

PBC6-IP

The PBC6-IP is a 20 Watts IP design wallmount loudspeaker for voice, paging, intercom, music streaming, audio routing, pre-recorded and scheduled announcement, VoIP communication or as the SIP endpoint where network-wide communication is desired and high-output loudspeakers are required to overcome high ambient noise and/or large spaces.

The PBC6-IP incorporates 3 control inputs for level control and source selection (using the RAC 5/8 controllers), 1 contact output for triggering events.

To configure, control, monitor the IP speakers in real-time, this can be easily done through your favorite web browser interface, making the management even the most complex environments simpler than ever.



● Features

Support PoE+, PoE and/or connect to 24 VDC power adapter (if PoE+ is not available)

Standard RJ45 interface, PCB control and Class-D amplifier board (2 x 20W)

Cost effective and simple installation with single cable deployment

Easily configured, controlled, managed and monitored via web browser

IP based for music streaming, routing, paging and control over LAN/WAN

Full DSP includes AEC, NR, Ducker, AGC, PEQ, Hi/Low Pass, Compressor, Limiter, etc.

3 control inputs for level control and source selection using the RAC 5/8 controller

1 relay contact output

Internal storage (200 MB)

Integrated scheduler for triggering of messages, music and alerts

Network audio codecs: G.711, G.722, WAV, MP3

3rd party control with TERRACOM system

Support VoIP call via SIP protocol

● Certifications

EN 55032, EN 55035,
EN 61000-3-2, EN 61000-3-3

● Electrical

Rated power, Watts (24 VDC, 1.8 A external power supply)	6
Rated power, Watts (PoE+, IEEE802.3 af, class 3)	20
Driver Impedance, Ohms	8
Effective Frequency Range, Hz (BSEN60268-5)	160 - 18,000
S.P.L. @ 1 m, 1 Watt, dB, Octave, 100 Hz-10 kHz	96
S.P.L. @ 1 m, Full power, dB, Octave, 100 Hz-10 kHz	104
Dispersion at 1k/2k Hz, Degrees	180/120



TECHNICAL SPECIFICATIONS

PBC6-IP

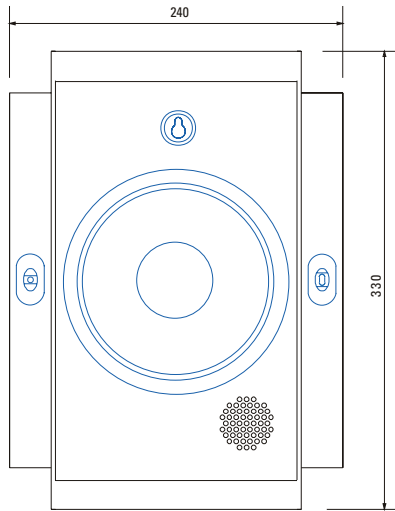
Power supply	PoE+, IEEE802.3af, class 3 DC power input: 24 VDC (18-24 VDC) Minimum power supply: 2 A
● Control Inputs	
Type	Euro-block terminal
Mode (analog/TTL), VDC	max. 3.3
TTL logic input (max.), VDC	HIGH active: 3.3 LOW active: 1.2
● Interconnection	
Female RJ45 socket, CAT5/6 cables	
Max. cable length, m	100
● Supported Protocols	
SIP 2.0 (peer and proxy)	
IETF SIP (RFC3261)	
IETF IGMP version 2 (RFC2236)	
IETF RTP (RFC1889)	
● Contact Output	
Type	Euro-block terminal
Default status	OPEN (N.O.)
Maximum voltage, VDC	100
Maximum current, A	0.5 A
● Audio	
Audio compression	G.711, G.722, WAV, MP3
● Network	
10/100 Mbps Base TX Ethernet RJ45	
Manual or Dynamic Host Configuration Protocol (DHCP) IP address setup	
Time and date synchronization using NTP	
● Environmental	
IP-rating	21
Min/Max amb temp	-10°C to 55°C
Relative humidity	≤ 60%
● Mechanical	
Dimensions, diameter, mm	330 x 240 x 90
Net weight, kg	1.5
Colour (Unless Specified)	White RAL9016



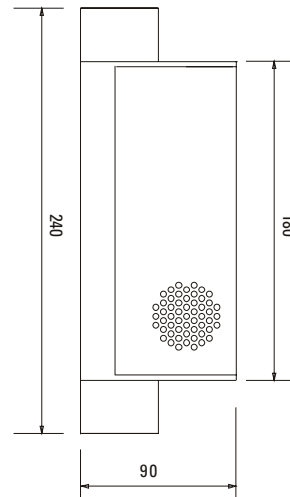
INSTALLATION GUIDE

PBC6-IP

Front view
(unit: mm)

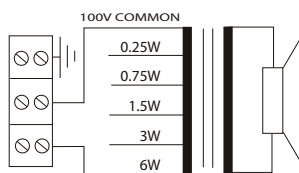


Top view
(unit: mm)

