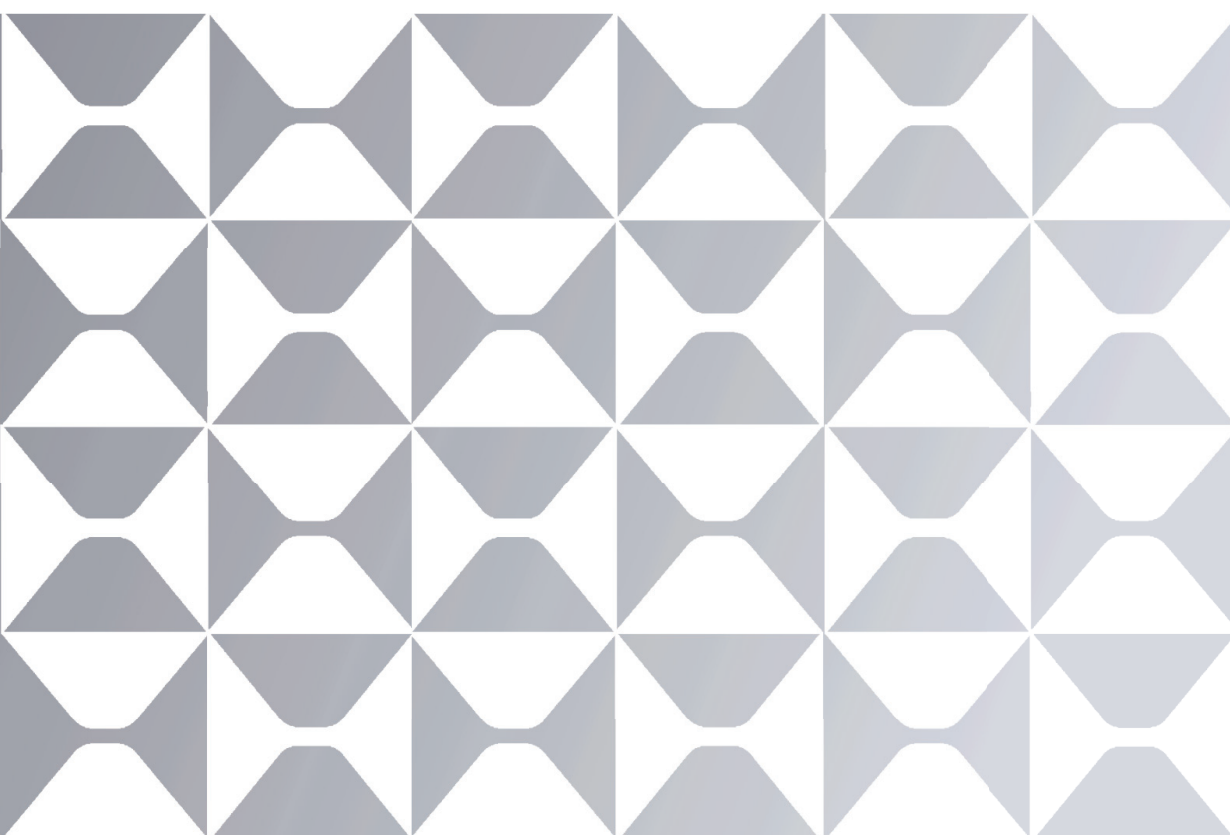


Using MAXHUB Share with CMA/UW Series & V5/V6/V7 IFP Series Technical Whitepaper



V1.5

MAXHUB

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1. Introduction

MAXHUB Share aims to provide a **convenient**, **stable** and **safe** connection and screen-sharing solution. We support Windows/MacOS/Android/iOS and other platforms.



2. Multiple Ways of Connection

2.1 Share by MAXHUB Share App

2.1.1 Join by MAXHUB Share Code

The MAXHUB Share screen-share software enables wireless screen sharing from laptops, phones and tablets. Once connect to the same enterprise LAN, just input the share code and you're ready to go.



