ATND1061DAN
Beamforming Ceiling Array Microphone

The ATND1061DAN Q-SYS plug-in can be used to connect to and control an Audio-Technica ATND1061DAN microphone. This help file covers the following firmware/software releases:

ATND1061DAN FW: 1.0.4 AND ABOVE

ATND1061DAN Q-SYS PLUG-IN: VERSION 1.0.0 AND ABOVE

Q-SYS DESIGNER: 8.4.0 AND ABOVE

For further information and to download additional product software and documentation, visit the ATND1061DAN web page at audio-technica.com.

Connecting the ATND1061DAN to a Network
Before you can utilize the plug-in, the ATND1061DAN must be connected to a network and have a valid IP address on the same subnet as the Q-SYS system being connected to.

The plug-in can automatically discover microphones on the same subnet or can be set to find microphones using a manual IP address entry. The IP address can be obtained or configured from Digital Microphone Manager, Audio-Technica's software application for the ATND1061DAN.

Adding the ATND1061DAN to Your Schematic and Connecting

1. Drag the ATND1061DAN plug-in into your schematic from Asset Manager
2. Double-click the plug-in to open it for configuration
3. In the "IP Mode" section, select Discovery or Manual
4. If the Connection Mode is Discovery, select the microphone from the Device drop-down menu.
   If the Connection Mode is Manual, enter the IP address.

Configuring the ATND1061DAN Q-SYS Plug-in
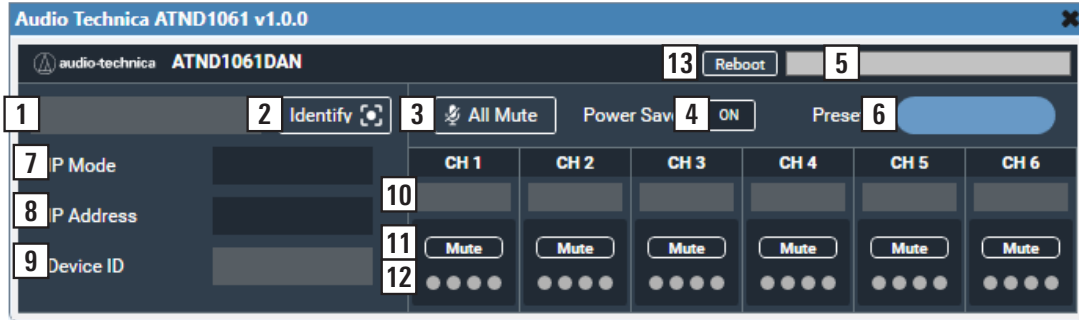
|	Description	Action
1	Device name	Displays device name; set in Digital Microphone Manager
2	Identify	Pings connected device and flashes device LED
3	All Mute	Mutes all six output channels at once
4	Power Save	Toggles Power Save Mode On/Off
5	Status Control	Indicates connection status
6	Preset	Recalls a preset; configured in Digital Microphone Manager
7	IP Mode	Displays current IP Mode; click field to select "Discovery" or "Manual"
8	IP Address	Displays IP Address
9	Device ID	Displays Device ID
10	Channel Name	Displays channel name; set in Digital Microphone Manager
11	Mute	Mutes individual channels
12	Meter	Displays audio level
13	Reboot	Provides a soft reboot to the connected device

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Using the ATND1061 for Camera Tracking via the ACPR Plug-in

The ATND1061 outputs speaker (talker) location via a UDP Communication which is processed by the ACPR plug-in within the Q-SYS design file. For this operation to occur, the network must be set up to allow for multicast traffic. Additionally, the ATND1061 Control plug-in uses this same UDP Communication to indicate current i/o levels, mute status, preset status, and power save status of the respective ATND1061. For proper ATND1061 plug-in operation the Audio Level Notification & Camera Control Notification must be enabled within the ATND1061 device. See below for details:

1. Download Digital Microphone Manager from the [Audio-Technica Website.](#)
2. Open Digital Microphone Manager and connect to the ATND1061DAN you would like to make changes to.
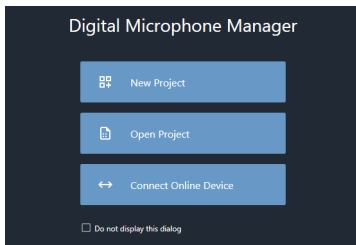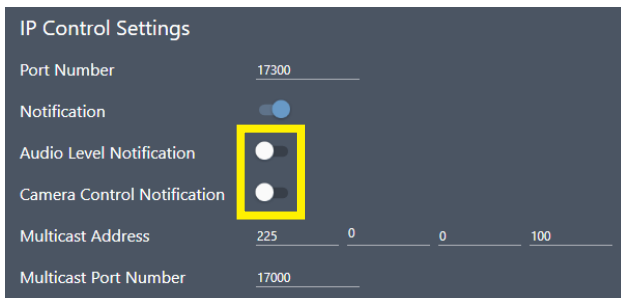

3. Select the settings tab and navigate to System Settings > Network.
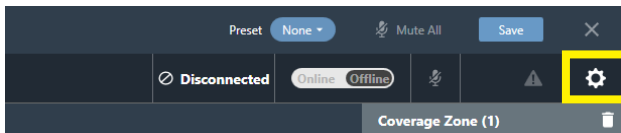
4. Scroll down to IP Control Settings, click the Notifications toggle switch.

5. Click the Audio Level Notification & Camera Control Notification toggle switches and 'Apply' your changes. This will force a reboot of the device.

6. In your QSYS Design file, drag the ACPR plug-in into your design and configure the ACPR to suit your room's needs.

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A Note on Multicast Communications

Multicast is a one-to-many communication over an IP network that uses UDP for broadcasting a stream. In this communication method, the host only needs to output a single stream and the node(s) on the network will deliver that stream to any listeners that care to listen. Computers and devices that wish to join a multicast group will request to join the group address. This action is handled by the Internet Group Management Protocol (IGMP). This address can then be used to send to every member of the group. Multicast allows for an efficient use of network infrastructure which only requires the source to send a packet once, even if there are many listeners. A multicast router is not required if all devices are in the same network segment and no switches employ IGMP snooping. This is more typical in an isolated network such as a LAN. If your network switch has IGMP snooping enabled or it is forced on by the manufacturer, a router is required to prevent the multicast stream from being shut down by the switch.

ATND1061 Control Pin Details

Pin Name	Description	Pins Available	Type	Value
Channels (CH1-CH6)				
Mute	Channel Mute Status	Input / Output	Boolean	Unmute = 0 / False Mute= 1 / True
Name	String Value of assigned Channel Name	Output	String	User defined in DMM
Device				
Device ID	User Defined integer value	Output	String	User defined in DMM
Identify	Flash LED on ATND1061	Input / Output	Boolean	Trigger = 1
Mute All	Mute All Input and Output Channels	Input / Output	Boolean	Unmute = 0 / False Mute= 1 / True
Name	String Value of assigned device name	Input / Output	String	Text
Power Save	Turn Power Save mode ON/OFF	Input / Output	Boolean	Power Save OFF = 0 / False Power Save ON = 1 / True
Preset	Call Microphone Preset configured in Digital Mic Manager	Input / Output	String	"Preset 1, Preset 2, Preset3 … Preset 16" regardless of preset naming scheme
Status	Status of connection between ATND1061 & Plug-in	Output	String	Text
Reboot	Triggers a soft reboot of the device	Input / Passthrough	Boolean	Trigger = 1 / True
Audio CH Position				
Audio CH Position	The microphone will output the active audio channel. Audio channel zones are defined in Digital Mic Manager	Output	String	Coverage CH 1 = 0 Priority CH 2 = 1 Priority CH 3 = 2 Priority CH 4 = 3 Priority CH 5 = 4 Priority CH 6 = 5
Camera CH Position				
Camera Area Group	The microphone will output the active camera area group. Camera area groups/zones are defined in DMM	Output	String	No active group = Camera CH Position 0 Active group = Camera CH Position 1-15

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ATND1061 Control Pin Details (continued)

Pin Name	Description	Pins Available	Type	Value
Speaker				
Elevation Angle	Outputs the angle in degrees, relative to horizontal, of the detected talker	Output	String	0-90 90 degrees = directly under the mic
Rotation Angle	Outputs the angle in degrees, relative to the orientation of the array, of the detected talker	Output	String	0-359 0 degrees = directly facing LED
Talking	Outputs the talking status	Output	String	True / False

For further assistance, please contact AETeam@atus.com.

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