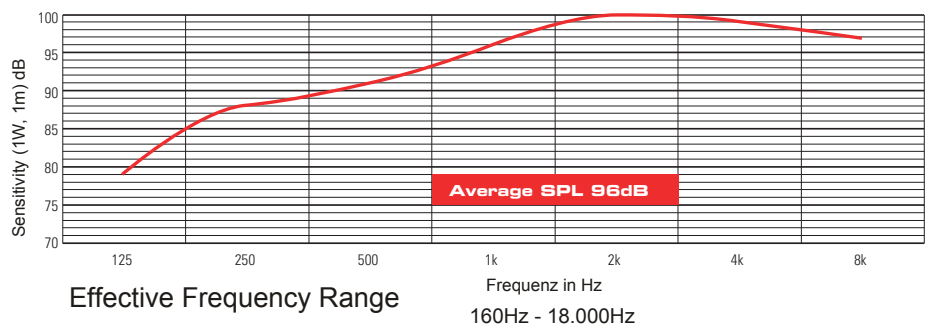


- 1) On selecting the chosen position for the loudspeaker (it can be mounted vertically or horizontally) use a spirit level to ensure that it is level.
- 2) Offer the speaker to the wall or ceiling and mark through the mounting holes, as shown on the drawing above, the position required for drilling.
- 3) Drill 2 holes 210mm apart and then raw plug them.
- 4) Cabling can now take place, connect the 100 volt line supply to your required volume as shown on the circuit diagram.
- 5) With the cable in place the speaker can be screwed through the mounting holes into position. Once in position the two mounting hole caps can be put in place to hide the offending screw heads.
- 6) There is also provided a key hole mounting plate, as shown on the drawing, this can only be used if the loudspeaker is wall mounted and in a vertical position.

Frequency response



Circuit Diagram



Disclaimer: We reserve the right of changes and errors.



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The diagram shows the back panel of the IPSCM-2C20 device. It includes a microSD card slot, a Power IN jack (24VDC 2A), and an Ethernet PoE+ port. The Ethernet port is labeled with 'STATUS' and 'LINK' indicators. The Power IN jack is labeled 'POWER IN' and '24VDC 2A'. The Ethernet port is labeled 'ETHERNET PoE+'. A 24VDC Power adapter (option) is shown connected to the Power IN jack. The adapter is labeled '24VDC Power adapter (option)'.

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- Diagram of the rear panel of the 20W2-2C20M amplifier. The panel features two 20W2/8Ω amplifier sections, a MIC INPUT section, and a CONTACT INPUT section. The CONTACT INPUT section includes terminals 1, 2, 3, 6, D1, and D2. Below the diagram, numbered circles 4 through 9 point to specific components: 4 points to AMP-1, 5 points to AMP-2, 6 points to MIC INPUT, 7 points to CONTACT INPUT, 8 points to D1 LED, and 9 points to D2 LED.

7. 3 programmable contact inputs are controlled by external remotes such as source selector and volume control (RAC 5 / RAC 8)