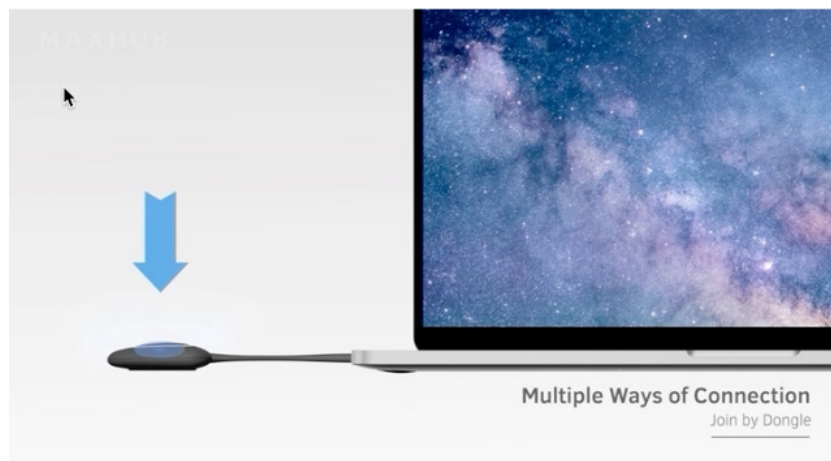
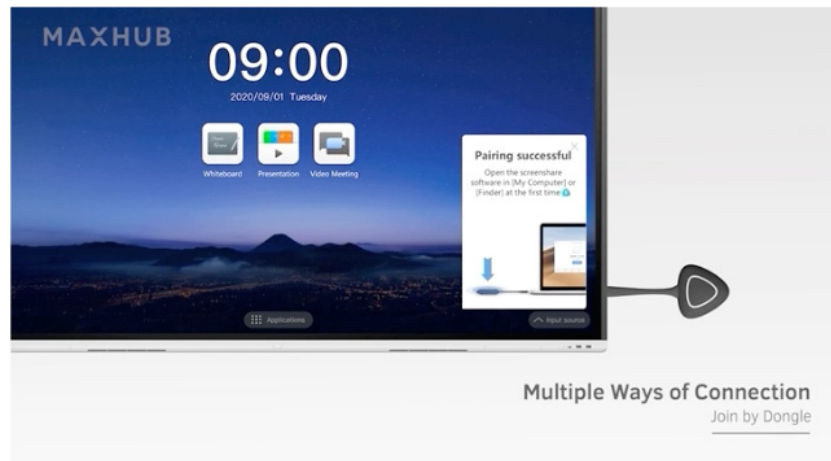
2.1.2 Join by X-Link

Instead of connecting to the same router or hotspot, use the X-Link feature in MAXHUB Share & MAXHUB dongle to screen share wirelessly from laptops without connecting to any network. This will enable you to connect to a nearby MAXHUB V5/V6/V7 IFP faster and more directly.



2.2 Share by Dongle (*MAXHUB dongle feature isn't available in North America)

Pair your wireless screen-share dongle with a MAXHUB Share application, plug into your computer, make a few clicks and share your screen.



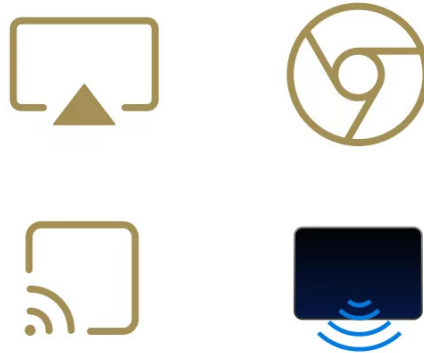
NOTE

MAXHUB offers individual dongle interface options for USB and Type-C.

