

## Integrated Audio IP Solutions!

*High Performance, Reliability, Security, Bidirectional PA Systems*

## Network LAN Speaker for Paging & Communications

The AD630S indoor/outdoor SIP IP horns are part of a series of autonomous TEMA loudspeakers to be connected in a LAN network for PA (Public Address) sound diffusion of announcements, audio clips and music in rooms where high sound power and weather resistance are needed.

Installation is simplified thanks to the built-in **PoE** (Power over Ethernet) for direct power supply on the UTP cable, without the need for cables or external power supplies.

Complete control of the system takes place remotely with security password for access on every **Web Browser**.

The Flash memory stores audio clips for manual or automatic sound diffusion at set times.

AD630S is a **two-way communication system** that incorporates a microphone for communicate with people who are close to the speaker.

**AD630S is designed for continuous operation H24/7 and in heavy environments with IP66 degree of protection.**

### Integration with VoIP SIP phone systems

AD630S can be perfectly integrated with VoIP telephone systems (IP-PBX/Cloud) with SIP protocol and can be registered as a regular IP phone or P2P (Peer to Peer) without a PBX.

### Integration in security systems

Alarm, fire and video surveillance systems can benefit from the functions of AD630S, expanding their efficiency by issuing warning announcements and pre-recorded audio clips.

### iOS and Android APP, Windows software

Free download APP are available for smartphones with operating systems iOS, Android, Windows. With these applications it is possible to operate with the IP speakers and launch announcements.

### Special Applications

Remote alerts for intruders' deterrence, automatic emergency instruction messages, notifications to security personnel for requests for help and immediate interventions.



### Target

- ◆ Factories, Industries, Production lines
- ◆ Alarm and warning systems, Video surveillance
- ◆ Private and Public Security, Parks, Transport
- ◆ Energy, chemical plants, Oil & Gas
- ◆ Schools, Campus, Universities
- ◆ Parking lots, garages, building sites
- ◆ Warehouses, Supermarkets, Shopping Centers
- ◆ Gyms and Fitness Centers, Institutions
- ◆ Railways Stations, Undergrounds, Airports

## Innovative features and performances

- ◆ Launch of PA ads from any phone by calling the account of the IP SIP Speaker
- ◆ Sending of the announcement directly or with an enabling code from telephone keypad to start the operation
- ◆ Launch of **deferred** announcements: the system answers the call, records the announcement of the caller and plays it at the call hang up in order to eliminate disturbances due to noises of echo and reverberation of the environment
- ◆ Automatic broadcasting from pre-recorded audio files in memory for immediate launch via software or web browser, or at set times daily, weekly, annual calendar
- ◆ Double internal High efficiency audio amplifier 2x20W (40W) self-protected against even permanent short-circuits
- ◆ Output for 2nd passive speaker 20W 8 Ohm to extend the served area or to generate a 100V-20W audio line
- ◆ Internal microphone for bidirectional communication
- ◆ Speaker **self-diagnosis** with specific tone test for periodic verification of functionality, upon detection of anomalies, the system sends reports to the operator with immediate warning message and via e-mail.
- NEW!** ◆ **12 audio files of 60sec each** (extendable duration) recordable in the internal memory of the speaker, 9 for announcements, 3 for alarms
- ◆ Activation of messages pre-recorded in the memory with a simple SIP phone call and DTMF dialing
- ◆ 2nd SIP account with night call repeater function (SIP Repeater) with 6 selectable basic sounds and others freely customizable by the user
- ◆ LAN P2P (Peer to Peer) operation even without PBX
- ◆ PoE (Power over Ethernet) to IEEE802.af standard, only one UTP cable cat. 5/6 for data and power, no external power supply required in the presence of a PoE switch
- ◆ Internal clock synchronization via Internet
- ◆ **API (Application Program Interface)** for integration with external programs and functionality activation from browser
- NEW!** ◆ 1 alarm input from external contact from PIR sensor, or from any type of other sensor (Temperature, smoke, etc.), for one of the following functions following the event:
  - a) Launch of pre-recorded message for Warning/Dissuasion
  - b) SIP calling and sending an alert message
  - c) "Push to Talk" function for two-way communications controlled by an external local button (not included)
  - d) Manual activation of the ringer of the 2nd account
- ◆ 2 inputs for external call buttons to 2 programmable SIP numbers or IP addresses.
- NEW!** These inputs can be used as other alarms inputs
- ◆ Sending of TLS e-mails following events at the alarm input
- ◆ 2 Relay outputs for remote operation via LAN of external devices or light signals indicating the presence of sound or a call in progress.
- ◆ **Activation of the 2 internal relays that can be associated with different events:** night call on 2nd account, Multicast channel active, Call phone call in progress, etc.
- NEW!** ◆ **16 multicast reception channels** at priority levels for broadcasting music, silent by announcements, high quality, play of audio clips/sequences.
- NEW!** ◆ **9 Multicast channels in transmission**
- ◆ **Master/Slave operation can be activated on the devices**
- NEW!** ◆ Volumes individually adjustable via Web browser for all voice channels: Multicast/Announcements/Ringtone/Audio in the local memory, or by software Tema ADAM or APP for Smartphone and Tablet
- ◆ Creation of LOG files for tracking all activity of the system
- ◆ PC software, iOS/Android APP and free utilities for easy installation and system management
- ◆ Built for H24/7 operation
- ◆ Compatible with all SIP standard popular IP-PBXs brands on the market