8. LED interface (3.3V@10 mA): for safety and emergency alerting (EVC-SW02W)

9. LED strobe light interface (24V@10mA): A strobe light for safety and emergency alerting



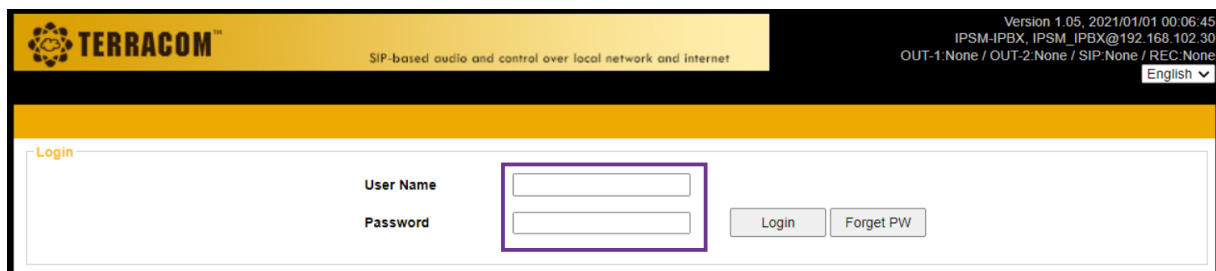
QUICK START

PBC6-IP

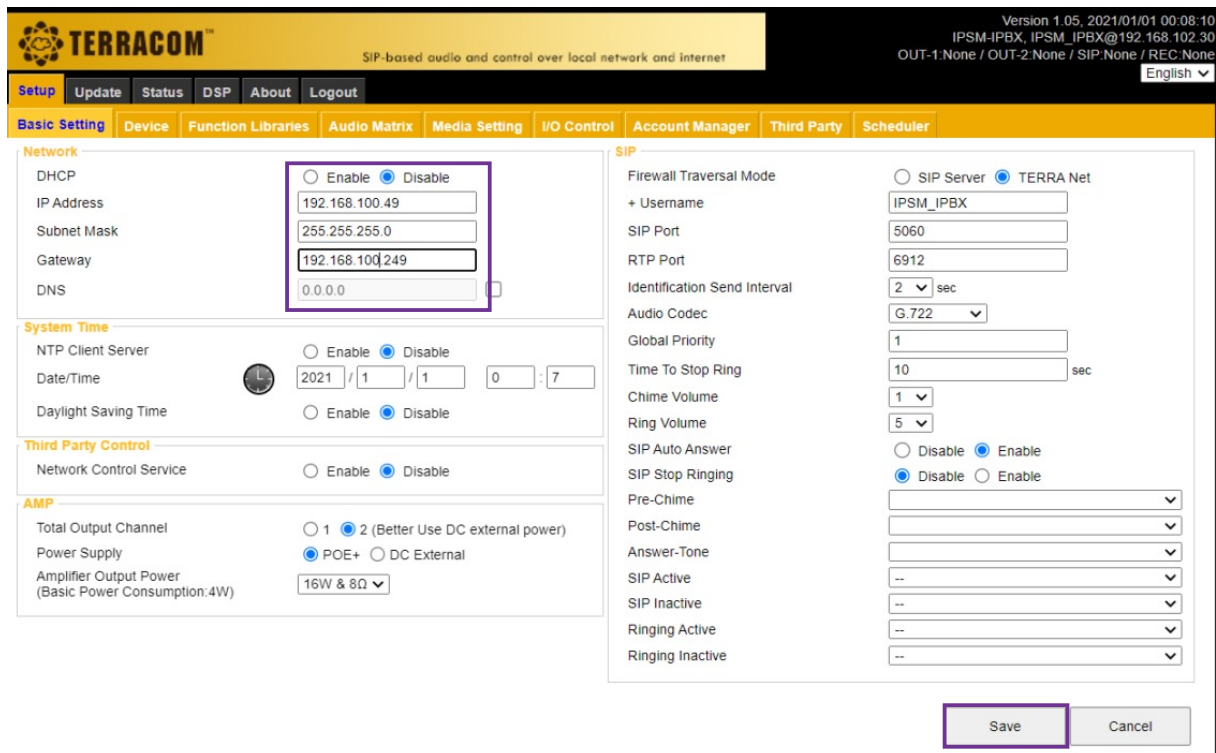
Network

PBC6-IP is shipped set to the default IP Address of 192.168.100.1:

1. Specify the IPv4 of the computer manually and in the same range of the PBC6-IP (192.168.100.xxx).
2. Open a web-browser on the computer (Chrome or Firefox recommended) and navigate to the speaker's address. (192.168.100.1).
3. Default **User name / Password: admin / admin.**



4. Click **SETUP > BASIC SETTINGS**: define a manual IP address or enable DHCP.



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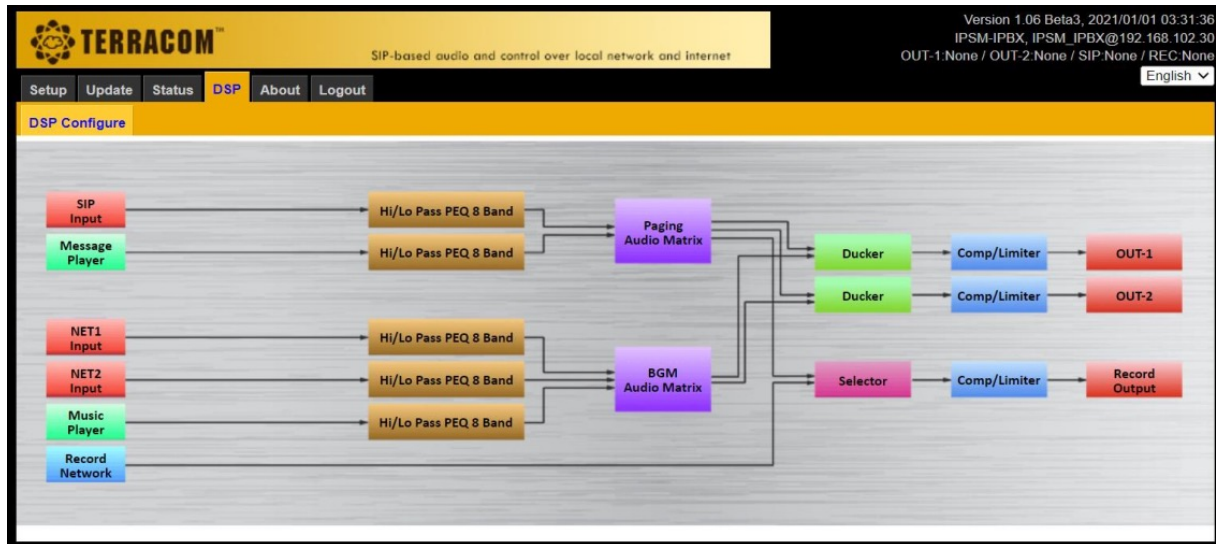


QUICK START

PBC6-IP

DSP

Adjust different audio features by navigating to the **DSP Tab**.