*MAXHUB dongle feature isn't available in North America

2.3 Other Screen-Sharing Methods

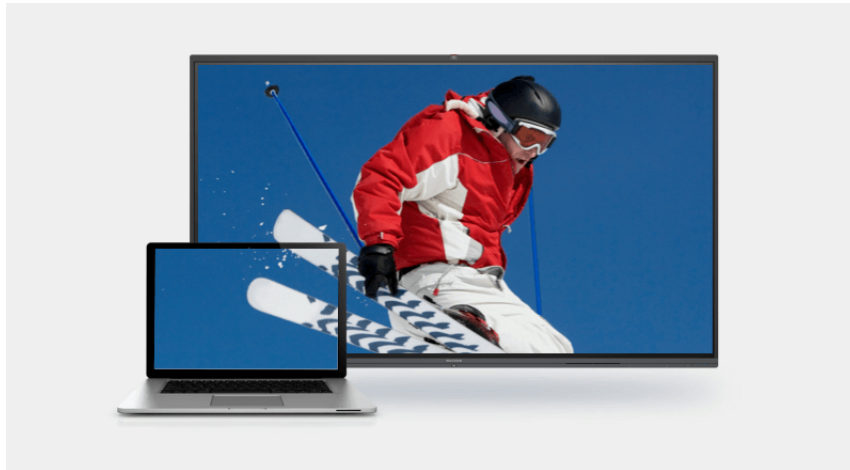
There's no need to rely on virtual-meeting platforms to share your screen. The MAXHUB Share receiver supports multiple screen-sharing methods, including our built-in MAXHUB Share client app, Miracast, AirPlay, and Chromecast.



3. Key Features

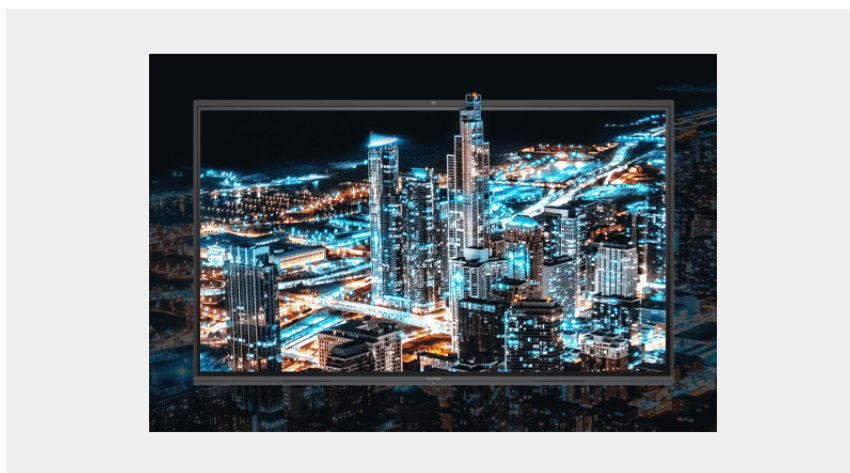
3.1 Ultra-Low Latency

With a 0.09s transmission time, real-time sharing enables you to present high-quality pictures and videos with fluidity and stability.



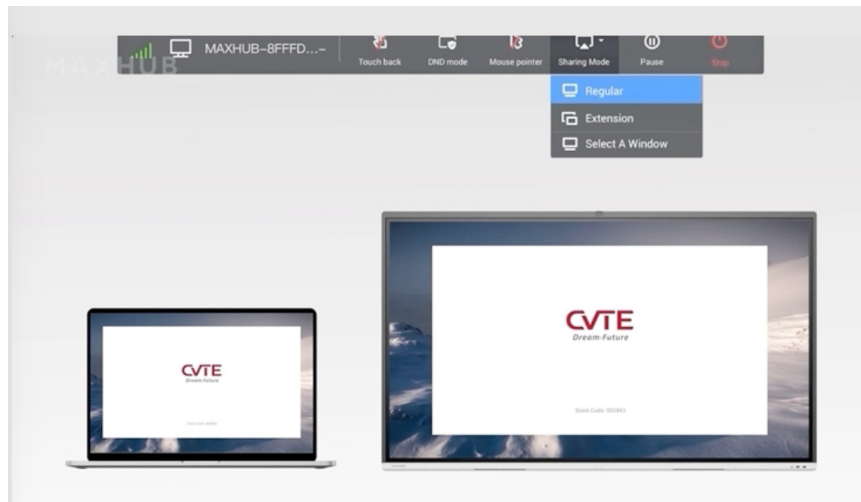
3.2 Share Up to 4K

MAXHUB Share delivers crisp and clear screen-sharing clarity up to 4K resolution, preserving critical detail and enhancing the visual experience when multiple presenters share content simultaneously.