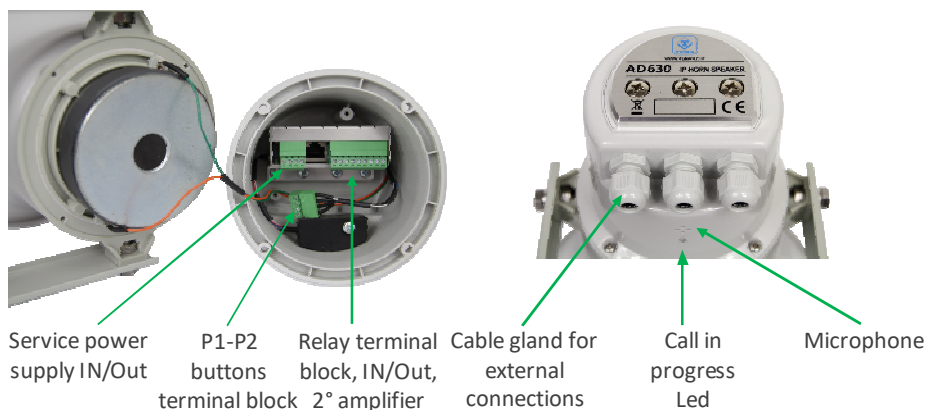
**MADE IN ITALY** il prodotto è progettato e costruito in Italia con tecnologie all'avanguardia da TEMA TELECOMUNICAZIONI che ne garantisce il supporto e l'assistenza tecnica nel tempo.

### Tested with the most popular PBX brands:

SIEMENS/UNIFY - AVAYA - ALCATEL - PANASONIC - SAMSUNG  
 NEC - LG ERICSSON - WILDIX - AASTRA - ASCOM - NITSUKO  
 SELTA - PHILIPS - MITEL - YEASTAR - ZYCOO - CISCO - EPYGI  
 ELASTICS - GRANDSTREAM - SHORETEL - NORTEL - SWYX  
 XORCOM - INNOVAPHONE - NETHESIS - 3CX - KALLIOPE  
 SISTEMI ASTERISK - BRIA - APP SOFTPHONE - SOFTCLIENT SIP



## Rear view



## Packing list

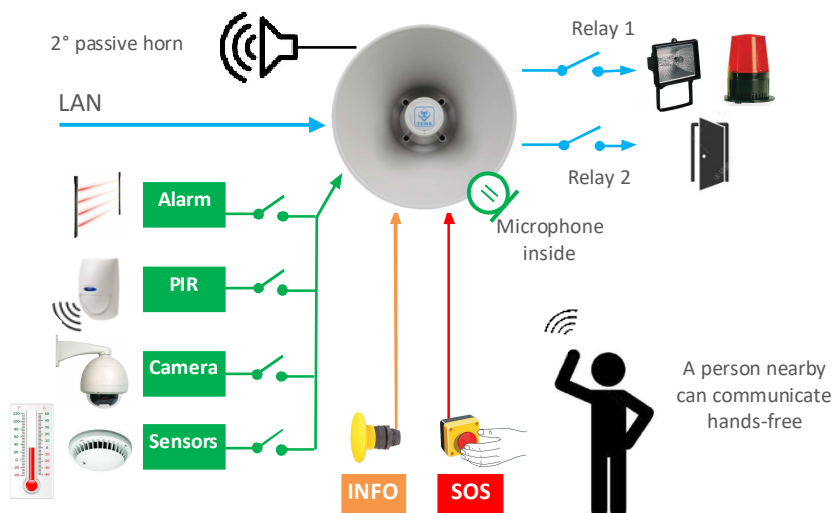
- 1 IP SIP Horn AD630S/AD630SA with UTP cable
- 1 technical manual
- 1 Documentation and software supplied

