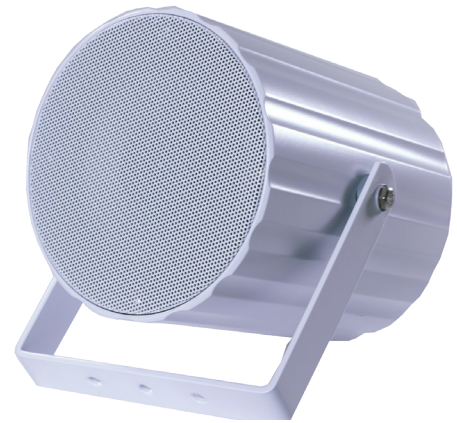


IP SOUND PROJECTOR

CELL20-IP

The CELL20-IP is a 20 Watts IP 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 CELL20-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)	30
Rated power, Watts (PoE+, IEEE802.3 af, class 3)	20
Driver Impedance, Ohms	8
Effective Frequency Range, Hz (BSEN60268-5)	110 - 16,000
S.P.L. @ 1 m, 1 Watt, dB, Octave, 100 Hz-10 kHz	88
S.P.L. @ 1 m, Full power, dB, Octave, 100 Hz-10 kHz	101
Dispersion at 1k/2k Hz, Degrees	180/120



TECHNICAL SPECIFICATIONS

CELL20-IP

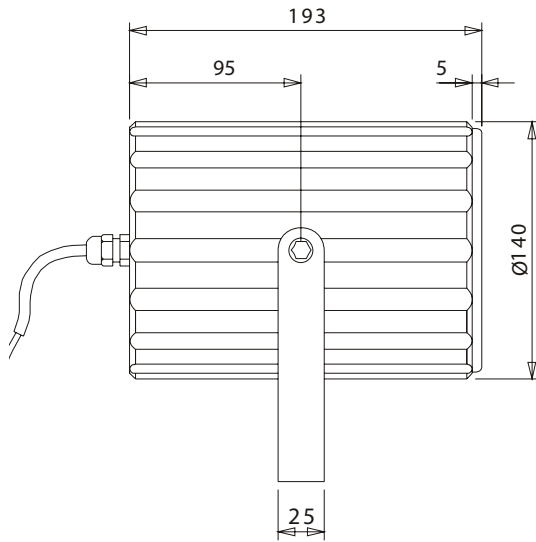
Power supply	PoE+, IEEE802.3af, class 3 DC power input: 24 VDC (18-24 VDC) Minimum power supply: 2 A
● Control Inputs	
Type	Euro-block terminal
Mode (analog/TTL), VDC	max. 3.3
TTL logic input (max.), VDC	HIGH active: 3.3 LOW active: 1.2
● Interconnection	
Female RJ45 socket, CAT5/6 cables	
Max. cable 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	55
Min/Max amb temp	-30°C to 80°C
Relative humidity	≤ 85%
● Mechanical	
Dimensions, diameter, mm	Ø140 x 193
Net weight, kg	2.5
Colour (Unless Specified)	White RAL9016



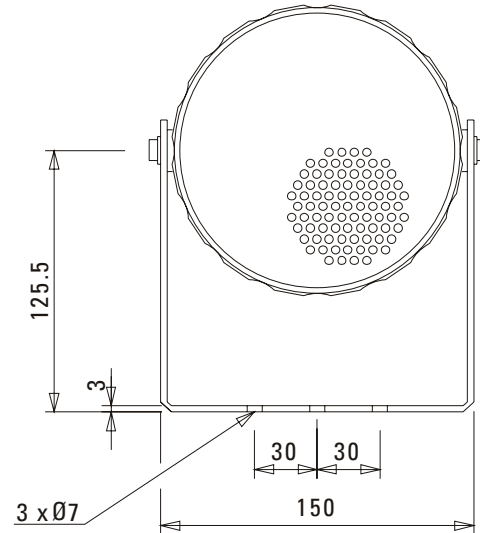
INSTALLATION GUIDE

CELL20-IP

Side view
(unit: mm)



Front view
(unit: mm)



1) Drill the mounting location holes for the loudspeaker inline with the "U" bracket (2 holes 30 millimetres apart) in the surface where the loudspeaker is going to be located. It is not necessary to use the central mounting hole in the bracket unless the loudspeaker is used with a pole mount clamp.