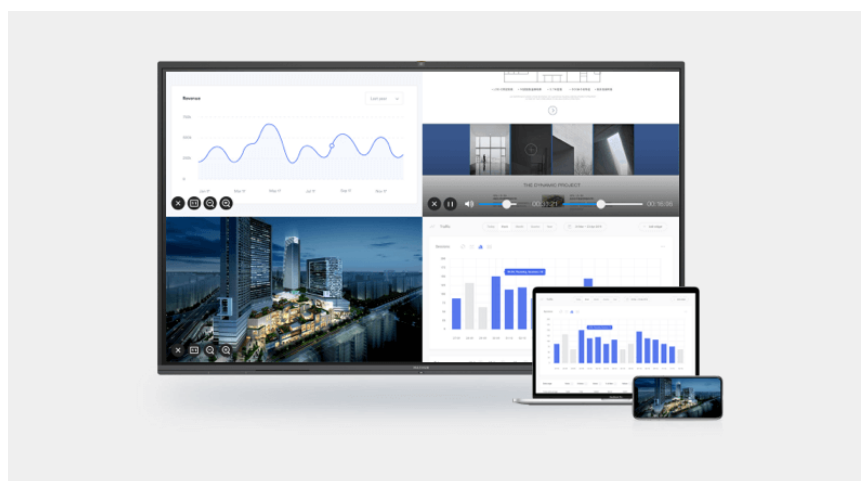
3.3 Screen Duplication or Extension

In addition to the option of duplicating the screen, now MAXHUB Share adds a new feature, shared as an extension, to ensure a more accurate and safe sharing environment.



3.4 Multi-Screen Sharing

MAXHUB Share wirelessly connects the panel to personal devices like laptops, phones and tablet computers. It also allows up to 4 participants to share content simultaneously.



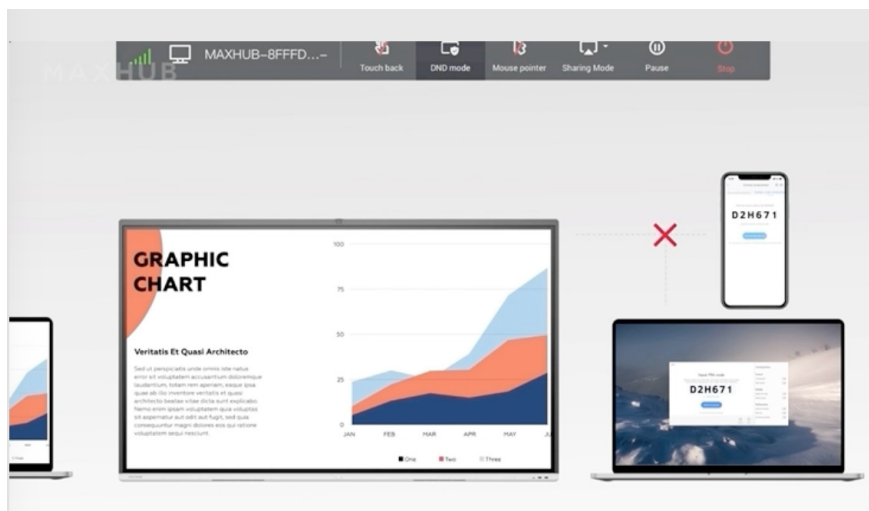
3.5 2-Way Collaboration

With MAXHUB Share, mobile devices can be operated both from the MAXHUB flat panel, or used directly to manage writing, annotating and presenting on MAXHUB. By enabling 2-way operation, MAXHUB Share makes teamwork more flexible and efficient.



3.6 "Do Not Disturb" Mode

When sharing important content in full screen, others may accidentally interrupt and distract you. The "Do Not Disturb" mode enables you to secure the screen-share session and maintain your focus.



4. Performance Parameters

Parameter Name	Parameter Values
Resolution / frame rate	1920x1080 / 30±10fps
	2560x1440 / 30±10fps
	3840x2160 / 20±10fps*
The average screen is delayed	90ms*
Video coding method	H.264, H.265
Audio coding method	opus
Audio and video bandwidth requirements	Still picture: 1 Mbps Dynamic picture: a peak value of 8Mbps
Maximum number of screens	4 Road

*** Test condition:**

ThinkPad X280 (Windows 10,1920x1080, Intel Core i5 8250U 8G, 256 GSSD)

MacBook Pro 2017 Model (MacOS10.15.4,2560 x 1600, Intel Core i5,8G memory, 256 G SSD)