You will be able to adjust output volume by clicking on "OUT1".

This will open a popup window, allowing you to change the volume and showing the current output level on a VU meter.

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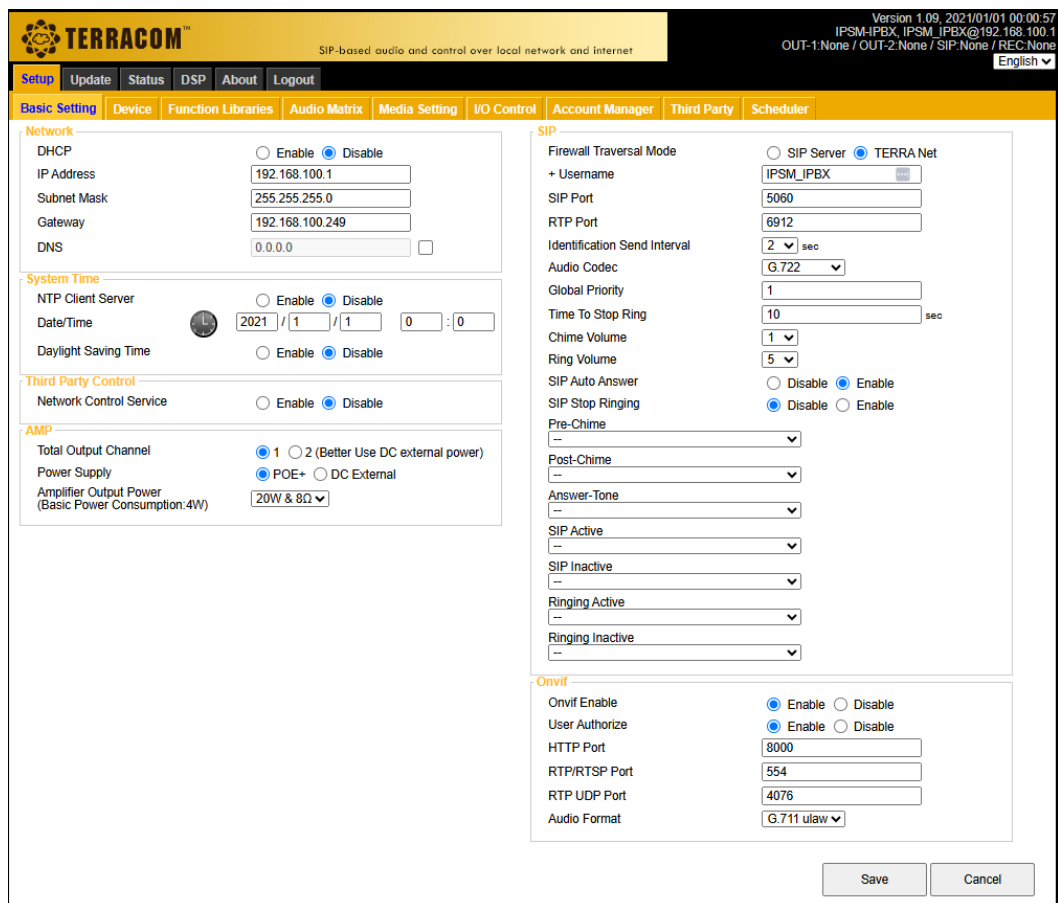
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ONVIF PBC6-IP

Milestone VMS

1. Within the **ONVIF** section of the configuration page change the **User Authorize** to **Enable**.



The screenshot shows the TERRACOM configuration interface. The top navigation bar includes tabs for Setup, Update, Status, DSP, About, and Logout. Below this is a secondary navigation bar with tabs for Basic Setting, Device, Function Libraries, Audio Matrix, Media Setting, I/O Control, Account Manager, Third Party, and Scheduler. The main content area is divided into several sections:

- Network:** DHCP (Enable/Disable), IP Address (192.168.100.1), Subnet Mask (255.255.255.0), Gateway (192.168.100.249), DNS (0.0.0.0).
- System Time:** NTP Client Server (Enable/Disable), Date/Time (2021/1/1 0:00), Daylight Saving Time (Enable/Disable).
- Third Party Control:** Network Control Service (Enable/Disable).
- AMP:** Total Output Channel (1/2), Power Supply (POE+/DC External), Amplifier Output Power (20W & 8Ω).
- SIP:** Firewall Traversal Mode (SIP Server/TERRA Net), Username (IPSM_IPBX), SIP Port (5060), RTP Port (6912), Identification Send Interval (2 sec), Audio Codec (G.722), Global Priority (1), Time To Stop Ring (10 sec), Chime Volume (1), Ring Volume (5), SIP Auto Answer (Disable/Enable), SIP Stop Ringing (Disable/Enable), Pre-Chime, Post-Chime, Answer-Tone, SIP Active, SIP Inactive, Ringing Active, Ringing Inactive.
- Onvif:** Onvif Enable (Enable/Disable), User Authorize (Enable/Disable), HTTP Port (8000), RTP/RTSP Port (554), RTP UDP Port (4076), Audio Format (G.711 ulaw).

