



SHARP

Productivity doesn't just depend on the time that we put in, but also on the quality of work we do – using the best possible tools.

For teamwork to be truly effective, people need to easily connect and share ideas and information in a comfortable environment – whether they are working in a meeting space, conference room or anywhere in the world.



The Windows collaboration display from Sharp is a next generation 70" Class (69.5" diagonal) 4K Ultra HD interactive display that enables better space utilization and more productive collaboration in meetings, boardrooms, training rooms, technical reviews and

almost anywhere else.

As well as using Sharp's award-winning display technology, together with a built-in microphone array, 4K camera and IoT sensor hub, it exceeds Microsoft's specifications and also works seamlessly with the best Microsoft 365 collaboration tools. Furthermore, it's all connected to the cloud to deliver outstanding ease of use and enable the continual analysis of meeting room conditions and usage.

Our Windows collaboration display has won an award for Best New Collaboration Board in the 2019 Best of ISE Awards (rAve publications) and for 2019 Top New Technology (TNT) award for displays. (CE Pro and Commercial Integrator magazines).*



Walk in, plug in and work together

Setting up the technology needed for a meeting can be very time consuming and frustrating. But you simply "plug and play" with the Windows collaboration display from Sharp.

It is so simple to walk into a room, plug in your device and start working together straightaway. Just connect its 8m long USB-C cable and it automatically switches to the right input for whatever information you want to display. You're instantly ready to start your meeting – saving up to 10 minutes* time trying to set up connections.

This single USB-C connector, which is also used with the latest Windows and Apple® Mac® notebooks, provides high-speed, high-bandwidth data transfer for multiple functions, including 4K video, high-quality audio, internet network and application data. And it can also provide power for attached mobile devices. However, for added flexibility, a wireless connection is included for lower bandwidth data transfer. And, any hardware without a USB-C connection can still use the full functionality of the Windows collaboration display using a HDMI and USB Type B cable combination.

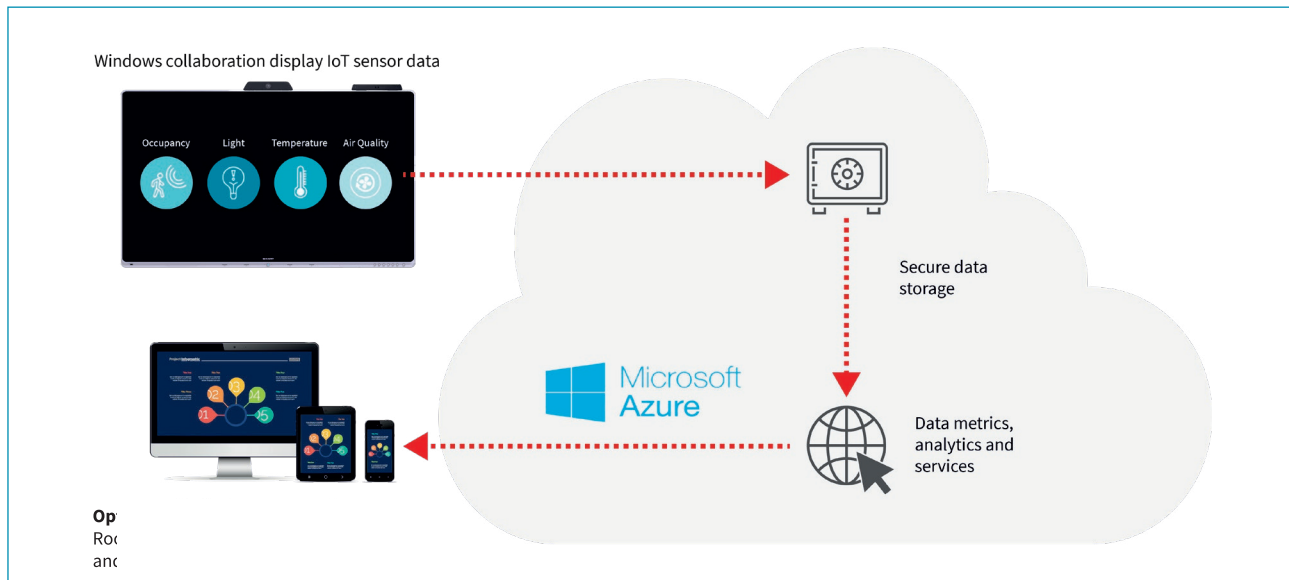


In addition, the Windows collaboration display has received Crestron Connected® certification. Users can set timers to remotely turn them off, saving a great deal of energy. Employees can stay focused on more important tasks instead of spending time setting up in-room meetings.