## Models code

**AD630S** gray aluminum loudspeaker  
**AD630SA** white ABS loudspeaker

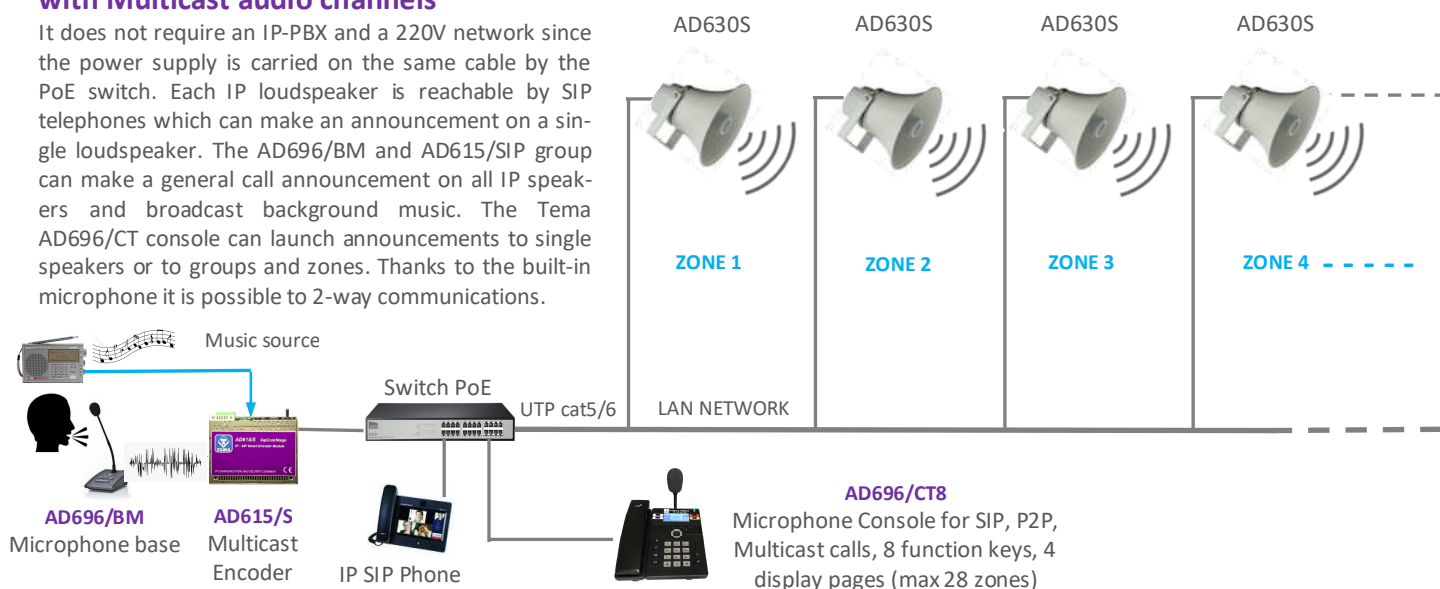
## Inputs/Outputs

- 1 multifunctional alarm input
- 2 inputs for SIP call buttons or other alarms inputs
- 2 Relay outputs remotely controlled via LAN
- 1 Built-in microphone for 2-way communications
- 1 12-24Vdc power input
- 1 Service power supply output 12-24Vdc/200mA
- 1 2nd output power amplifier dedicated to one or more passive external satellite speakers



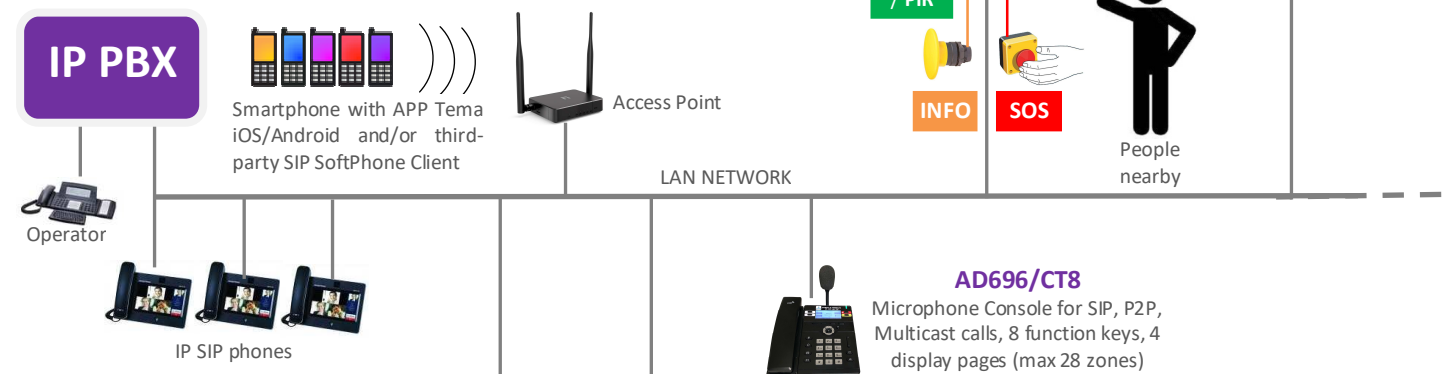
## Simple P2P (Peer to Peer) application with Multicast audio channels