At the bottom right of the configuration area are 'Save' and 'Cancel' buttons.

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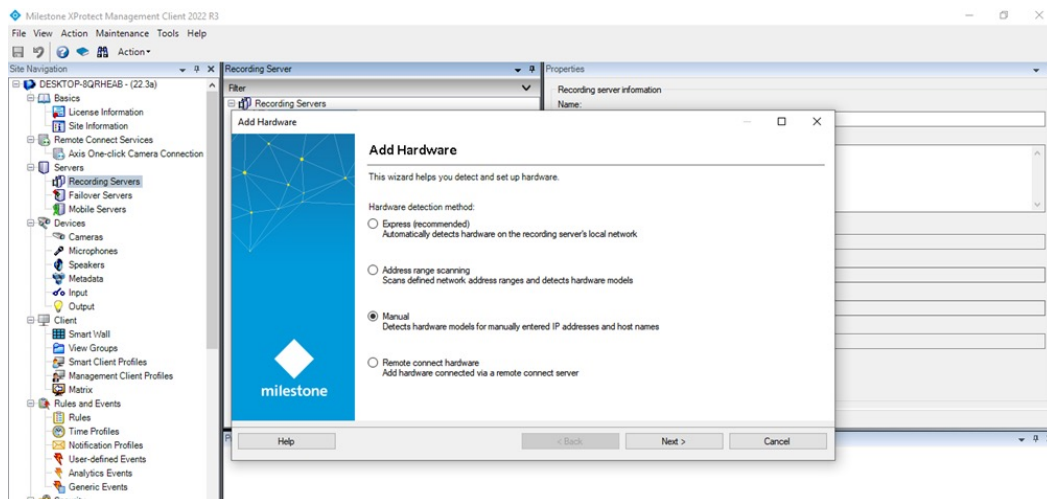
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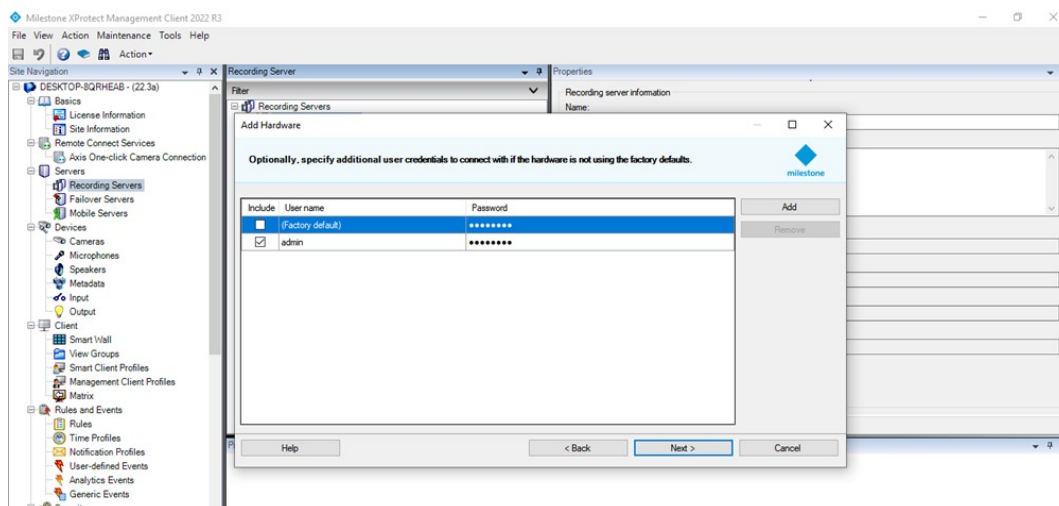
ONVIF PBC6-IP



2. Within **Milestone VMS** in the **Recording Server** screen, right click and click **add hardware**, and then choose the option. Click next.



3. Add the **username** and **password** of the Penton IP speaker product to the user credentials list and **untick** the default credentials entry. Click next.