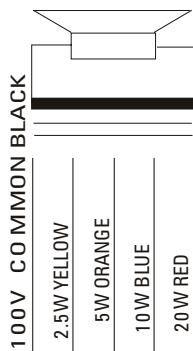
2) The connection for the CELL20/T are as follows:

3) Secure the cable gland tight, ensuring that all the rubber washer are in place for the fixing screws.

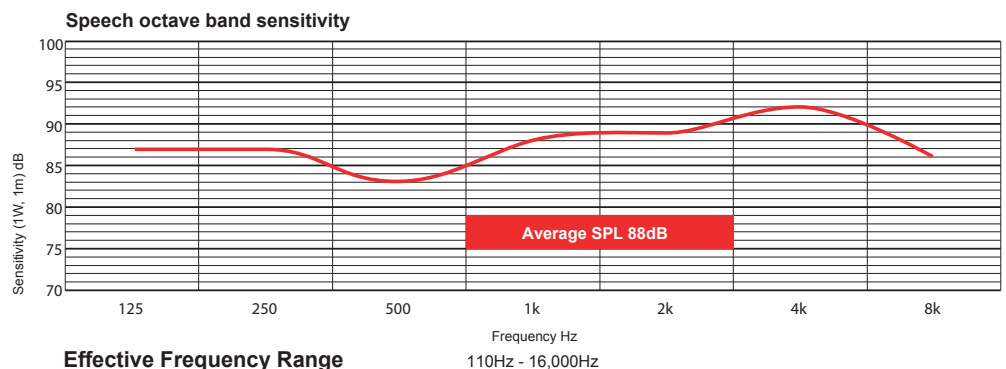
You will observe that around the inner section of the chamber where the back lid was removed a large rubber washer, please make sure that this is in-place when re-locating.

4) Before putting 100 volt line through the units it is advisable to check the impedance of the circuit.

5) On checking the line impedance the speaker is in an operational mode.



Circuit Diagram



Disclaimer: We reserve the right of changes and errors.



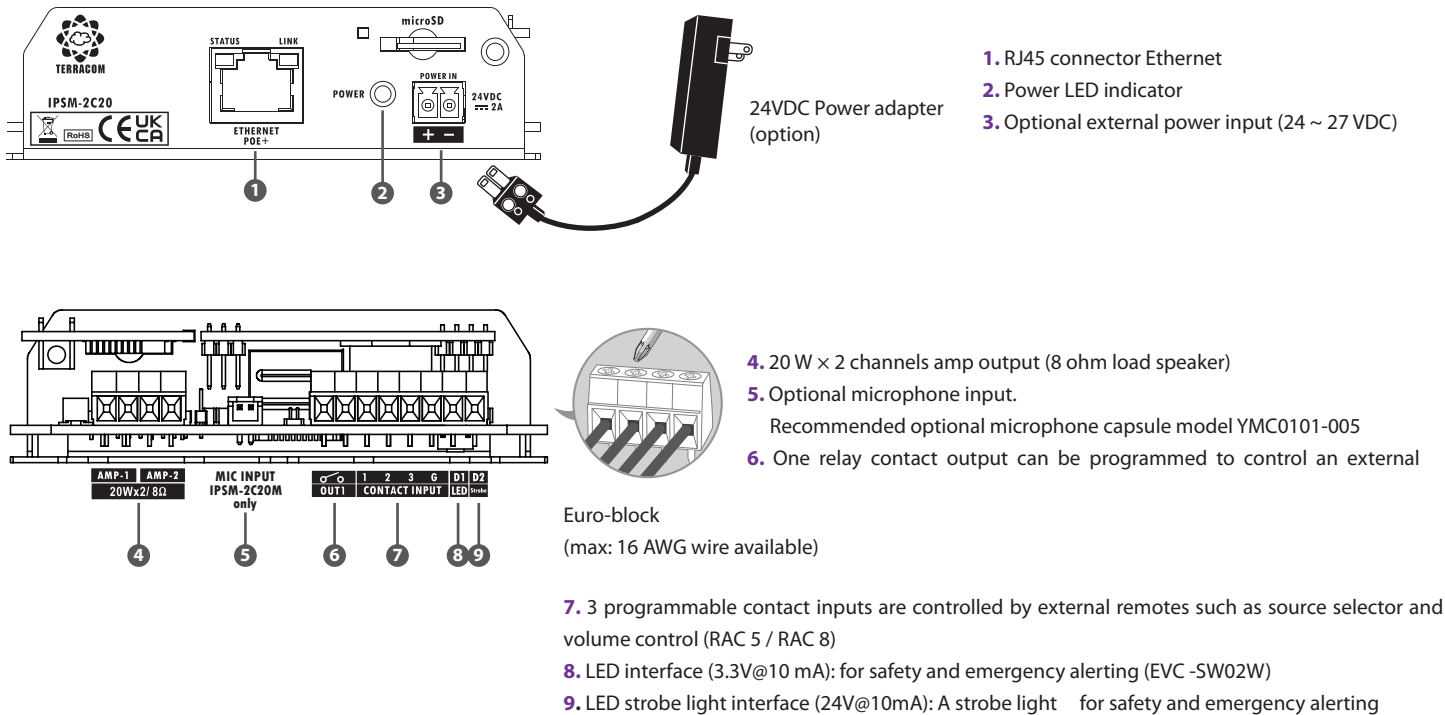
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INSTALLATION GUIDE

