

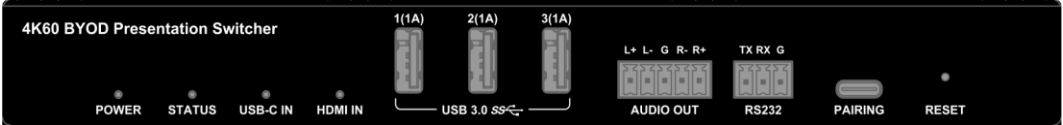
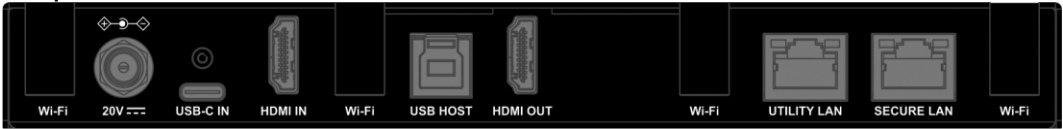
TA-WPS21U

UNITYTM UC WAVE WIRELESS COLLABORATION SWITCHER



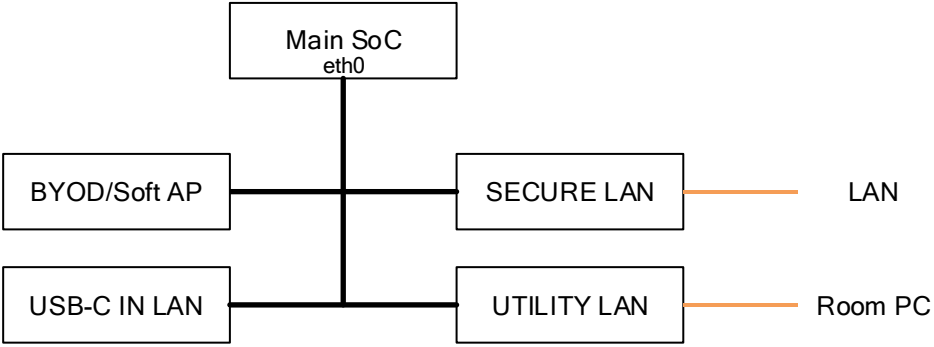
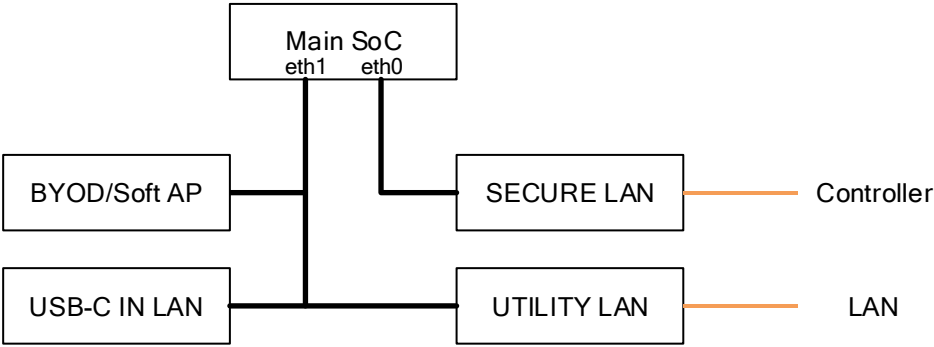
User Manual

