
Product color	Matt black
Use material	Selected thickened cold rolled steel
Weight capacity	≤80Kg
From the wall	80 mm
Description	One-piece stamping without splicing

> **Optional Trolley-type Luxury Mobile Stand (Applicable to 55-86 inch)**



**Option 1**



**Option 2**

Options	Option 1	Option 2
<b>Product colour</b>	Matt black	
<b>Use material</b>	High-quality cold-rolled steel, surface pickling process treatment, black fine frosted electrostatic spraying	
<b>weight capacity</b>	95Kg / 70lbs	136Kg / 100lbs
<b>Lifting height range (level off the ground)</b>	1280 mm to 1700 mm	
<b>Load-bearing middle pallet (place documents)</b>	20Kg / 100lbs	
<b>Base area size</b>	L1000 x W550 mm(4 nylon casters with foot brake function)	L1120 x W650 mm(4 nylon casters with foot brake function)
<b>Package size</b>	L1590 x W630x H220 mm	
<b>Recommended applicable whole machine size</b>	55 inch~65inch	75 inch~86inch

- **Optional** Lifting mobile bracket Can be tilted 90° Mobile Stand  
(Applicable to 55-86 inch)



## ➤ **Optional Wireless same screen device**

Intelligent wireless screen device, realize the wireless projection of the computer to the conference tablet, two-way control, interactive collaboration, simple and convenient



### > **Wireless same screen parameters**

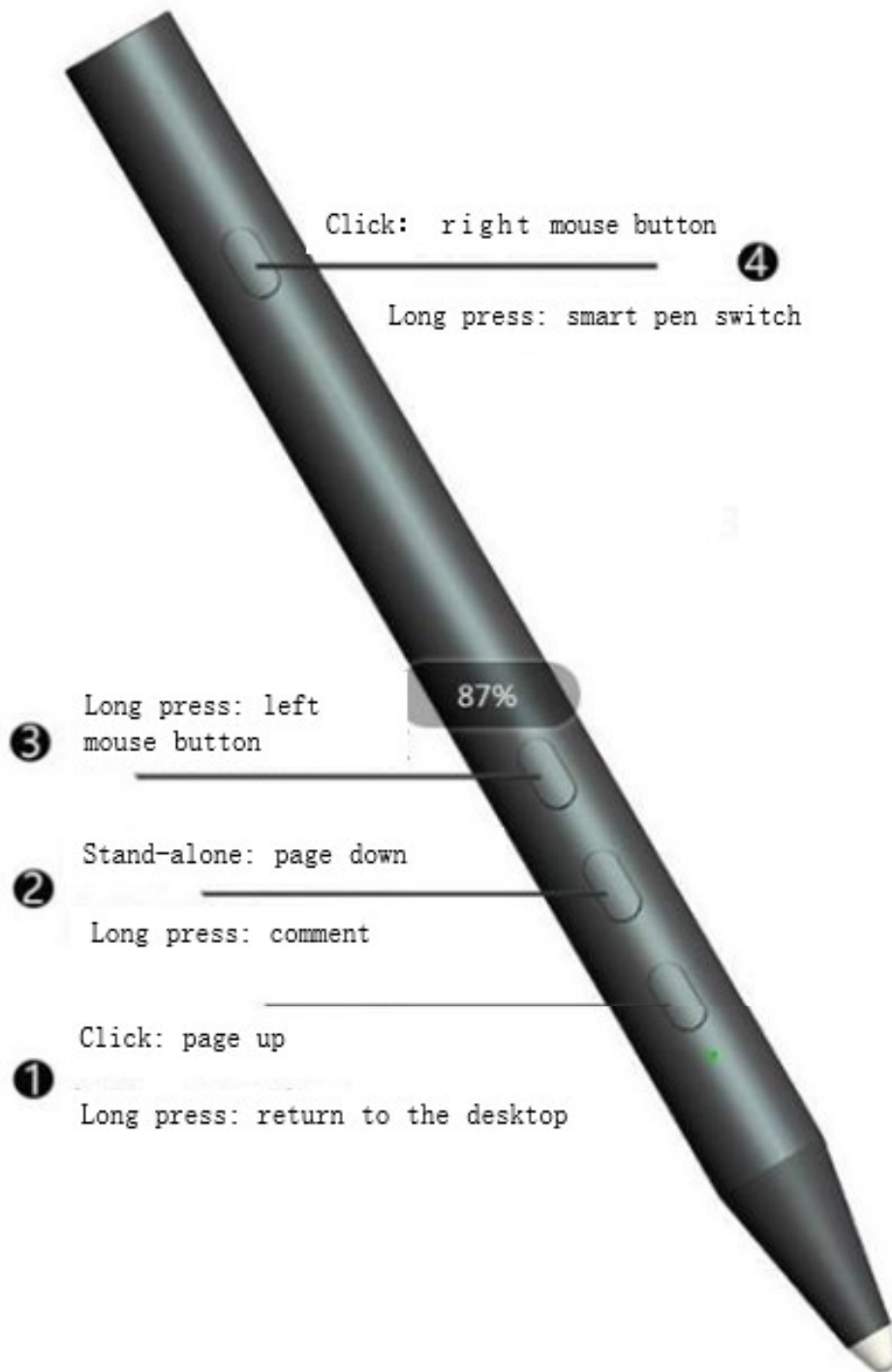
<b>Model</b>	QS36--2
<b>Configuration installation</b>	Free configuration, free installation
<b>Interface</b>	USB
<b>Support system type</b>	Windows 7/8/10, Apple Mac
<b>Resolution</b>	720P~1080P
<b>Frame rate</b>	Audio and video 30~60 frames
<b>Overall delay</b>	90~180ms
<b>Display mode</b>	Support extended desktop (Windows7/Win10)
<b>Touch control</b>	Support 10-point touch return (Windows 7/8/10)
	Support mouse mode return (Windows, Mac)
<b>Number of connections</b>	1~8 (If you need more than 8 channels, you need to configure additional engineering routers)
<b>Maximum number of simultaneous display</b>	1~9, depending on the receiving end
<b>Wireless rate</b>	Transmitter 300Mbps
<b>Wireless transmission protocol</b>	IEEE 802.11 a/g/n/ac
<b>Frequency band</b>	5.8G
<b>Encryption</b>	AES
<b>Verification protocol</b>	WPA2-PSK