CELL20-IP

LOUDSPEAKER CONNECTIONS



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QUICK START CELL20-IP

Network

CELL20-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 CELL20-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.

Disclaimer: We reserve the right of changes and errors.



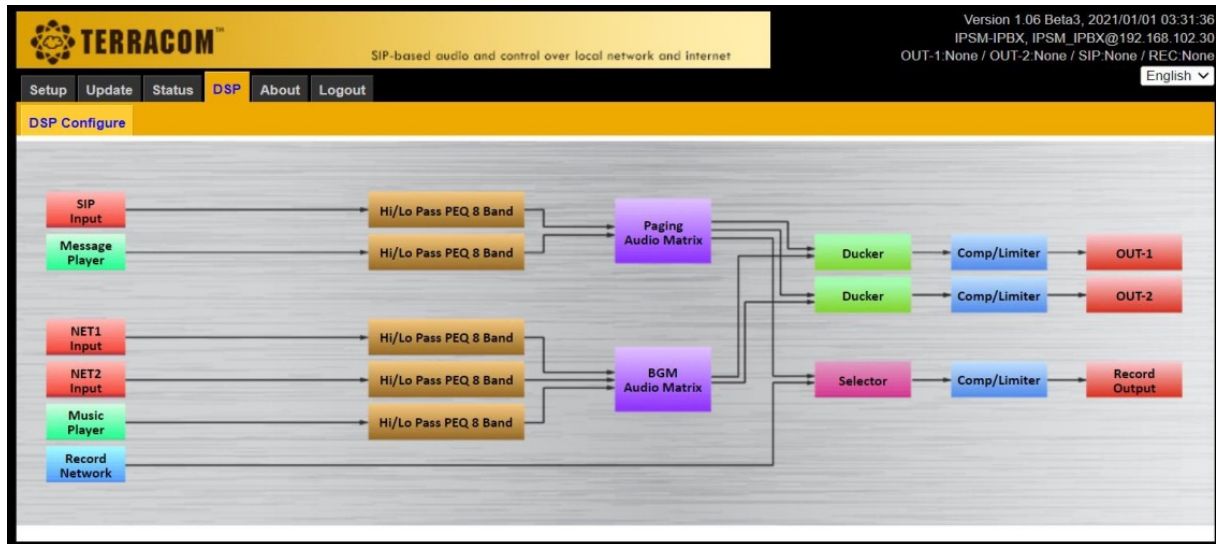
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QUICK START CELL20-IP