It does not require an IP-PBX and a 220V network since the power supply is carried on the same cable by the PoE switch. Each IP loudspeaker is reachable by SIP telephones which can make an announcement on a single loudspeaker. The AD696/BM and AD615/SIP group can make a general call announcement on all IP speakers and broadcast background music. The Tema AD696/CT console can launch announcements to single speakers or to groups and zones. Thanks to the built-in microphone it is possible to 2-way communications.

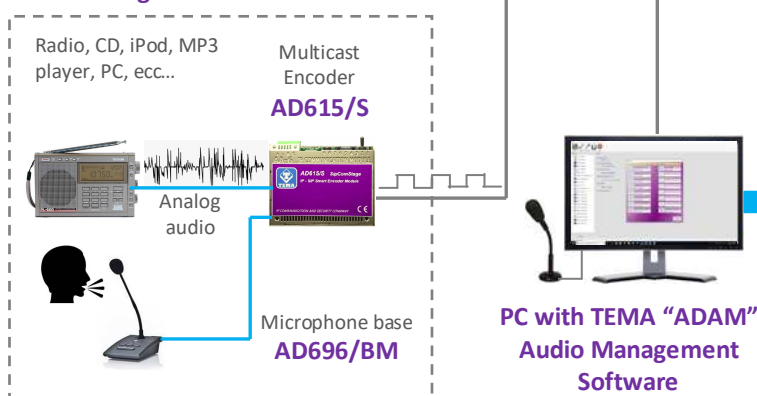


## Extended application with IP-PBX for sound diffusion of Announcements, Background Music and Security functions

Each IP speaker can be reached from SIP phones and Smartphones with the Tema App or a generic "SoftClient" registered in the IP-PBX enabled to launch an announcement. With the Tema AD615/S encoder it is possible to broadcast music on the AD630S Multicast channels, the music is taken in analogue from the output of any audio player and sent to the Encoder which will distribute it on the LAN. The announcement from a call to an IP speaker will stop the music which will be automatically restart at the end of the announcement. There are no limits of use in the number of AD615/S or PC stations with the **ADAM Software** that can be installed in the LAN network. Any announcements or audio streams towards a specific Multicast channel coming simultaneously from multiple Encoder devices (AD615/S and ADAM stations) are interlocked for transmission on the same channel. Each IP speaker has **2 internal relays** that can be activated remotely via LAN.



## Encoder for announcements and music broadcasting



**Network PC with ADAM Audio Domain & Access Management Software** and microphone base for the complete management of all AD600 series IP speakers in the LAN network: Remote management, Programming, Configuration, Remote activation of the relays, Remote activation of pre-recorded messages in each individual IP speaker, launch of announcements, launch of music files, streaming Multicast audio, playlists, launch of audio sequences and announcements at set times, scheduling, SIP calls, monitoring of active Multicast broadcasts in the LAN network ...

## Specific security functions

Up to 2 external buttons can be connected to the AD600 series IP speakers to make SIP calls for information, help or emergency to different extensions of the telephone switchboard, or in P2P, and to establish **two-way communication** thanks to the built-in microphone. A separate input is also provided for an alarm contact coming from the outside or from a **PIR sensor**, or from any other type of sensor, which signals the event with a SIP call to an operator with a customizable message that informs about the **origin zone of the alarm**. The remote operator can activate, with codes from the telephone keypad, the emission of one of the 9 audio files preloaded in the flash memory of the loudspeaker, or control the **2 internal relays** to turn on lights, warning lights or activate others external devices.