Better places to meet

Creating a comfortable environment in your meeting rooms pays real dividends in terms of helping people concentrate and improving productivity. The Windows collaboration display from Sharp has built-in sensors that can connect to the Microsoft Azure Digital Twins IoT platform, and other commercially available cloud and subscription services such as Sharp WorkSpace Intelligence,* as part of a smart building environment. Azure is a powerful, managed cloud service that acts as a central data store and can provide additional data processing intelligence. By collecting and analyzing real-time data from across the digital and physical worlds, it automatically monitors ambient conditions and helps with optimization of space utilization once connected to a smart building back-end analytics system.



IoT sensors

- **Occupancy** – a motion sensor detects the presence of any people in the room. An additional artificial intelligence (AI) service can analyze this data, automatically switch on displays and other equipment to enable a faster setup, and help improve the scheduling of room bookings. During a meeting, the sensor can also be used by another AI service to detect the location of whoever is speaking and control a three-dimensional microphone array to focus on the relevant person.
- **Temperature** – its intelligent climate measurement can be used by an AI service to automatically regulate the room temperature and relative humidity to make the room feel more comfortable. By intelligently optimizing the operation of the air-conditioning it also helps reduce costs.
- **Light** – an ambient light sensor helps with intelligent lighting control, as it automatically measures the level of light. An AI service can then adjust the screen to compensate for the in-room lighting with the changing day and night time conditions, which can reduce eye strain and save money on wasted energy.
- **Air quality** – The Windows collaboration display continually measures and analyzes the ambient air quality** in the meeting room and can assist another AI service in automatically adjusting the air-conditioning to provide the best possible working environment.

* Available later 2019.

** Measure the levels of eCO₂ (Equivalent Carbon Dioxide) and TVOC (Total Volatile Organic Compounds).



Actively using the data collected by the Windows collaboration display and making physical changes to how rooms are used and controlled is best achieved using the services of additional smart building facilities managers. Sharp is working with leading businesses to build a comprehensive ecosystem for the creation of smart meeting spaces that enable truly effective collaboration.

When ideas are flowing you need to be able to work quickly and intuitively, without having to struggle with the technology.

Even in the most highly interactive meeting, the Windows collaboration display from Sharp ensures that information can be shared and captured quickly and precisely.

Simply much easier

With its 10-point Projected Capacitive (PCAP) touch technology and direct optical bonding, it provides a more accurate and natural Pen-on-Paper® experience. Writing on-screen is just as quick and effortless as writing on a flipchart or whiteboard. By using either a finger or pen, notes and comments can be quickly added as simple text or by drawing freehand to highlight changes and annotate the information on-screen. This means that in boardroom presentations, you can quickly give the big picture overview, but also focus on key details to keep everyone engaged and 'eyes up'.



Thanks to the Windows collaboration display's exceptional responsiveness and ease of use, it also:

- **Speeds-up collaboration** – users can work together immediately, with little to no training, which encourages more engagement and interactivity.
- **Builds confidence** – users feel more confident and willing to participate and present and share information.
- **Increases concentration** – users can focus on the delivery of content with no technical distractions.

Fast, precise control

The Windows collaboration display comes with a Passive pen as standard. Designed with a precise 2mm tip, this powerful and ergonomic stylus sits comfortably in the hand and enhances the Pen-on-Paper experience. It is ideal for discussing complex technical information or graphics, such as architectural plans or engineering designs, where you need to review even the smallest details.





All you need to do more

Business teams come in all shapes and sizes – from tactical workgroups to large-scale, established project teams – and often span both local and global locations. But to be truly effective, they need to share ideas openly and inclusively.

The Windows collaboration display from Sharp offers the highest quality audio and video and provides the best ways to connect and collaborate using the power and productivity of Microsoft 365 at room scale.*

- **Microsoft 365** provides familiar Microsoft Office applications that enable people to be more creative, work together more effectively and have a more productive experience. It also includes advanced security and device management capabilities to help safeguard your business.
- **Microsoft Teams** is a complete chat, notes, attachments and online meetings solution. It includes annotation, overlay and presentation tools, along with seamless video conferencing and collaboration tools. So whether everyone is in a meeting room or spread around the world, it still feels like you're all together.
- **Microsoft Azure Digital Twins** is an IoT platform that creates a comprehensive model of physical environments. Data from multiple IoT sensors is stored in a reliable and secure private cloud database and can be analyzed, for example, by a third-party smart building dashboard solution, to help optimize the management of office space.

Technology should not only enhance your productivity, but also your workplace.

Imagine a collaborative space where the technology is designed to ensure effortless control and collaboration, but also adds an extra touch of style. That's exactly what you get with the Windows collaboration display from Sharp.