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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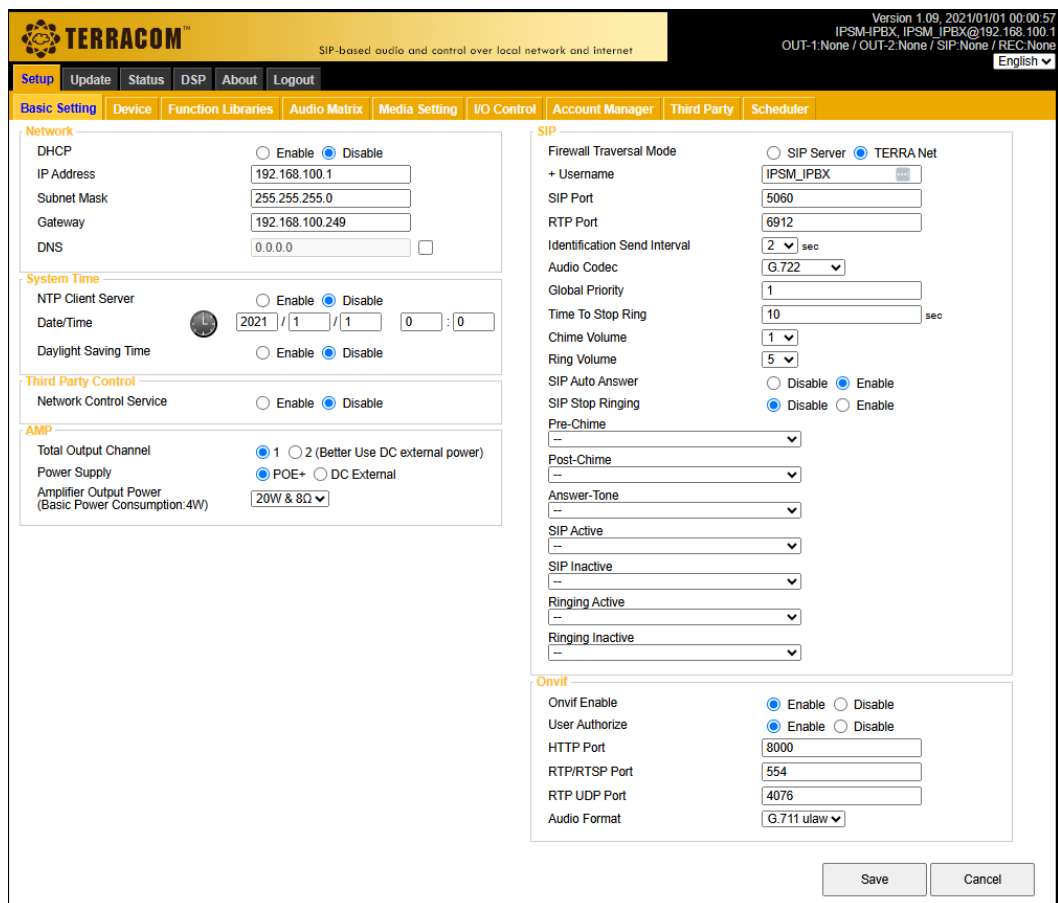
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ONVIF CELL20-IP