## Integrated Web Server for programming

TEMA TELECOMUNICAZIONI		VoIP SIP Horn Speaker	
AD630S			
RICEZIONE AUDIO MULTICAST			
Funzione attiva: <input checked="" type="checkbox"/> Abilita <input type="checkbox"/> Disabilita			
Indirizzo IP	Porta	Volume	
#1 - Indirizzo IP: 239.255.15.1	Porta: 8001	Volume: 0	<input checked="" type="radio"/>
#2 - Indirizzo IP: 239.255.15.2	Porta: 8001	Volume: 1	<input type="radio"/>
#3 - Indirizzo IP: 239.255.15.3	Porta: 8001	Volume: 0	<input type="radio"/>
#4 - Indirizzo IP: 239.255.15.4	Porta: 8001	Volume: 1	<input type="radio"/>
#5 - Indirizzo IP: 239.255.15.5	Porta: 8001	Volume: 1	<input type="radio"/>
#6 - Indirizzo IP: 239.255.15.6	Porta: 8001	Volume: 1	<input type="radio"/>
#7 - Indirizzo IP: 239.255.15.7	Porta: 8001	Volume: 1	<input type="radio"/>
#8 - Indirizzo IP: 239.255.15.8	Porta: 8001	Volume: 0	<input type="radio"/>
#9 - Indirizzo IP: 239.255.15.9	Porta: 8001	Volume: 1	<input type="radio"/>
#10 - Indirizzo IP: 239.255.12.43	Porta: 8002	Volume: 5	priorità <
#11 - Indirizzo IP: 239.255.25.56	Porta: 8001	Volume: 7	
#12 - Indirizzo IP: 239.255.30.200	Porta: 8001	Volume: 7	
#13 - Indirizzo IP: 239.255.30.255	Porta: 8001	Volume: 7	
#14 - Indirizzo IP: 239.255.35.200	Porta: 8001	Volume: 7	
#15 - Indirizzo IP: 239.255.35.255	Porta: 8001	Volume: 7	
#16 - Indirizzo IP: 239.255.40.255	Porta: 8001	Volume: 7	priorità >

## AD630S with additional passive speakers

Thanks to the 2nd channel of the internal audio amplifier it is possible to connect other low-cost passive speakers of the same design to the active IP unit to increase power, directionality, extend the area served, even in different rooms separated by walls, in order to reduce the cost of the plant.



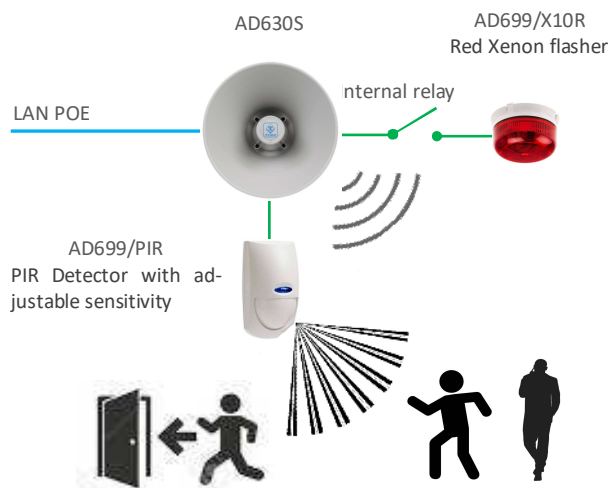
## Self-diagnosis of the IP speaker

A functionality test is performed with specific tones at a preset time, the test tones are read by the built-in microphone and, in the event of an anomaly, the system makes a SIP call and sends an alert message. It is possible to send e-mails for logs. In emergency applications the function is **essential** to guarantee the safety of the public address system.



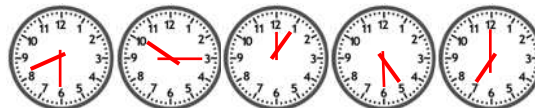
## Automatic announcements with PIR detector

When a person approaches, an automatic warning announcement that can be customized by the user is issued, which may contain instructions, information, evacuation or **alarm and deterrent messages for intruders**. At the end the system can make a SIP call to a number or simply send an e-mail to an operator. Both the PIR sensor and the flasher are powered by the same AD630S without the need for external power supplies.