## ➤ **Optional Intelligent Page Turning Pen**

Plug and play, touch writing, full-channel PPT page up and decrease control functions.

### **Smart whiteboard pen**



## > Application Scenarios



Training institution



Remote negotiation



Academic exchange



Makerspace



meeting room



Training Courses



family entertainment



Work discussion

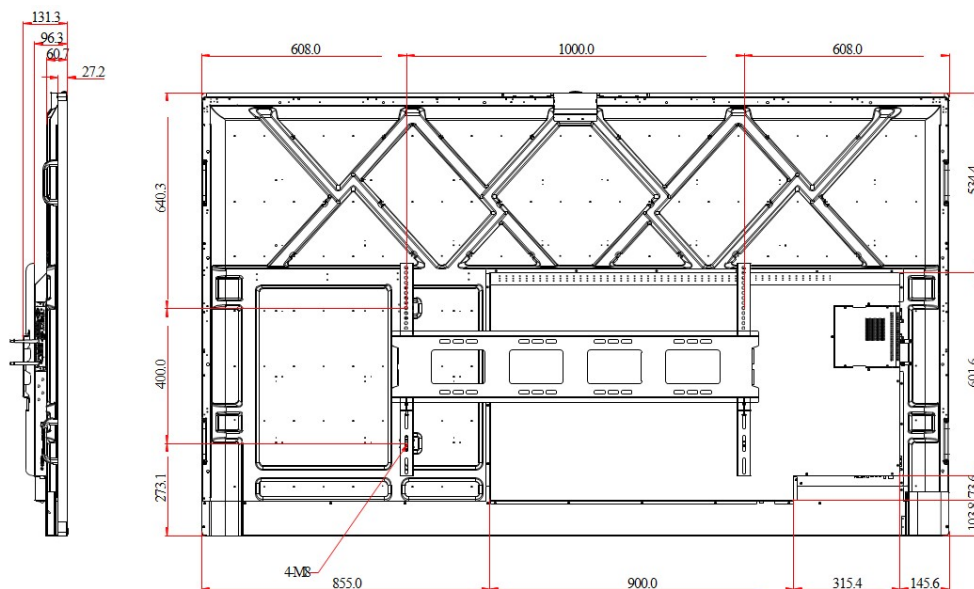
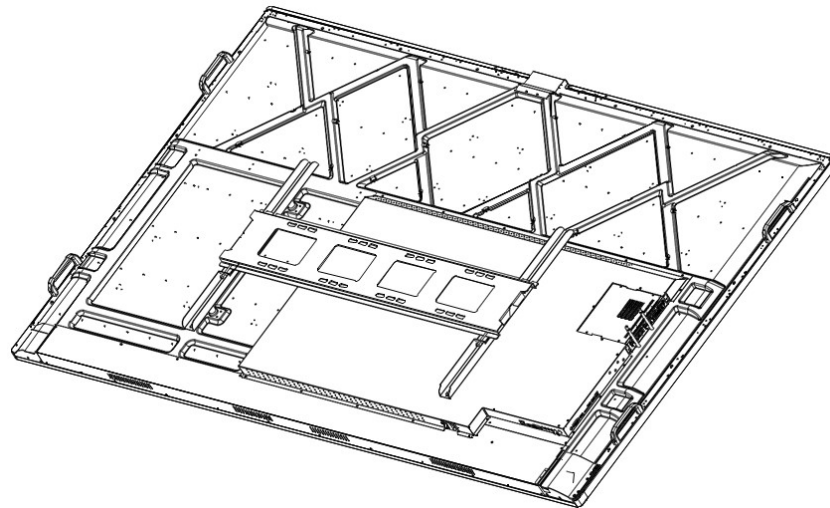
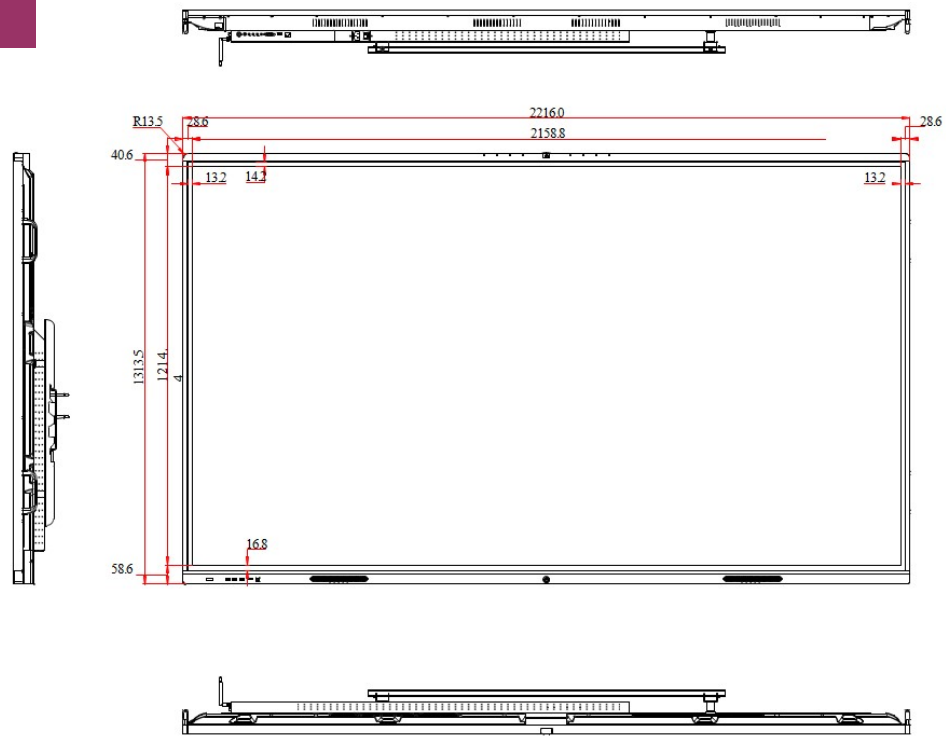