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 : 0), Daylight Saving Time (Enable/Disable).
- Third Party Control:** Network Control Service (Enable/Disable).
- AMP:** Total Output Channel (1 or 2), Power Supply (POE+ or DC External), Amplifier Output Power (20W & 8Ω).
- SIP:** Firewall Traversal Mode (SIP Server or 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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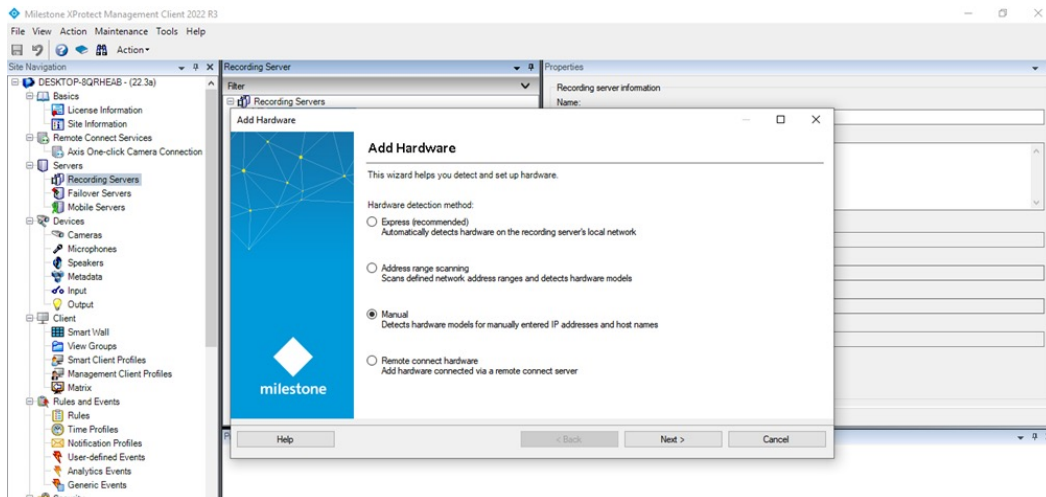
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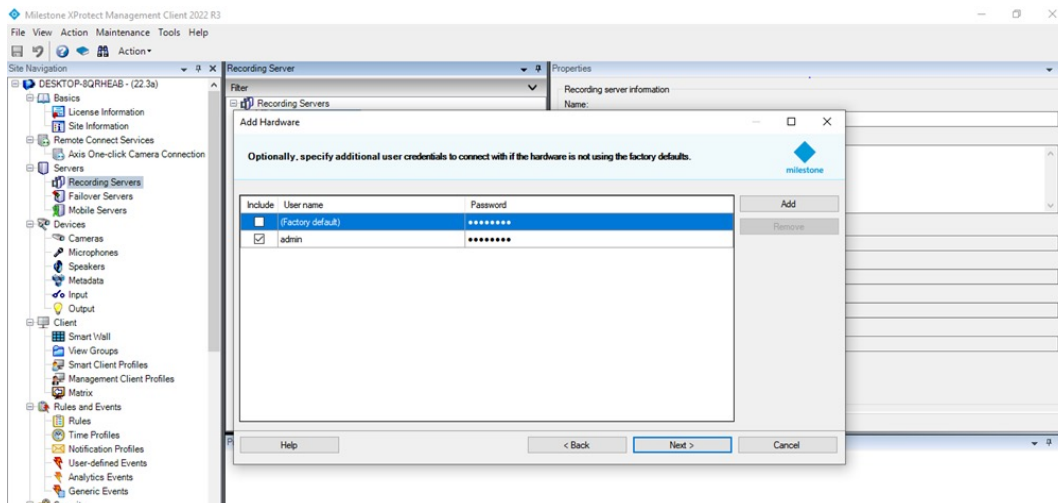
ONVIF CELL20-IP



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.



Disclaimer: We reserve the right of changes and errors.

