

APPLICATION NOTES

PRODUCTS SUPPORTED:

ClearOne CONVERGE® Pro 2 and Microsoft Surface hub

CLEARONE DOCUMENT NTS-0054-001 (REVISION 1.0) August 2017 CONNECTING AND CONFIGURING CONVERGE PRO 2 AND MICROSOFT SURFACE HUB

Overview

This application note describes the procedure for connecting CONVERGE Pro 2 (CP2) to the Microsoft Surface Hub through USB audio, enhancing the audio experience of the Surface Hub through the use of ClearOne DSP and expanding the system to use ceiling, table top, wireless or Beamforming microphones.

Configuring the Microsoft Surface Hub

On the underside of the Surface Hub is the port connection panel. Connect the Surface Hub to the CONVERGE Pro 2 using a USB A to USB B cable:



NOTE: You can also connect through a CONVERGE Pro 2 USB Expander rather than directly to the CONVERGE Pro 2, when you need to extend the distance between the Surface Hub and the CONVERGE Pro 2 DSP mixer. Consult the documentation that came with the USB Expander for setup and configuration information.

Upon connection, the Converge Pro 2 will be presented in the Surface Hub's list of audio options and the audio will be switched from the internal microphones and speakers on the surface hub to the Converge Pro 2.:

← Settings			4	2			
lome	Calling & audio						
Surface Hub	Skype for Business configuration	Make Windows better.					
Accounts	If you're connecting to a Skype for Business server in a domain that's different from the device account, you'll need to specify the domain name of the target server.						
Device management	Configure domain name						
IΞ Apps & features	Microphone & speakers						
🌜 Calling & audio	Default speaker volume						
En Projection	45						
S Welcome screen	Use this microphone for calls						
 Session & power 	ConvergePro 2 USB Audio1 Input (ClearOne Converge Pro 2 128V USB Audio) $ \smallsetminus $						
① About	Use this speaker for calls						
	Speakers (ClearOne Converge Pro 2 128V USB Audio) 🗸						
	Use this speaker for media playback						
	Speakers (ClearOne Converge Pro 2 128V USB Audio)						
	Enable Dolby Audio X2 speaker enhancements. You'll need to restart the device for this setting to take effect.						
	On On						



Removing the USB cable or manually switching the audio sources within the Surface Hub will switch the audio back to its internal speakers and microphones.

Configuring CONVERGE Pro 2

To configure the CONVERGE Pro 2, use the CONSOLE software application.

- 1. Open the CONVERGE Pro 2 CONSOLE.
- 2. If necessary, open the project for the CONVERGE Pro 2 being used.
- 3. Make sure that the USB channels (both USB_RX and USB_TX) you're using to connect the audio signal have been added to the room and partition that corresponds to the location of the Surface Hub.

NOTE: For more details about adding resources to rooms/partitions, see "Adding Assets to a Partition" in the CONVERGE Pro 2 CONSOLE User Manual.

4. Using FlowView or MatrixView, make a connection between the USB_RX channel to be used with the Surface Hub and whatever channel you want to use for your output (speakers).



NOTE: The screenshot above is only an example of making a MatrixView crosspoint connection between a USB_RX channel and an output channel. The channels to be used and their names vary from project to project.

5. Using FlowView or MatrixView, make a connection between the USB_TX channel to be used with the Surface Hub and whatever channel you want to use for your input (microphone).

MatrixView™	Reference Matrix	۲.																		
Filter View Remove Filter					Clear All Crosspoints										Home					
Crosspoint Typ Crosspoint Gated Non-Gated Pre-AEC	es Mixed (Group)	Dut_Name_2_02	Dut_Name_2_03	Dut_Name_2_04	DADTk_Name_2_09	DADTk_Name_2_10	USB_L_CP2_USB_Exp_TechDocs_128V	JSB_L_Name_2_Tx	JSB_L_Name_3_Tx	JSB_L_Name_4_Tx	JSB_R_CP2_USB_Exp_TechDocs_128V	JSB_R_Name_1_Tx	USB_R_Name_2_Tx	JSB_R.Name_J.Tx	JSB_R_Name_4_Tx	Felco_Name_3_01Tx	VolP_Name_1_01Tx	ProcBlk_Name_1_02	ProcBilk_Name_1_04	
MicAEC_Name_ MicAEC_Name_ MicAEC_Name_	2_01																			
MicAEC_Name_C MicAEC_Name_C MicAEC_Name_C	2_03 2_04 2_05																			
DialogMic_DIALO BFMic2_TechDoo BFMic2_TechDoo	DG20_TechDocs_128 :s_128V_01 :s_128V_02 :r_129V_02																			
DADRx_Name_2 DADRx_Name_2 DADRx_Name_2 DADRx_Name_2	_05 _06 _07																0			
DADRx_Name_2 DADRx_Name_2 USB_L_CP2_USB	_08 _09 _Exp_TechDocs_128V																0			
USB_L_Name_2_ USB_L_Name_3_ USB_L_Name_4_ USB_R_CP2_USB	Rx Rx Exp_TechDocs_128V																			
USB_R_Name_1_ USB_R_Name_2_	Rx Rx																			

NOTE: The screenshot above is only an example of making a MatrixView crosspoint connection between a USB_TX channel and an input channel. The channels to be used and their names vary from project to project.

NOTE: For more details about making channel connections using FlowView, see "Connecting Assets Using FlowView" and for more details about making channel connections using MatrixView, see "Connecting Assets Using MatrixView" in the CONVERGE Pro 2 CONSOLE User Manual.

6. Save the project and load it to the appropriate CONVERGE Pro 2 device.

NOTE: Changes you make in the CONSOLE have no effect until you load the project to the device. See "Loading a Project File to a Device" in the CONVERGE Pro 2 CONSOLE User Manual for more information.

Summary

This app note describes a simple USB audio connection and configuration details for Converge Pro 2 DSP mixer and Microsoft Surface Hub. With these instructions, a Converge Pro 2 DSP mixer and its peripheral devices could be used with Microsoft Surface Hub for getting professional audio.

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