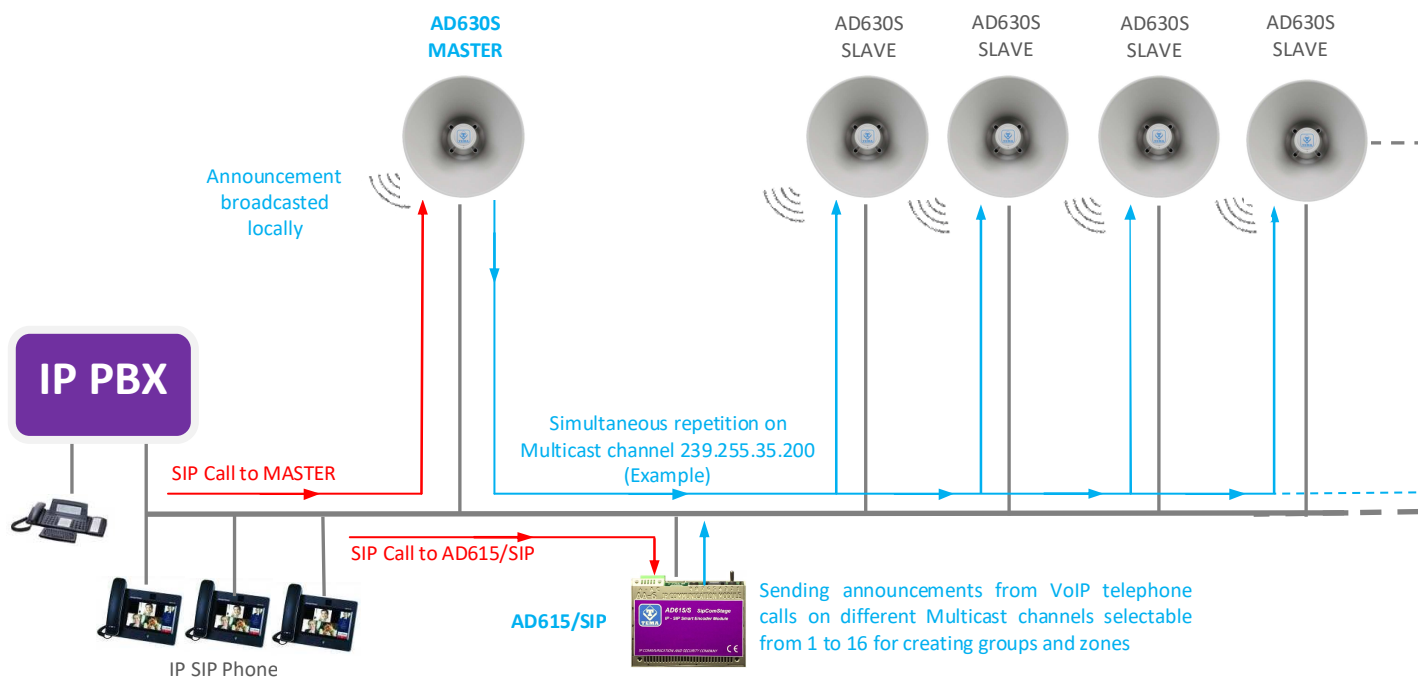
## Automatic announcements at set times and days

5 different daily/weekly schedules that can be programmed for the automatic emission of sounds or announcements. It is possible to upload a CVS file for scheduling with a monthly/annual calendar up to 32 times a day, useful in schools and workplaces.



## AD630S in Master-Slave configuration for general telephone call on Multicast channels

In the scenario shown, each IP speaker can receive the telephone call and broadcast the announcement in its area. The system configured as "MASTER" receives the telephone call and, in addition to broadcasting the announcement in its area, simultaneously generates a Multicast audio stream on a programmable channel and broadcasts the same announcement on all the "SLAVE" loudspeakers enabled to receive the channel Multicast programmed in the "Master" unit.



## Software included in the supply



### TEMA Device Scan (Free):



Software **"DeviceScanTema"** to search for all Tema systems on the network, with display of the IP address, MAC address, serial number S/N, device name, description. From this software it is possible to quickly change the IP address and Subnet Mask or set the system in DHCP. The DeviceScanTema software does not require installation on a PC and can also run from a USB key.

### APP PC Windows (Free Demo):



Software **"ADAM"** Audio Domain & Access Management for centralized management of all networked devices. The "Full" version is provided for 30 days, upon expiry it can be purchased or, if not, the basic Demo version remains with the "Scan" function and Web Link for viewing all Tema devices on the network: IP addresses, MAC and other parameters.

### APP Android, iOS (Free):

### APP PC Windows (Free):



Software **"AAVideoconsole"** max 4 terminals, for ads, SIP calls and relay activation via smartphone

Software **"AAVideoconsole Win"** max 16 terminals, announcements and SIP calls from a PC, receives SIP calls. These applications work as SIP Clients that can be registered on the IP-PBX, they can launch announcements on the IP speakers and activate the relays inside the devices.

**Note: Tema AA-500/AA-600 and AD600 series devices are compatible with any third party SoftClient.**

### APP Android (Free):



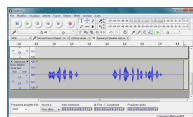
Software **"EVA"** Enhanced Volume Adjustment, for the practical and immediate adjustment of the audio volume from Smartphone, the software can manage an unlimited number of AD600 series IP speakers on the network. Every user in your area (office/room) can control the volume of your IP speaker through the EVA App.

### API Application program interface:



Various APIs can be activated via browser or external programs to activate some of the horn functions such as the activation of the 2 internal relays, the local playback of the 9 internal pre-recorded messages, the activation of audio stream on Multicast channels, etc...