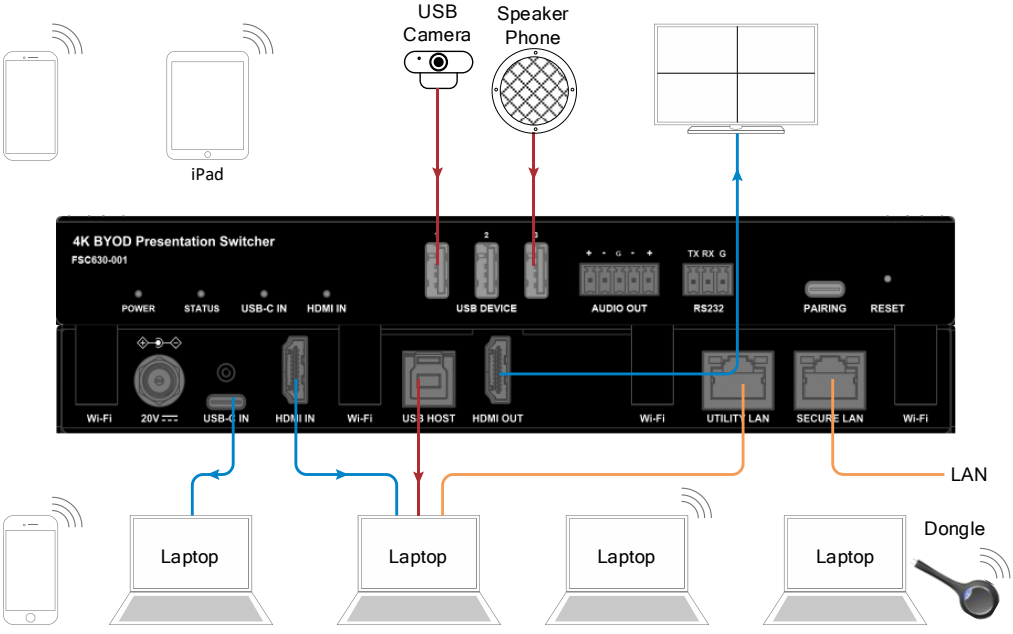
VER 2.0

Significance	The successor of the discontinued FSC610-000. Enhancements: ✧Wireless conference ✧Full feature USB-C input ✧Up to 4K@60 4:4:4 output ✧Dual Ethernet ports for security
Description	Front panel POWER indicator A LED with yellow color On: Device is powered on Off: Device is powered off or lost power STATUS indicator A LED with yellow color On: Device is working normally. Off: Device is in standby mode. HDMI IN indicator 2 x LED with yellow color USB-C IN indicator On: The corresponding video signal is valid and shown. Off: Device is in standby mode or the corresponding video signal is not valid or shown Twinkle once every second: The corresponding video source is selected but invalid. USB DEVICE 3 x USB 3.0 Type-A female connector To connect USB peripherals Up to 1A current on each port AUDIO OUT 1 x 5-pin 3.5mm phoenix male connector analog audio output, balanced 2-channel RS232 1 x 3-pin 3.5mm phoenix male connector Connected with the controller or peripheral PAIRING 1 x USB-C female connector, USB 2.0 specification, used for update and dongle pairing RESET 1 x Push button Press shortly, show all OSD items Press and hold for 5 seconds, it automatically restores to factory default settings Rear panel USB-C IN 1 x USB Type-C female connector Video input, up to 3840x2160@30 USB to Ethernet bridge for network connection USB-C charger, up to 60W (20V, 3A) USB 3.0 Host HDMI IN 1 x HDMI Type-A female connector Video input, up to 3840x2160@30 USB HOST 1 x USB 3.0 Type-B female connector, Standalone USB host port HDMI OUT 1 x HDMI Type-A female connector Video output, up to 3840x2160@60 SECURE LAN 2 x RJ45 female connector, 10/100/1000Mbps Ethernet UTILITY LAN For Ethernet connection, can be divided into 2 VLANs for network security Wi-Fi 4 x SMA connector, for Wi-Fi antennas Power 1 x 5.5/2.1 DC Screw connector, DC 20V power supply More Details Wi-Fi 2 x IEEE 802.11 a/b/g/n/ac Wi-Fi module Dual bands, 2.4~2.4835GHz, 5.0~5.8GHz 2T x 2R, up to 867Mbps WEP, TKIP, AES, WPA, WPA2 USB switcher 2 host ports, USB-C IN and USB HOST 3 device interfaces, USB DEVICE Front panel  Rear panel 