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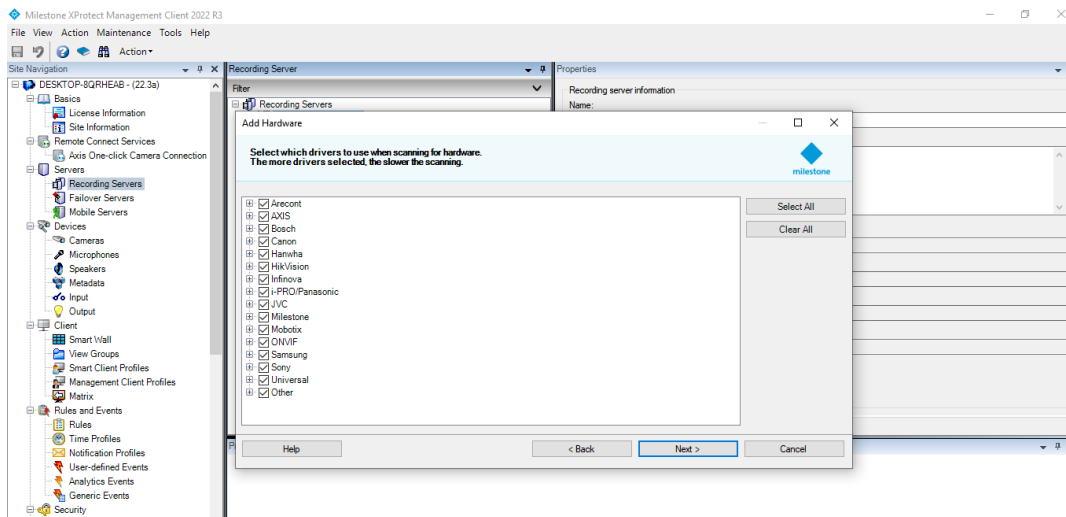


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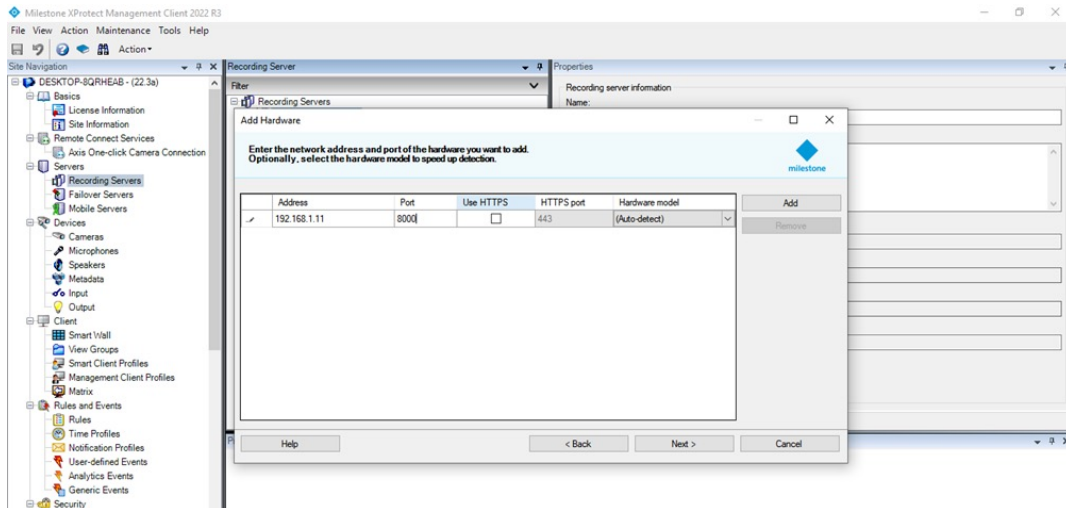


ONVIF PBC6-IP

4. Leave all the manufacturers **ticked**. Click next.



5. Enter the **IP address** of the Penton IP speaker and add the port as **8000**. Click next.



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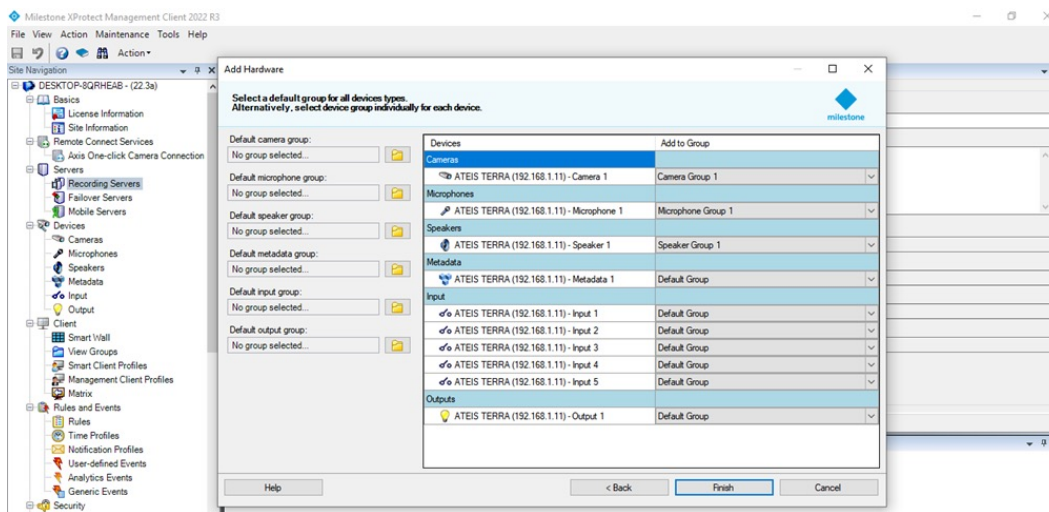
ONVIF PBC6-IP