### Audio processing software:



For the realization of messages and audio clips it is suggested to use AUDACITY software, freely downloadable from the site: <https://www.audacityteam.org/download/>

**Tema offers a message personalization service in the inside studio with multilingual professional speakers.**

## Optional accessories



### AA-39P4

PoE injector 230Vac/  
48Vdc 0,5A



### AA-39E3 (30W)

DIN 220Vac/24Vdc-1,25°  
Power Supply



### AA-39E6V (60W)

DIN 220Vac/24Vdc-2,5°  
Power Supply



### AD330/30T

Passive horn speaker 8 Ohm  
30W aluminum



### AD330A/30T

Passive horn speaker 8 Ohm  
30W ABS oval



### AA-699/xx

Flash light indicators with  
Xenon lamp or high  
brightness LED



### AD696/CT4-CT8

PoE console with cardioid  
electret microphone for SIP  
and Multicast calls, 12-28  
Zones



### AA-36

Power relay  
250Vac/16A/4KVA,  
AC/DC 12V/24V



### AD699/XPB

IP65 vandal-proof die-cast  
metal box with N.A.  
button red



### AD699/PIR

PIR Detector with adjust-  
able sensitivity



### AD320/30

Transformer 30W for PA Audio  
line 100V, toroidal



### AD699/RV

Pole collar for diameters  
from 80mm to 150mm



### AD699/CLP

Clamp for fixing on pipes for  
diameters from 25 to 50mm



## Technical Features

### LAN e main protocols supported

TCP/IP Network 10/100BaseTx, Auto MDX, RJ45, UDP, IPv4/6, HTTP, HTTPS, SSL/TLS, SMTP, DNS, NTP, RTP, ICMP, ARP, RTC, TCP/IP, UDP, IGMP, ICMP, DHCP, FTP/SFTP, UPnP, DNS, SIP, NAT, STUN

### Programming

Integrated Web Browser with password

**API (Application Program Interface):** Different functions are available for system control through HTTP command lines

### Power supply

PoE (Power over Ethernet): IEEE802.3af Class 3 12,95W

External power supply: 12-24Vdc-2° (for max power)

*Note: the 2 PoE + Vdc power supplies can coexist*

### Inputs/Outputs

Inputs from external alarm: 1

Inputs for call buttons: 2 differentiated, 2 SIP / alarm numbers

Outputs: 2 internal relays that can be operated remotely

Relay contact capacity: max 30Vdc – 1,5A

Audio output: for external 8Ω passive speakers

Ports (optionals): RS232, RS485, I2C (on request)

### Double internal amplifier

Amplifier, impedance: Class D 2x20W (24Vdc), 8Ω

Bandwidth: 20 – 22.000Hz

Electrical, thermal protection: permanent short circuit, automatic reset, shut down 120 °C

### Speaker

Characteristic, impedance: Magnetodynamic unit, 8 Ohm

Bandwidth: 300 – 7.000Hz

Acoustic pressure (SPL): 107 dB A (1KHz at 1 meter)

Acoustic pressure (SPLmax): 120 dB A Pnom

Dispersion angle: 100°

### Internal microphone

Omnidirectional electret 30Hz-18KHz high sensibility

### Signalings

Acoustic: Call tone, Ding-dong (Chime)

Visual: Active call LED, flashing external lights

**Self-diagnosis:** Horn functionality test with specific and periodic tones, in the event of an anomaly a SIP call with a warning message and an e-mail is sent

### Technology

CPU: processor MIPS core 560MHz

Memory: 128MB Ram, Flash 32MB

Messages/Sounds: 9 60s cad. in flash memory

E-mail notice: YES following an external event

### Multicast Audio Streaming

Codec: G711μ, G711a, G722, Linear from L16 to L44 kHz

Multicast channels: 16 channels priority order RX  
9 trasmission channels TX

### VoIP SIP

SIP Calls: Server (IP-PBX) or P2P (PeerToPeer)

Audio communication: Mono and Bidirectional, DTMF

### Security & Service

Access Protection: with password

Debug: activity log files

### Environment

Operating temperature: from -20° to +60°C

Storage temperature: from -20° to +65°C

Humidity, protection grade: up to 100%, IP66

### Mechanics

Installation: wall mounting

Housing material: painted aluminum

Dimensions, Weight: Diam. 245 x 245 x 300mm, 2,3Kg  
ABS 215x283x290mm 2,0Kg

### Reliability, Safety

Construction: Designed for operation H24/7

### Normative references

Safety (Health&Safety): IEC/EN 60950-1 +A11:2009  
+A1:2010 +A12:2011

EMC: EN 55022:2010, EN 55024:2010,  
EN 61000-3-2:2006  
EN 61000-3-3 :2008

### Compatibility:

CE, ROHS

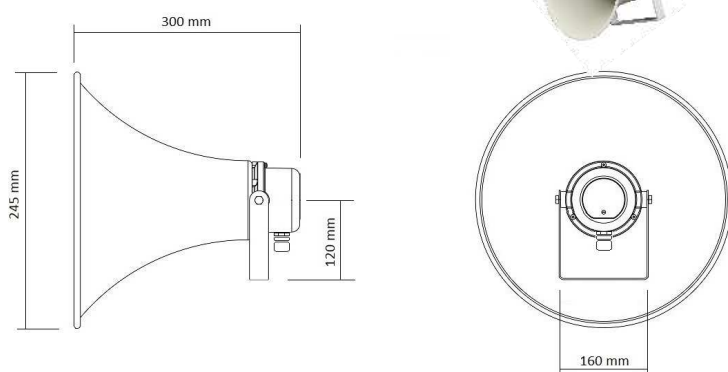
### Warranty:

2 years, (optional extension)

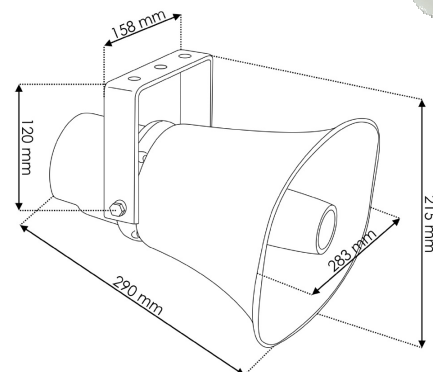
### Origin:

Designed and built in Italy

## AD630S grey round aluminum version



## AD630SA white oval ABS version



## A complete range of IP SIP Network Speakers for any Public Address application

Model	NEW!							
	AD630S AD630SA	AD630SAL (*Q1/23)	AD634	AD638W AD638B	AD633	AD635	AD639	AD639SR
Power (ext. Power supply) 24Vdc-2A / 18Vac-2,5A	40W (2x20W)	20W	40W (2x20W)	40W (2x20W)	12W (2x6W)	12W (2x6W)	30W (2x15W)	30W
Power (PoE power supply)	10W	10W	10W	10W	10W	10W	10W	10W
Multicast channels RX	16	16	16	16	16	16	16	1
Memories N. int. audio	9+3	9+3	6+3	6+3	6+3	6+3	6+3	2
Internal microphone	YES	NO	YES	YES	YES	YES	YES	NO
2° speaker output	YES	NO	YES	YES	YES	YES	YES	NO
Buttons 2-3 inputs	YES	NO	YES	YES	YES	YES	YES	NO
Bandwidth (Hz)	300 7.000	300 7.000	150 15.000	50 20.000	80 15.000	180 16.000	180 16.000	350 5.800
Max acoustic pressure SPL Pnom/1mt	120dB	120dB	105dB	104dB	103dB	100dB	98dB	109dB
Dispersion angle	100° @2KHz	100° @2KHz	100° @2KHz	170° @2KHz	160° @2KHz	110° @2KHz	150° @2KHz	150° @2KHz
Dimensions (mm)	240x290 215x283x290	215x283x290	180x145x178	163x160x255	200x92	218x216x120	119x159x70	119x159x70
Weight (Kg)	2,3	2,3	2,5	2,2	1,1	1,5	1,8	1,8
Protection grade	IP66	IP66	IP65	IP65	IP20	IP20	IP56	IP56
Housing material, Body	Aluminum (AD630S) ABS (AD630SA)	ABS	Aluminum	Plastic stab. UV, metal grid	Metal ring and grid car- rier	Plastic stab. UV, metal grid	Halogen Polymer free EN 60754-2	Halogen Polymer free EN 60754-2
Installation, environment	Internal/ external	Internal/ external	Internal/ external	Internal/ external	Internal	Internal	Internal/ external	Internal/ external
Main applications features	Power directivity bad weather	Power directivity bad weather	Power bad weather Audio quality Design	Power Audio quality Design	Ceiling Audio quality	Wall Practicality Audio qua- lity	Directivity Compact Resistant	Alarm SIP Call Repeater

<https://www.tematlc.it/eng/audio-ip-en.asp>

<https://www.tema-ipaudio.com/en/products/ip-audio/sip-speakers/ad630/>

**TEMA TELECOMUNICAZIONI**, founded in 1988 by professionals of the sector, is a leader in the design and manufacture of special systems and services for Fixed and Mobile Telecommunications and Security. The research and development laboratories in Milan, where it is invested more than 15% of sales, are equipped with advanced equipment and skilled personnel in microprocessor technology, programming languages, Voice-Audio-video processing, VoIP, Wireless. The company's purpose is to give complete customer satisfaction, continuous improvement of product performance and to offer an excellent technical support service, for that is **UNI EN ISO 9001:2015** quality certified. To date TEMA can claim an installed base of hundreds of thousands of devices and peripherals integrated with of most major brands of PBX. Operation is ensured through trusted resellers, with technical support from the Milan Headquarter. It also organizes technical and commercial trainings. Company's revenue is divided between the domestic market and foreign market with exports percentages rising in recent years.

"IP COMMUNICATION AND SECURITY COMPANY"