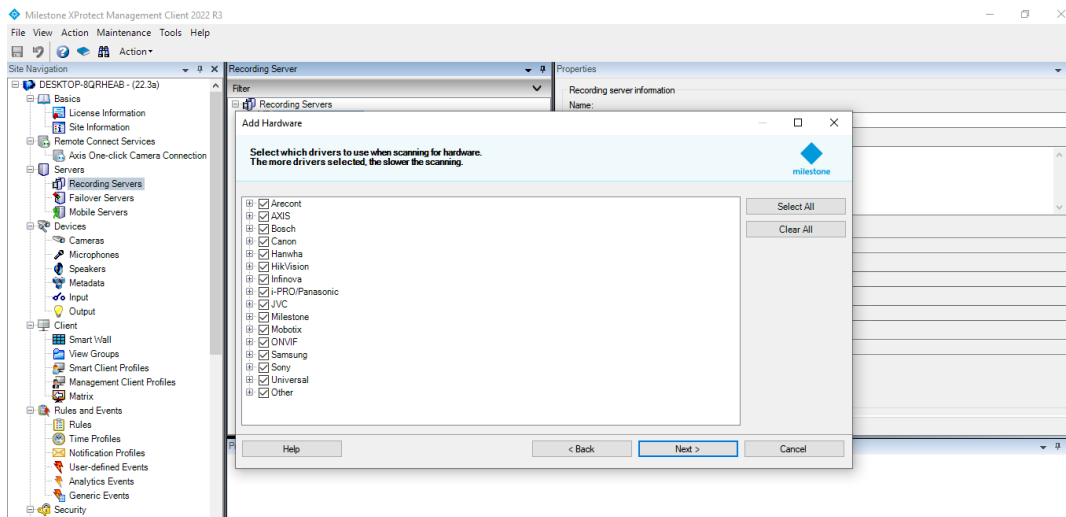


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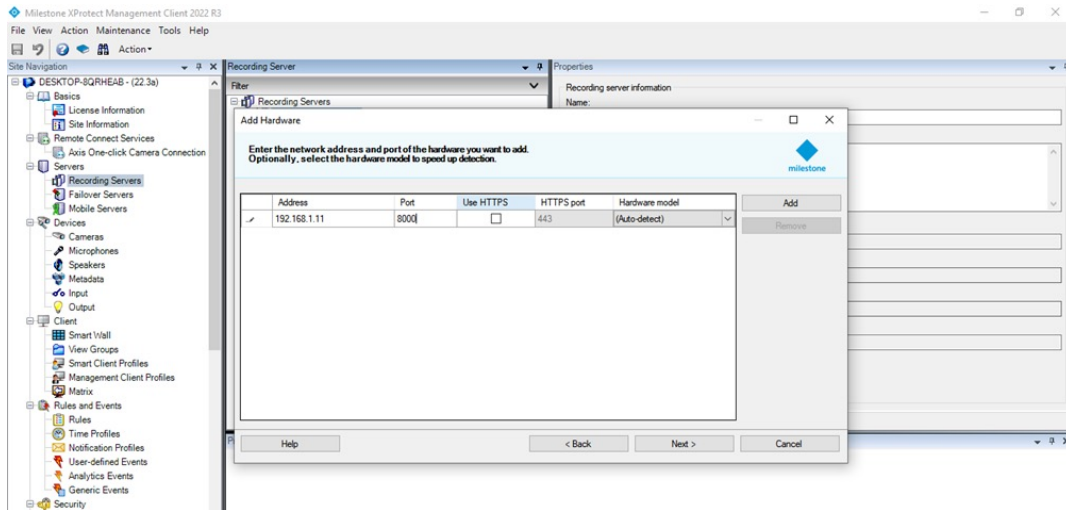


ONVIF CELL20-IP

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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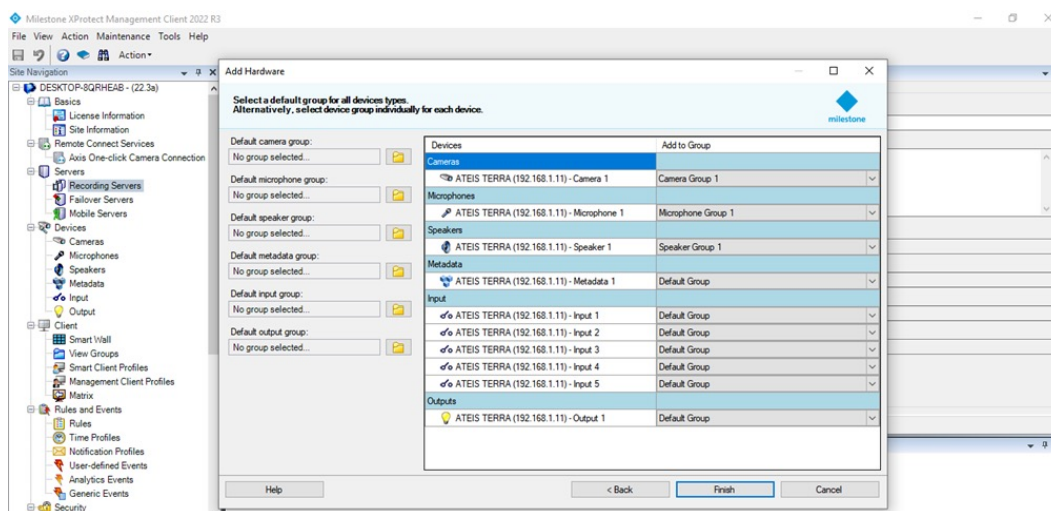
ONVIF CELL20-IP