Early Childhood Education



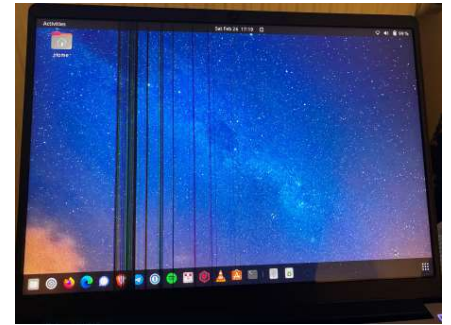
video conference

## Dimension:



## Benefits of using single Large screen compared to Tiled Video wall (55" or 46")

1. Colour matching between panels difficult
2. RS232 and DP cable looping will cause more connectivity problems
3. No matter how narrow the bezel is, lines between panels are STILL visible
4. Ultra Narrow bezel require Extremely precise pop-out brackets, slight clash on the bezel will cause lines to appear thus display quality compromised
5. Need very skillful personnel to do alignment of the bracket, thus costly to maintain.
6. Precise pop-out bracket means costly to install, and over time, installation will drift and gap between panels will appear after 1-2 years.



## Single large LCD panel, 98" do not have the above problems

1. Display quality is good, 4k native quality. For 4K quality, video processor or switcher are expensive.
2. No Patching required on the switching
3. With CLEVER, you can practically cast any device with an URL onto the video wall from Mobile devices to CCTV, not limited to only notebook or mobile devices.
4. Bracket to mount a single monitor will be much easier and can be made mobile easily (based on the conditions of the meeting rooms)
5. To run HDMI cable from Equipment room to Meeting room 4, it require costly Fiber HDMI cable and display quality may not be ensured
6. With CLEVER, we can bridge ALL 8nos meeting rooms together and keeping only 1 equipment room
7. No noise generated from server if using CLEVER
8. A single 98" LCD panel is larger than 2x2 46"(92") but slightly small than 2x2 55"(110"), with the + line in the middle disrupting viewing experience.
9. Single large screen will incorporate electronic white board function, thus not necessary to have white board or marker run out of ink or color or duster or accidentally used a permanent marker to write.



## Using Video Wall for Presentation



1. Using a 98" LCD instead of 2x2 arrangement as video wall.
2. With built-in **CLEVER**, notebook or mobile devices can cast to the video wall wirelessly.
3. No HDMI cable is required
4. Content can be projected from any workstation in the network.

## Using Video Wall as an Electronic White board



1. 98" LCD can be doubled as an Electronic White board.
2. All sketches or text can be saved and shared or print-out at a later stage.
3. Combination of presentation from notebook or mobile devices can project their screen onto Video Wall.

## Using Video Wall for Video conference



1. With **CLEVER**, the Video Wall can be used for Video Conferencing.
2. **CLEVER** is able to bridge different web conferencing tool, eg. Zoom + Teams + Webex



1. With **CLEVER**, the meeting rooms can be converted into a Remote Crisis Management Center.
2. **CLEVER** is able to bring video footage from crisis site, show reports to access or monitor from a more peaceful location.

## Bridging Video Walls and Presenting from 1 location

Board Room



1. During a large group event, all the video walls can be bridged to present from one location and broadcast to all or specific meeting rooms.