Technical Specifications	
Input Connectors	Video 1 x USB-C 1 x HDMI
Output Connectors	Video 1 x HDMI Audio 1 x Analog audio
Bi-direction Connectors	3 x USB 3.0 Type-A 1 x USB 3.0 Type-B 1 x RS232 2 x LAN, 10/100/1000Mbps Ethernet 2 x Wi-Fi
Buttons and LEDs	4 x LED 1 x Hidden button for reset
Supported Input	【Video】 HDMI / USB-C (8 bit, YUV 4:4:4 / 4:2:2 or RGB, up to HDCP 1.4) 640x480⁸, 800x600⁸, 1024x768⁸, 1280x768⁸, 1280x800⁸, 1280x1024⁸, 1360x768⁸, 1366x768⁸, 1440x900⁸, 1400x1050⁸, 1600x1200⁸, 1680x1050⁸, 1920x1200⁸, 720x480⁸ (480p), 720x576⁶ (576p), 1280x720⁵ (720p30), 1280x720⁶ (720p50), 1280x720⁸ (720p60), 1920x1080² (1080p24), 1920x1080³ (1080p25), 1920x1080⁵ (1080p30), 1920x1080⁶ (1080p50), 1920x1080⁸ (1080p60), 3840x2160⁵ (2160p30) Miracast(Wi-Fi) 640x480⁸, 720x480⁸ (480p), 720x576⁶ (576p), 1280x720², 1280x720³, 1280x720⁵ (720p30), 1280x720⁶ (720p50), 1280x720⁸ (720p60), 1920x1080² (1080p24), 1920x1080³ (1080p25), 1920x1080⁵ (1080p30), 1920x1080⁶ (1080p50), 1920x1080⁸ (1080p60) Airplay Mirroring (LAN/Wi-Fi) Max. 1920x1080⁸ (1080p60) USB-C Dongle 1920x1080⁸ (1080p60), 3840x2160⁵ (2160p30) 1 = at 23.98 Hz, 2 = at 24 Hz, 3 = at 25 Hz, 4 = at 29.97 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = 60 Hz, 9 = 75 Hz;
Supported Output	【Video】 HDMI OUT(8 bit, YUV 4:4:4 / 4:2:2 or RGB, up to HDCP 2.2) 640x480⁸, 720x480⁸ (480p60), 720x576⁶ (576p50), 800x600⁸, 1024x768⁸, 1280x800⁸, 1280x1024⁸, 1366x768⁸, 1440x900⁸, 1600x1200⁸, 1680x1050⁸, 1920x1200⁸, 1920x2160⁵, 2560x1440⁵, 2560x1440⁸, 2560x1600⁸, 1280x720⁶ (720p50), 1280x720⁸ (720p60), 1920x1080² (1080p24), 1920x1080³ (1080p25), 1920x1080⁵ (1080p30), 1920x1080⁶ (1080p50), 1920x1080⁸ (1080p60), 3840x2160³ (2160p25), 3840x2160⁵ (2160p30), 3840x2160⁶ (2160p50), 3840x2160⁸ (2160p60) 1 = at 23.98 Hz, 2 = at 24 Hz, 3 = at 25 Hz, 4 = at 29.97 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = 60 Hz, 9 = 75 Hz;
Audio Format	【Input】 HDMI/UCB-C/LAN/Wi-Fi RAW PCM, 16 bit, 2-channel, 32/44.1/48KHz sps 【Output】 HDMI RAW PCM, 16 bit, 2-channel, 48KHz sps Analog 2-channel, balanced
Data Rate	HDMI IN: 9Gbps. USB-C IN: 8.1Gbps(per lane) @DP channel, 5Gbps @ USB 3.0 channel HDMI OUT: 18Gbps USB 3.0: 5Gbps