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

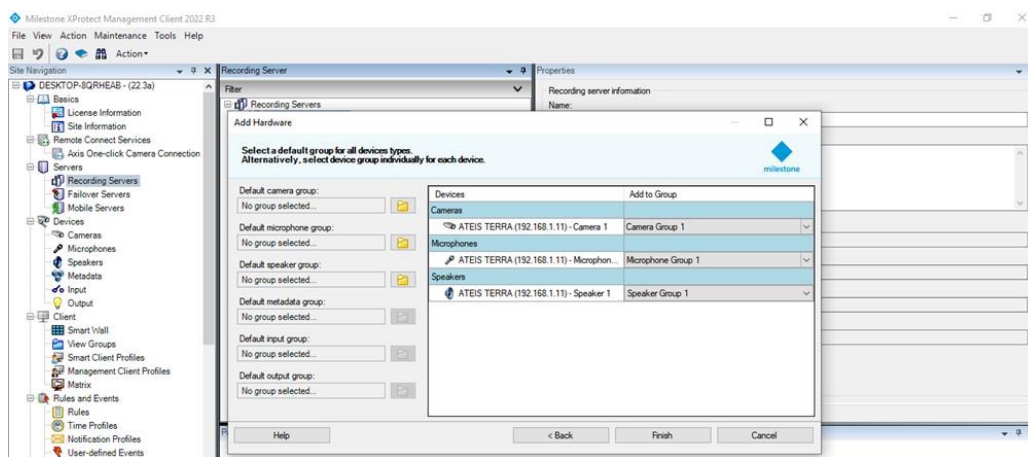
Camera: will show a holding screen to show connection.

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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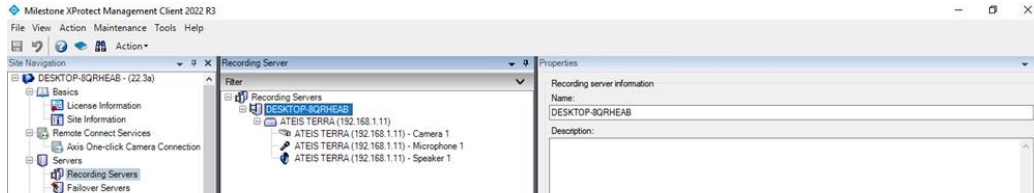
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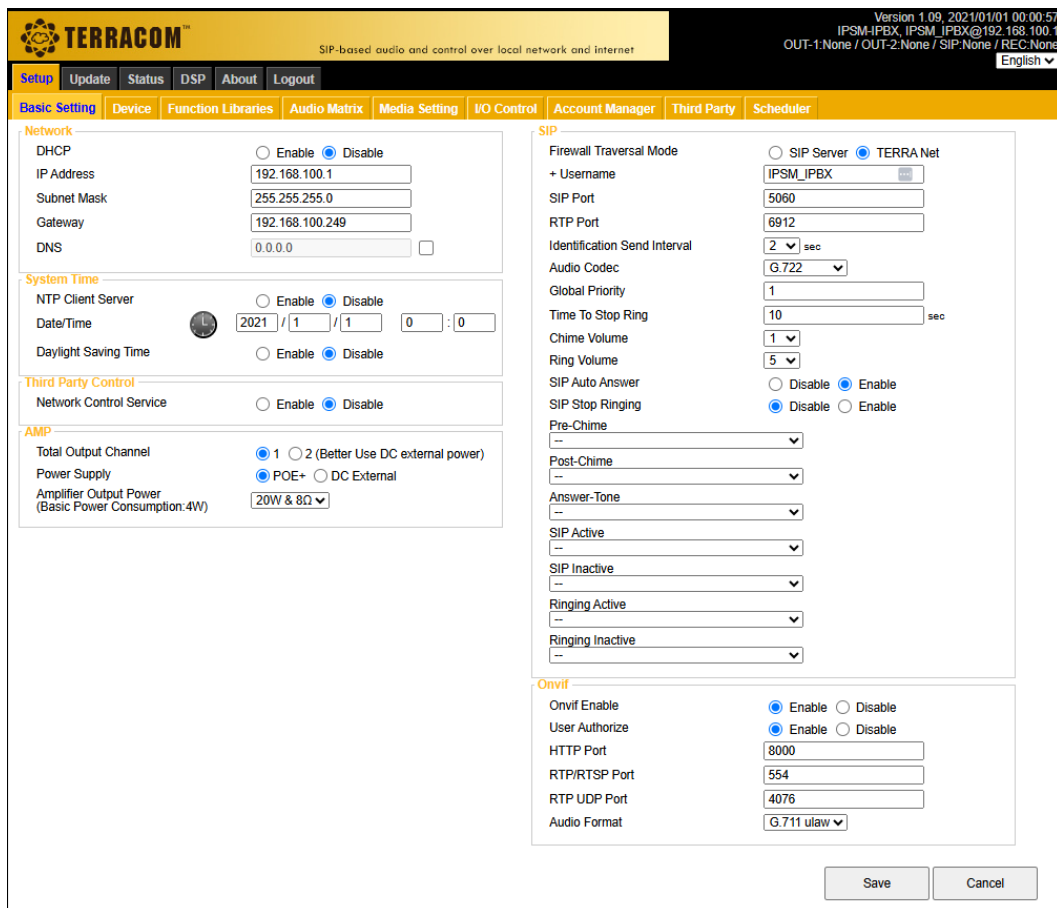
ONVIF CELL20-IP