Stylish design

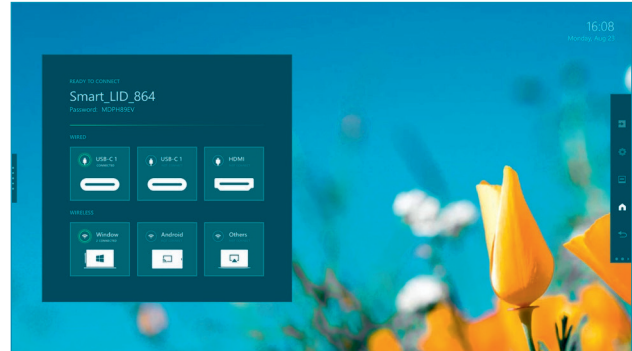
The display has an attractive and elegant edge to edge design that looks good in even the most prestigious corporate boardroom:

- The On Screen Display (OSD) buttons are discretely located on the front for quick and easy control.
- The 4K videoconferencing camera and IoT sensor hub have been integrated neatly on the top of the display.
- An integrated directional array microphone invisibly picks up sound from anywhere within a range of 4-6 meters.



Effortless device sharing

The Windows collaboration display has built-in wireless casting that works with Windows®, Android® and other devices. As a result, you can simply connect your own device to the display and easily share and display any information.

