

Sennheiser TeamConnect Ceiling 2

Version	1.0.0
Simpl+ Module filename	Sennheiser_TCC2_1.0.0_SE.usp
Simpl# Library filename	Sennheiser_Modules_CSharp.clz
Tested on processor	CP3
Tested on processor firmware	1.601.0050
Tested on device model	Sennheiser SL Ceiling Mic 2
Tested on device firmware	1.4.2
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Summary:

This module integrates with Sennheiser TeamConnect Ceiling 2, a microphone mounted in the ceiling of the room.

Release notes:

- 1.0.0
 - Initial release

PARAMETERS	
Device_IP_Param	The IP-address of the device we will connect to. If you want to be able to change this during runtime, instead use serial input Device_IP .
Device_UDP_Port_Param	The UDP port of the device we will connect to. This should most likely always be 45d Default: 45d
INPUTS	
Connect	Opens the connection to the device when signal is high. If you use the parameters to set Device Ip and Port, you may define this signals as '1'.
Debug	Enables debug messages to be printed to the text console while signal is high. Make sure this is not left high when not used.
Enable_Incoming_Commands	When set to high, all received data from the device will be outputted on the serial output Incoming_Command_FB .
Enable_Beam_Azimuth_Feedback Enable_Beam_Elevation_Feedback Enable_Input_Peak_Level_Feedback	Set this high when you want the analog output Beam_Azimuth_Degrees_FB / Beam_Elevation_Degrees_FB / Input_Peak_Level_FB to start outputting values. You may define this signals as '1'. The reason you have to manually enable this is because the device is quite "chatty" so if you don't use this feature all that traffic is unnecessary.
Mute_On Mute_Off Mute_Toggle	Mutes/Unmutes/toggles the audio outputs. This will also
Identify_On Identify_Off Identify_Toggle	Turns on/off/toggles the identify feature of the device. It blinks a LED on the frontpanel.
Exclusion_Zone_Active Exclusion_Zone_Inactive Exclusion_Zone_Toggle	Activates/disables/toggles the exclusion zones. Exclusion zones are areas where the microphone should not be listening. These are configured in the device settings.
Custom_Led_Active Custom_Led_Inactive Custom_Led_Toggle	Activates/disables/toggles the custom led color. The color is set with the analog input Custom_Led_Color .
Custom_Led_Color	Sets the custom led color. The color is activated with digital inputs Custom_Led_Active/Inactive/Toggle . Range: 0-7

	0 = Light Green 1 = Green 2 = Blue 3 = Red 4 = Yellow 5 = Orange 6 = Cyan 7 = Pink
Mic_Mute_Led_Color Mic_On_Led_Color	Sets the led color for muted/unmuted states. Range: 0-7 0 = Light Green 1 = Green 2 = Blue 3 = Red 4 = Yellow 5 = Orange 6 = Cyan 7 = Pink
Led_Brightness	Sets the brightness of the leds on the device. Range: 0-5 0 = Off ... 5 = Full
Dante_Output_Gain	Sets the Dante output gain. Value is in dB. Range: 0-24
Speaker_Detection_Threshold	Sets the sensitivity of the speaker detection based on the noise in the room. Range: 0-2 0 = Quiet room 1 = Normal room 2 = Loud room
Set_Name	Sets the name of the device. Max length: 8 characters.
Set_Location	Sets the location of the device. Max length: 8 characters. Allowed chars: 0-9, A-Z, a-z or <space> Must start with a letter May not start or end with a – or _
Set_Position	Sets the position of the device. Intended to be used as the position in the location. Example if location is "Room_1", position might be "Over the table". Max length: 30 characters.

	Allowed chars: 0-9, A-Z, a-z or <space>
Send_Custom_Command	Makes it possible to send your own commands to the device. Refer to the Sennheiser Sound Control Protocol (SSC). Example command: {"device":{"reset":true}}
Device_IP	The IP-address of the device we will connect to. Make sure you connect after this is set.
Device_UDP_Port	The UDP port of the device we will connect to. This should most likely always be 45. Make sure you connect after this is set.

OUTPUTS

Responding_FB	This is high as long as the device is responding. As the protocol uses UDP there is no connection state, so it might take up to a minute before responding goes low after the device has stopped responding.
Mute_On_FB	This is high while the audio output is muted.
Identifying_FB	This is high while the device is in identifying state.
Exclusion_Zone_Active_FB	This is high while exclusion zones are active in the device. Exclusion zones are areas where the microphone should not be listening. These are configured in the device settings.
Custom_Led_Active_FB	This is high while the leds on the device show the custom color.
Custom_Led_Color_FB	The currently selected custom led color. Range: 0-7 0 = Light Green 1 = Green 2 = Blue 3 = Red 4 = Yellow 5 = Orange 6 = Cyan 7 = Pink
Mic_Mute_Led_Color_FB Mic_On_Led_Color_FB	The currently selected led color for muted/unmuted states. Range: 0-7 0 = Light Green

	1 = Green 2 = Blue 3 = Red 4 = Yellow 5 = Orange 6 = Cyan 7 = Pink
Led_Brightness_FB	The currently selected brightness of the leds on the device. Range: 0-5 0 = Off ... 5 = Full
Dante_Output_Gain_FB	The current Dante output gain. Value is in dB. Range: 0-24
Speaker_Detection_Threshold_FB	The currently selected sensitivity of the speaker detection. Range: 0-2 0 = Quiet room 1 = Normal room 2 = Loud room
Beam_Azimuth_Degrees_FB	If you set the digital input Enable_Beam_Azimuth_Feedback high, this will output the horizontal angle to the person currently speaking. Value is in degrees. Range: 0-359
Beam_Elevation_Degrees_FB	If you set the digital input Enable_Beam_Elevation_Feedback high, this will output the vertical angle to the person currently speaking. Value is in degrees. Range: 0-90
Input_Peak_Level_FB	If you set the digital input Input_Peak_Level_Feedback high, this will output the current input peak level of the microphone. Value is in dB. Range: -90 - 0
Name_FB	The name of the device.
Location_FB	The location of the device.
Position_FB	The position of the device. Intended to be used as the position in the location. Example if location is "Room_1", position might be "Over the table".

Product_FB	The product name of the device. Example: SLCM2
Version_FB	The firmware version of the device. Example: 1.4.2
Serial_FB	The serial number of the device. Example: 1234567890
Mac_Addresses_FB	The mac addresses of the device. Example: 00:1B:66:11:22:33
Dante_Ip_Addresses_FB	The ip addresses of the Dante outputs. This returns both addresses separated with a comma. If there's no network cable connected or no addresses set, this might return a string only containing a comma. Example: 192.168.10.2,192.168.10.3
Dante_Mac_Addresses_FB	The mac addresses of the Dante outputs. This returns both addresses separated with a comma. Example: 00:1B:66:44:55:66,00:1B:66:77:88:99
Incoming_Command_FB	If you set the digital input Enable_Incoming_Commands high, this will output all the received data from the device. The use case for this would be to extend the functionality of the module.