5. Technical Details

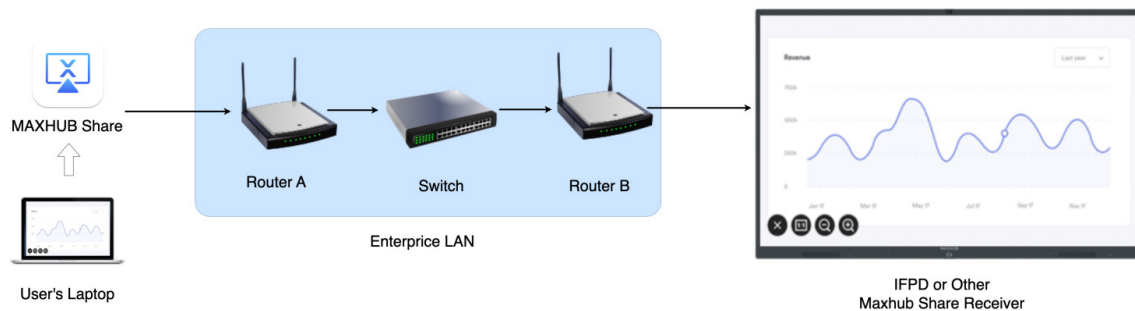
5.1 MAXHUB Share Implementation Details

5.1.1 Share Code

Please refer to: [screen code introduction document](#).

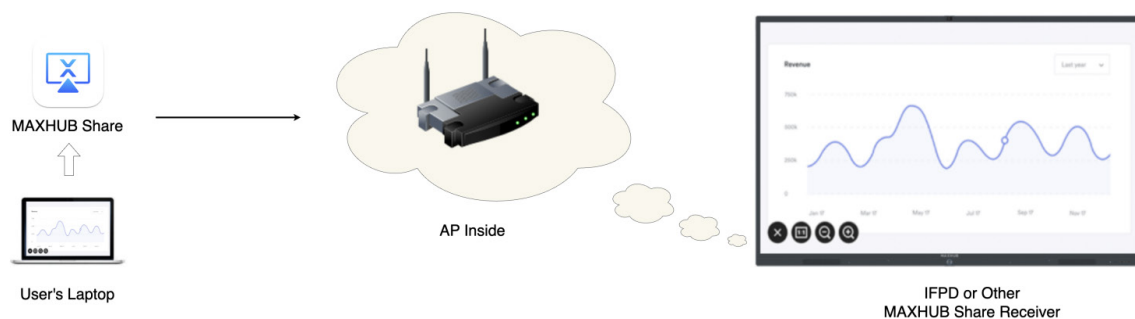
5.1.2 Transmission Method

1) Enterprise LAN :



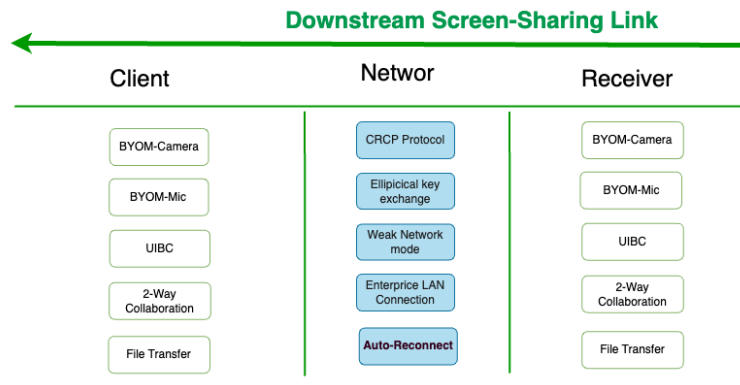
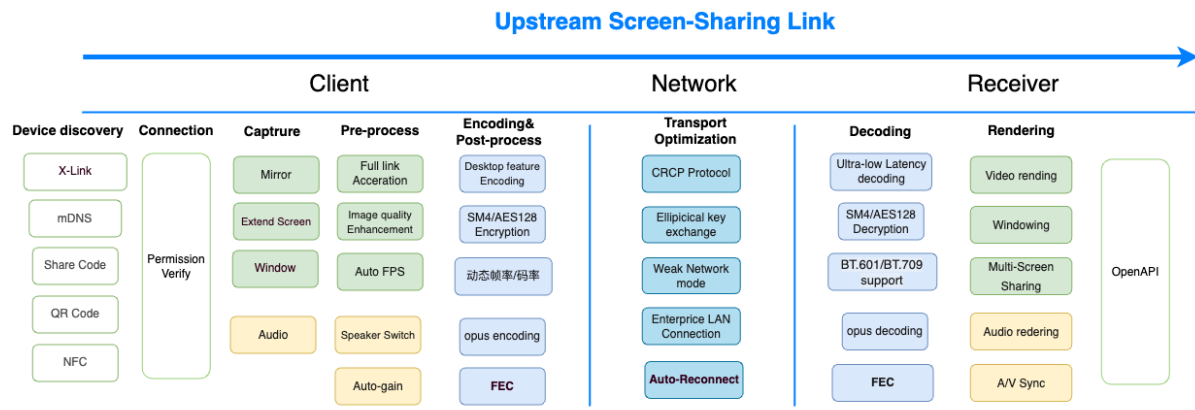
LAN connection is always preferred when sharing content to the IFPD or other MAXHUB Share Receivers (ie. CMA/UW displays, etc).