7. Select the hardware elements that you would like to implement.

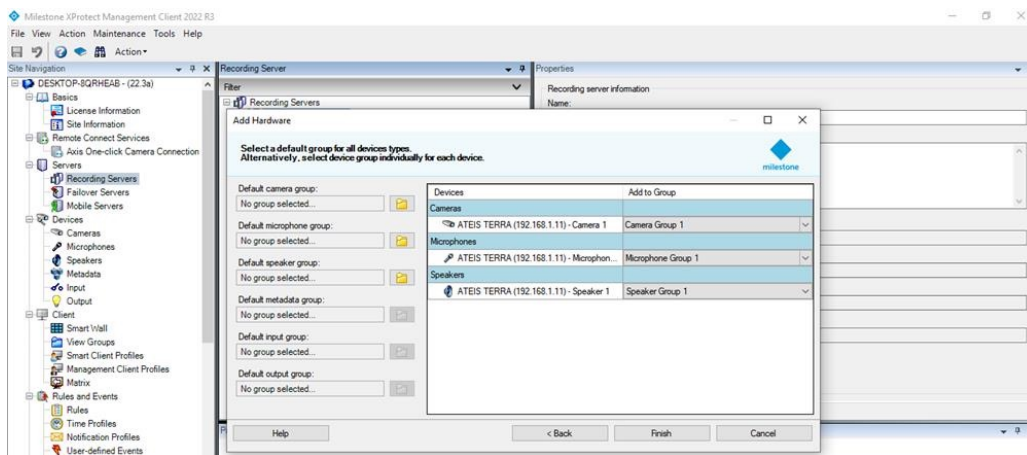
Camera: will show a holding screen to show connection.

Microphone: will allow the IP speaker device to stream back to the VMS. (For example, triggering messages etc.)

Loudspeaker: will allow the VMS to communicate with the IP speaker via any connected microphone.



8. Add devices to the desired groups.



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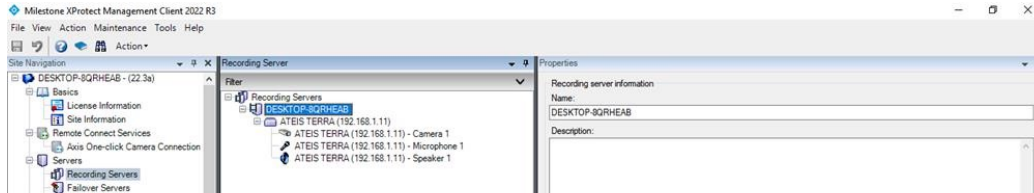


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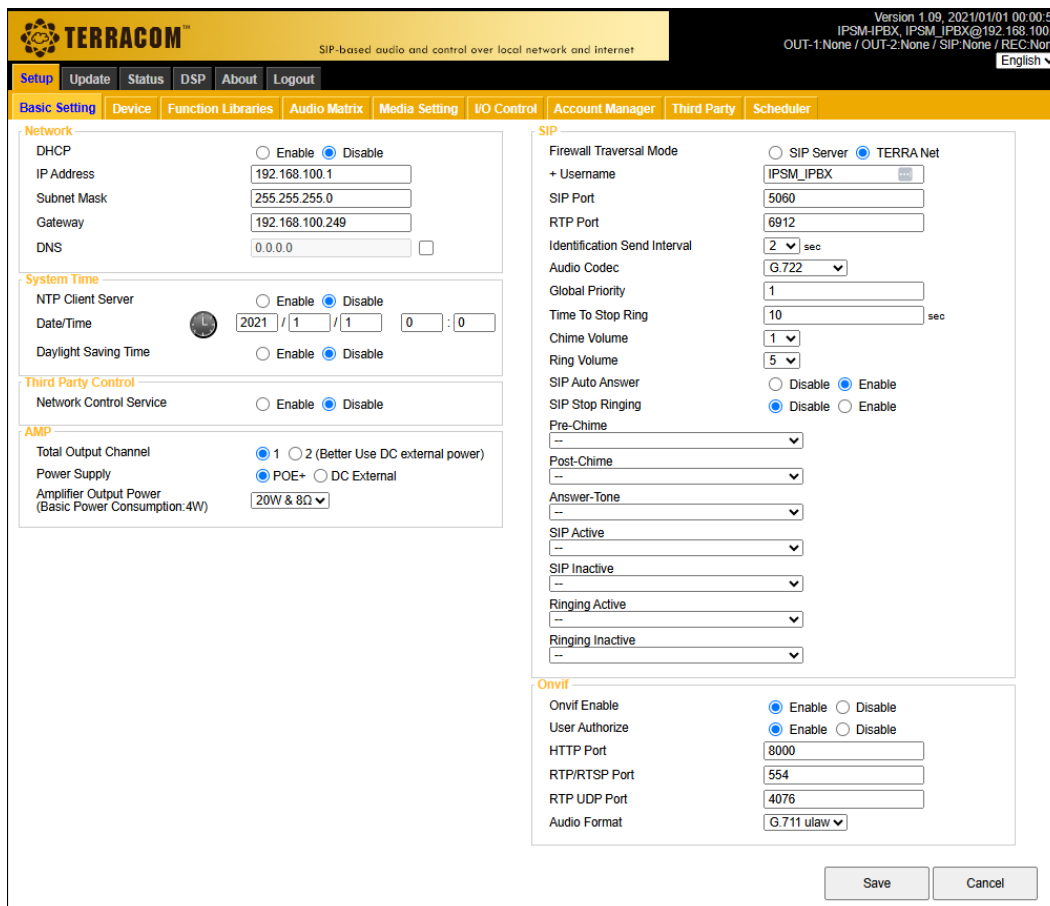
ONVIF PBC6-IP