USB Product USB HUB Tier	USB-C IN: 1 Tier USB HOST: 1 Tier
Control	Telnet A set of CLI commands is implemented and able to control the device Web: With the built-in Web server, the user can alter the configuration and update the firmware through a web browser.
EDID EDID Setting	Fixed but customizable, up to 3840x2160@30Hz 4:4:4
Function Details	2x1 presentation switcher; - USB-C port with video input, USB 3.0, charging and Ethernet - Multiview presentation, up to dual-view; - BYOD receiver with Airplay Mirroring, Miracast and Dongle - Video input timing up to 4K@30Hz 4:4:4; - Video output timing up to 4K@60Hz 4:4:4; - Built-in Wi-Fi module for wireless casting; 4 input and 2 output USB 3.0 switcher; - Built-in Ethernet switch with security design; - Analog audio output - Detailed and friendly OSD information;
Switching Mechanism	【Video】 Automatic (Default) - Once a video source is connected, the device starts to show the video, if multiple videos need to be shown, the device activates multi-view layout. - If the quantity of the videos needing to be shown simultaneously exceeds the limit of the current multi-view layout, the device switches to the next multi-view layout which has more views (windows). - In the previous step, if the device fails to found the next multi-view layout with more views, the earliest video source that was started to be shown is disconnected (kicked off), the freed view (window) is occupied by the video needs to be shown. - When a video source is disconnected, the device stops showing the video. - Along with the quantity of the videos needing to be shown simultaneously decreases, the device switches to a layout which has less views in due course. - In the full screen (single view) layout, when a video source disconnects, the device detects the status of all local inputs (USB-C IN and HDMI IN) in the reverse order with which they were shown, then shown the one found valid firstly. - In the previous step, if none of local inputs is valid, the device shows guide screen. Manual - A serial APIs are implemented to adjust the details of the video switching: ✧ Whether switch video source and layout automatically ✧ Whether enable multi-view layout ✧ Switch to the designated layout ✧ Start showing a designated local video source, no matter it is connected or not ✧ Stop showing any video source Please refer the API manual to get details. 【Audio】 Automatic (Default) - The device always plays the audio whose video is selected to be shown most recently. Manual - An API is implemented to make the device play the audio of any input whose video is

	being shown. - Once the API is called, the device plays the designated audio always, until the corresponding video is not shown any more, then the audio switcher restores automatic mode. 【USB】 Automatic (Default) - USB switching is independent of video switching. - The output of the USB switcher automatically connects with the USB host connected most recently. Manual - An API is implemented to make the output of the USB switcher connect with a certain USB host always.
Network	The device has two Ethernet interfaces to support both flexibility and security. Two network modes provided: 【Transparent】  All Ethernet interfaces are connected together. Either of the SECURE LAN and UTILITY LAN ports can be connected to the LAN where a controller is, and the rest one can be used as an extra network interface which may be used by the Room PC. 【Isolated】  The SECURE LAN is used for the controller exclusively. The second Ethernet interface of the Main SoC is activated for BYOD communication only. The UTILITY LAN port is used to connect to the LAN.
Firmware update	Two approaches - Manual, the user upload a firmware through Web UI, then control the device to update with this firmware. - Automatic, the user stores the firmware to a U-Disk with a special directory structure, once this U-Disk is plugged into the device, the device will start updating automatically.

Application Scenario	 Features at: 1) Two wired video inputs are connected with two computers; 2) Both computers can access the USB camera and speakerphone through built-in USB switcher; 3) Both computers can access the LAN through the built-in Ethernet switch; 4) Apple devices can access the device by Airplay Mirroring; 5) Android mobile and Windows 10 laptop can access the device by Miracast; 6) Any device with USB-C video output can access the device by a Techaagam USB-C dongle;
Installation	1. On or under the desk 2. Ceiling installation
Performance	Input video timing up to 2160p30Hz; Output video timing up to 2160p60Hz; Multi-view, up to 4 concurrent video signals;
Structural Design	
Key and Interface Layout	Refer the pictures to get the concept
Construction Drawing(Optional)	Refer the pictures
Dimensions	215mm x 160mm x 25mm
Packaging	
Power Adapter	20V DC 6A converter
Accessories	• 1 x 20V 6A DC Power Supply with US AC cable • 4 x Mounting Ears and screws • 4 x Wi-Fi antennas • 1 x 3-pin 3.5mm phoenix connector for RS232 • 1 x 5-pin 3.5mm phoenix connector for audio out