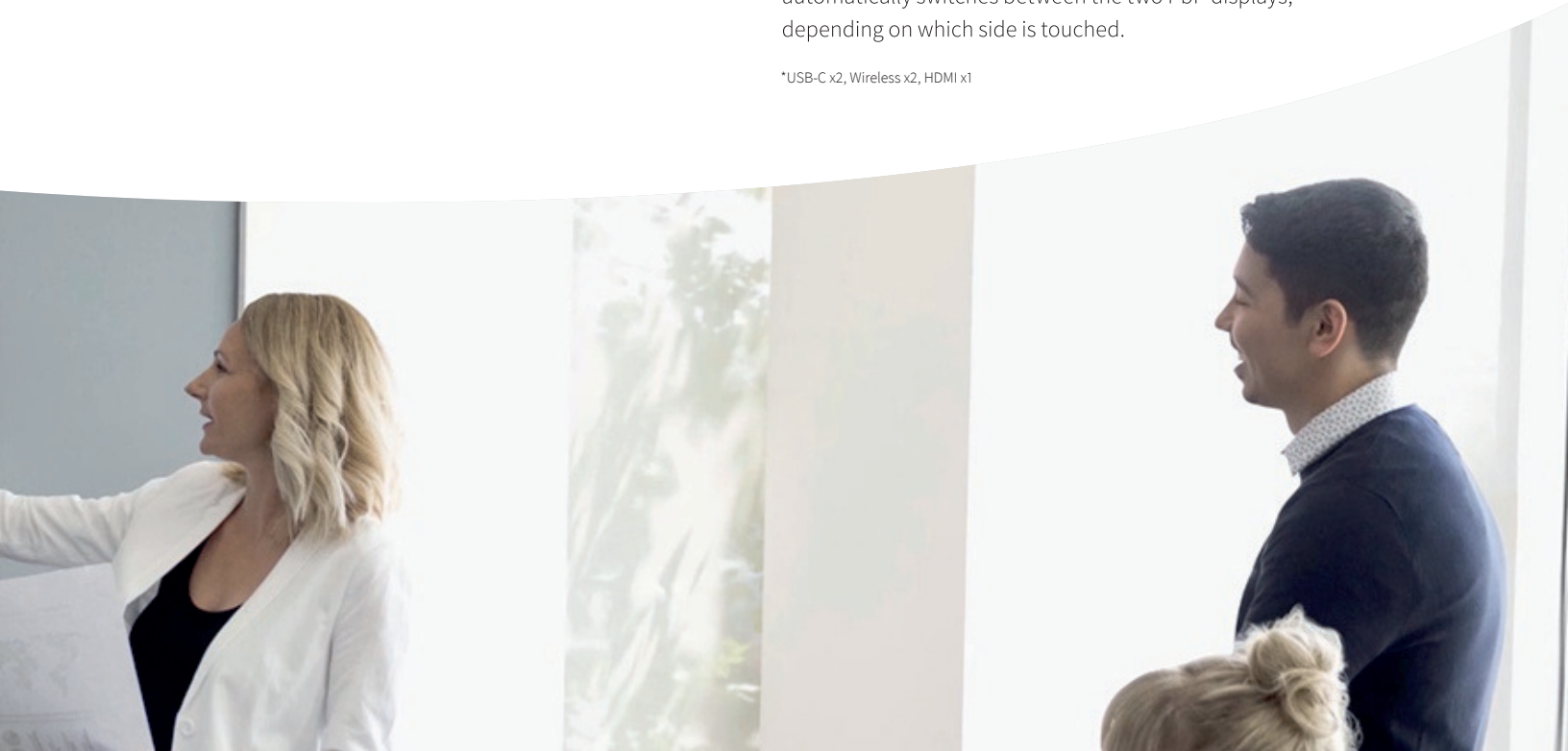


Up to five* devices can be connected simultaneously and the Touch Back control enables you to control screen content from either the display or the source device. So it is ideal for dynamic workgroups discussions or interactive training sessions as it allows you to work more efficiently, encourages active involvement and provides a more effective way of learning.

The Windows collaboration display can split into two separate screens, putting it into Picture by Picture (PbP) mode. The Windows collaboration display will show up to two different connected devices out of the five possible options. The two screens can be any combination of inputs, For example, 1 USB-C + wireless 1, or HDMI + wireless 2.

Touch Back is also a feature that works in PbP mode, with whichever attached device is active. Touch back control automatically switches between the two PbP displays, depending on which side is touched.

*USB-C x2, Wireless x2, HDMI x1



General

Installation	
PN-CD701	Landscape

LCD Panel

70" Class (69.5" diagonal) UV ² A ¹ LCD	
Max. resolution	3,840 x 2,160 pixels
Max. display colours (approx.)	1.06 billion colors
Pixel pitch (H x V)	0.401 x 0.401 mm
Max. brightness (average) ^{*2}	350 cd/m ²
Contrast ratio	4,000 : 1
Viewing angle (H/V)	176°/176° (CR >10)
Active screen area (W x H)	1,538.9 x 865.6 mm
Response time	6 ms (gray to gray, avg.)
Backlight	W-LED, edge lit

Touchscreen

Touch technology	Projected Capacitive (PCAP) touch
Direct optically bonded	Yes
Palm reject	Yes
PC connection port	(2.0) Type B x2
Power supply	Supplied from main unit
Multi touch	10 points
Protection glass	Thickness: approx. 1.9 mm ^{*3} Shock resistance: 130 cm ^{*4}

Pen

Passive touch pen	Standard with the Windows collaboration display
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Wireless Casting

Wireless communication method	2.4 GHz, IEEE802.11 b/g/n; 5 GHz, IEEE802.11 a/n/ac
Supported devices	Windows and Android

Computer Input

HDMI	(HDCP PC/AV signal compatible) x1
USB	(3.0 downstream) Type B x1
USB-C	(PD Profile-4, 60W) x2
Video	HDMI™
Plug & play	Yes
Power management	Yes
Input terminals^{*5}	USB-C x2, HDMI (HDCP PC/AV signal compatible) x1,

Input/Output terminals

Top	USB (3.0 compliant) Type A x2 AUDIO SPDIF-OUT x1
Side	USB (3.0 compliant) Type A x2 LAN port (External Gb EtherNet) x1 AUDIO LINE-OUT (3.5mm-diameter mini stereo jack) x1 LAN port (Internal Gb EtherNet) x1 USB (2.0 compliant, Internal storage expansion) Type A x1 USB-C Output x1
Service Port	USB (2.0 compliant) Type A x1 UART TX/RX port (3.5mm-diameter mini jack) x1

Speaker output	
Built-in	12 W + 12 W
Power supply	100V - 240V / AC 50/60Hz
Power consumption	550W max
Environmental conditions	
Operating temperature	5°C to 35°C
Operating humidity	20% to 80% RH (no condensation)
Dimensions (W x D x H) (display only)	63-29/32" x 3-17/32" x 38-7/16"
Weight (display only)	149.9 lbs.
Main accessories	AC power cord, remote control unit, battery (AA size x2), set-up manual, USB-C cable (8.0 m), passive touch pen

Unified Communications

Output connector	USB (3.0) Type B
Camera resolution	4K @ 30fps
Camera field of view	120°
Microphone	Array microphone x 4
Sound collecting distance	4-6m

IoT Sensor Hub

Output connector	USB (2.0) Type B
AI camera	
Resolution	1,920 x 1,080 @30 fps
Color space	YUY2, MJPG
Field of view	74.8°
Motion sensor	
Sensor type	Microwave
Detection area	140°(Horizontal) / 70° (Vertical) 0dB level
Light sensor	
Selectable LUX ranges	128/256/512/1024/2048
Processing	50/60Hz flicker noise and IR rejection
Air quality sensor	
Gas types	eCO2, TVOC
Temperature humidity sensor	
Temperature range	-40°C to +100°C
RH range	0% - 100%