9. All resources will now be available in the Milestone VMS.



Dahua DSS

1. Within the **ONVIF** section of the configuration page change the **User Authorize** to **Enable**.



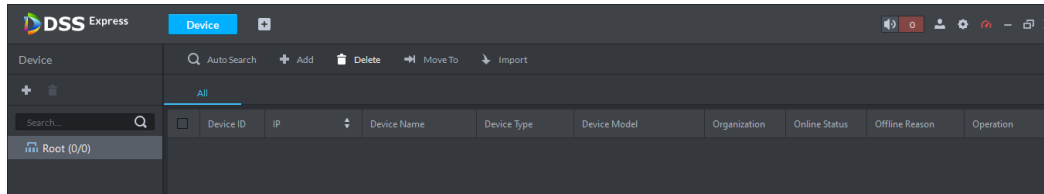
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ONVIF PBC6-IP

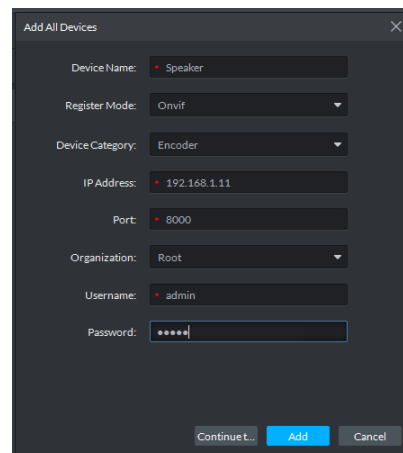
2. Within the **DSS** software go to the **Device Menu** screen and **click add**.



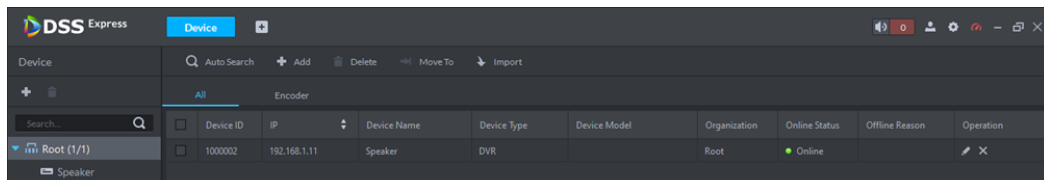
3. Enter the following information:

- 1) Enter the desired device name
- 2) Register Mode is **ONVIF**
- 3) Category is **Encoder**
- 4) Enter the IP address of the speaker/module
- 5) Port is **8000**
- 6) Enter Username/Password of the IP loudspeaker/module

Then click **Add**.

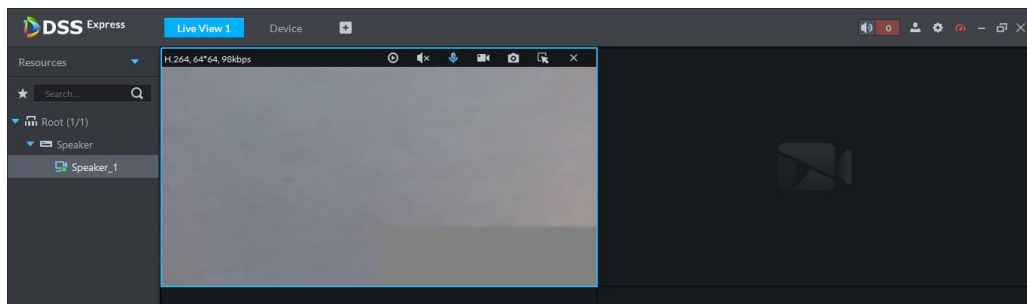


4. Wait for the device to show online.



5. Return to the **Live View** screen for the device you have just added and click the small microphone **icon**.

Ensure all the microphone settings are correct within the DSS in relation to your input microphone.



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SET UP TERRACOM II PBC6-IP

Go further with **TERRACOM II**

Please download the TERRACOM II User Manual by clicking the link below:

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