Meeting Rooms 1-3

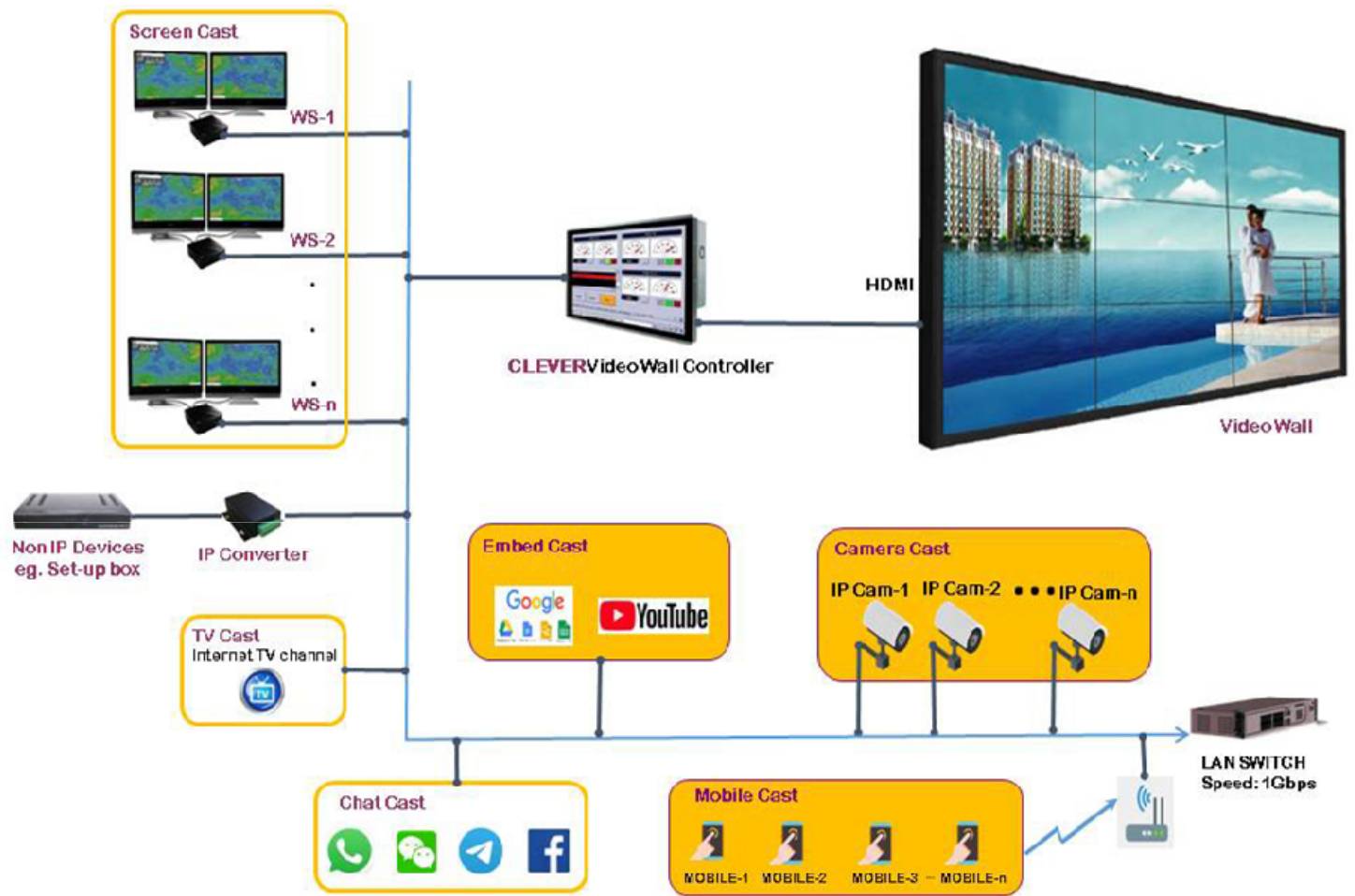


Meeting Room 4



Meeting Rooms 5A-C





1. **CLEVER** is an IP based Video Wall Controller
2. No Video Wall processor is necessary