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**.



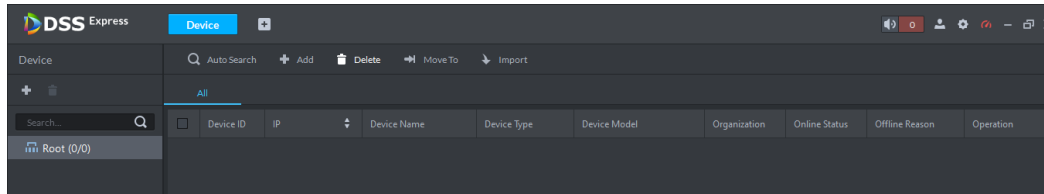
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ONVIF CELL20-IP

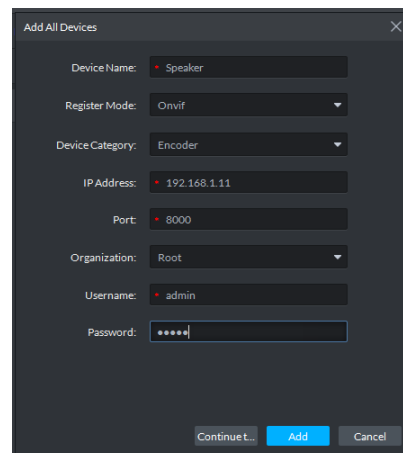
2. Within the **DSS** software go to the **Device Menu** screen and **click add**.



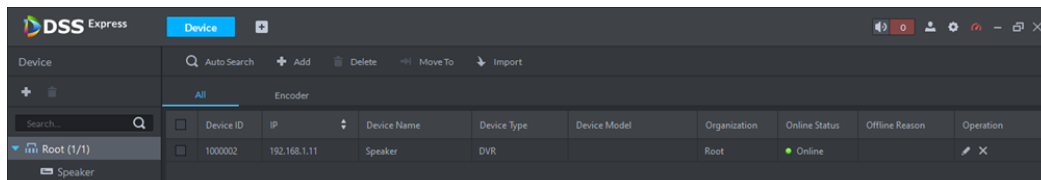
3. Enter the following information:

- 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**.

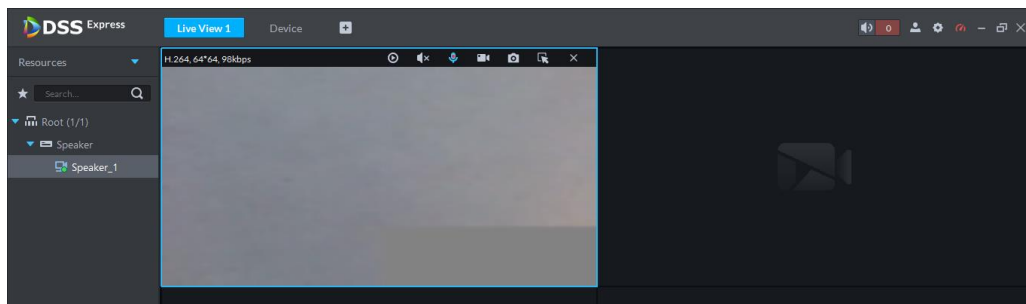


4. Wait for the device to show online.



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 CELL20-IP

Go further with **TERRACOM II**

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

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