2) Ap Inside:



If LAN connection isn't feasible, it is also possible to enable the wireless access point (Hotspots) on the IFPD or other MAXHUB Share Receivers

5.2 Technical Frameworks



6. Deployment Requirements

Deployment Requirements		
Laptop (Client side)	Run the platform	Windows 7 And above MacOS 10.11 and above
	CPU employ	Windows: Within 10% * Mac: within 15% *
	Memory occupation	Windows: About 100MB * MacOS: About 100MB *
	Computer system permissions	Authorization is required for the first installation: Windows: Install the expansion screen / touch-back driver (optional) MacOS: the screen recording, the auxiliary function
Enterprise LAN	Port occupied	7382-7400: TCP, UDP protocols 8009: ChromeCast
	Bandwidth requirements	1080 P @ 30 fps : The average is around 1.2 Mbps and a peak is around 8Mbps
	Wireless band	5G WiFi is recommended

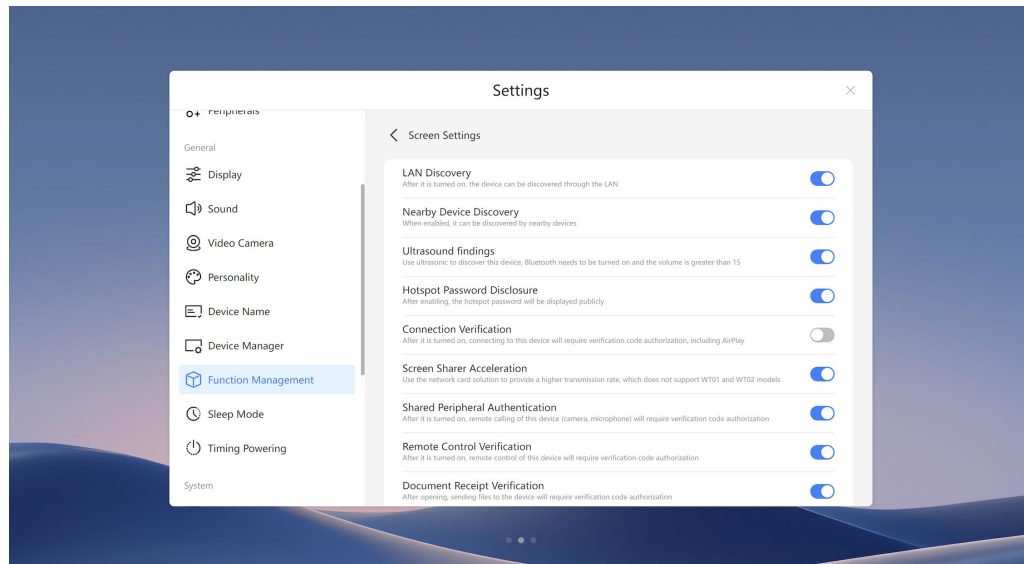
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7. Customization

According to different customer preferences, the MAXHUB Share receiver is set to provide a variety of segmentation configurations.



8. Security Design

For more details, please refer to: Screen transmission security design document v1.1.pdf.

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