High Performance, Reliability, Security, Intercom for PA Systems

Network LAN speaker for Paging and Communication

The SIP Ceiling Speaker AD633 is part of a series of TEMA speakers to be connected to a standard LAN for the PA (Public Address) paging of ads, speech and music, in offices, factories, public places.

The internal circuits incorporate a PoE (Power over Ethernet) power supply for direct power over the UTP cable, but also allow input from an external power supply at 230Vac / 12-24Vdc to extend the maximum sound power output. The two power supply types can coexist in order to increase the safety of the service.

AD633 is a two-way communication system with a built-in microphone with the dual local listening function and control of the speaker functionality.

Power Amplifier Technology

A double Class "D" Amplifier with high efficiency and low consumption can generate a maximum output power of 12W (2x6W) 8 ohms with high sound quality. The amplifier is self-protected against overload and short circuit output power. It is provided a second auxiliary output which can be brought to another passive speaker to better distribute the output power or to generate a 100V-6W PA line.

Pre-recorded messages

In the internal SD card are recorded sounds and messages for automatic or command sending onto speaker, also automatically at pre-set times.
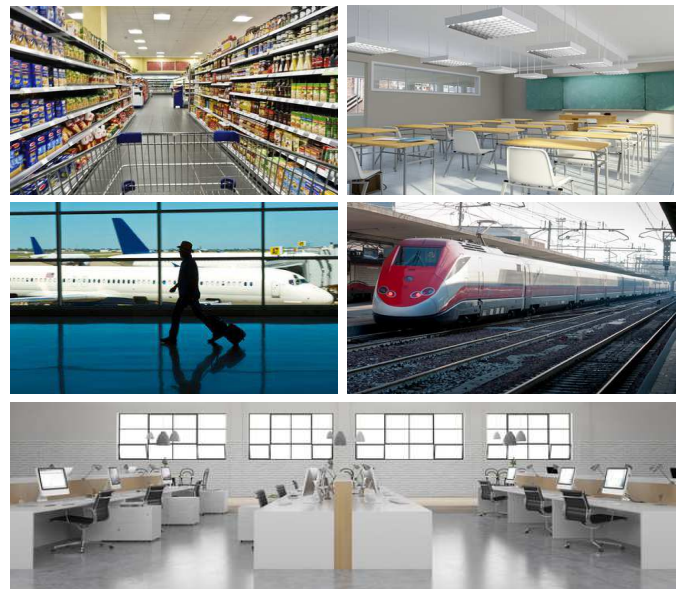
iOS and Android APP

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

Integration with VoIP SIP phone systems

AD633 can be perfectly integrated with VoIP telephone systems (IP-PBX) with SIP protocol and can be registered as a regular VoIP phone or P2P (Peer to Peer) without a PBX.

Applications, Target

♦ **Companies, Offices, Factories, Warehouses, Industry**
♦ **Warehouses, Garage, Supermarket, Parking**
♦ **Public areas**
♦ **Alarm and warning systems**
♦ **Hospitals, Schools**
♦ **Railway Stations, Airports, Ports**

Innovative features and performances

- Launch of PA ads from any phone by calling the account of the IP SIP Speaker

- Security code from keyboard to start the announcement

- 2nd SIP accounts night call repeater function, sounds files freely customizable

- Output for 2nd passive speaker 6W 8 Ohm to extend the served area or to generate a 100V-6W audio line

- Double internal audio amplifier 2x6W (maximum output power using external power supply)

- PoE (Power over Ethernet) 802.af standard, only one cable connection

- 2 internal relays for external devices drives via LAN

- 16 Multicast channels for broadcasting background music, silenced by ads, also in high quality (Linear Codec 44,1kHz)

- Volumes adjustable separately for all audio channels Multicast/Ads/Ringtone

- Internal microphone for environment listening (Monitor) and normal bidirectional communication

- 1 alarm trigger input for one of the alternate functions:
  a) Generate a phone call and sends a message of alert (SIP SECURITY INFO CALL)
  b) Pre-recorded announcements launch from the speaker (Notice/Deterrence)
  c) "Push to Talk" feature for phone communication driven by local external button (not included)

- 2 inputs for external call buttons to 2 programmable SIP numbers or IP addresses

- LAN P2P (Peer to Peer) operation even without PBX

- Remote programming via integrated LAN Web Server

- Compatible with all SIP standard IP-PBXs on the market

- IP20 grade of protection

Technical Features

LAN, protocols:	TCP/IP Network 10/100BaseTx, SIP 2.0
Grade of protection:	IP20
Power Supply:	PoE, Injector PoE or ext power supply
PoE:	802.3af class 0 12,95W
External Power Supply (Opt.):	230Vac/12-24Vdc-1-2A
Security:	Password access, activity logs
Inputs from external alarm commands:	1
Inputs for diversified call buttons:	2
Contact rating of the 2 internal relays:	max 30Vdc – 1.5A
Technology:	IMX25 400MHz processor
Memory:	256MB Ram, Micro-SD Flash 2GB
Housing material:	painted metal
Operating temperature:	from -20° to +55°C
Storage temperature:	from -20° to +65°C
Umidity:	up to 100%
Installation:	ceiling mount
Dimensions:	Diam. 200x92mm
Weight:	1,1Kg

Audio Amplifier:	"D" Class (10W PoE) 12W (Ext. Pow.)
Acoustic unit impedance:	8 Ohm
Audio Bandwidth:	80 – 15.000Hz
Acoustic pressure (SPL):	102 dB A (1KHz at 1 meter)
Internal Microphone:	omnidirectional electret 30Hz-18KHz
Multicast Audio Streaming:	G711μ, G711a, G722, L16 16 / 44 kHz
Audio Communication:	Unidirectional and Bidirectional
Additional speakers:	1 passive speaker 8 Ohm 6W
Messages/Sounds:	pre-recorded into the internal SD
Connection:	SIP Server (IPPBX) or P2P (Peer To Peer)
Smartphone APP:	iOS, Android
Acoustic signaling:	call tones, ads Ding-dong
Visual signaling:	Active call led
Programming:	user-friendly web interface and passwords
Origin:	entirely developed and manufactured in Italy
Warranty:	2 years, possibility of extension (option)
Compatibility:	CE, ROHS

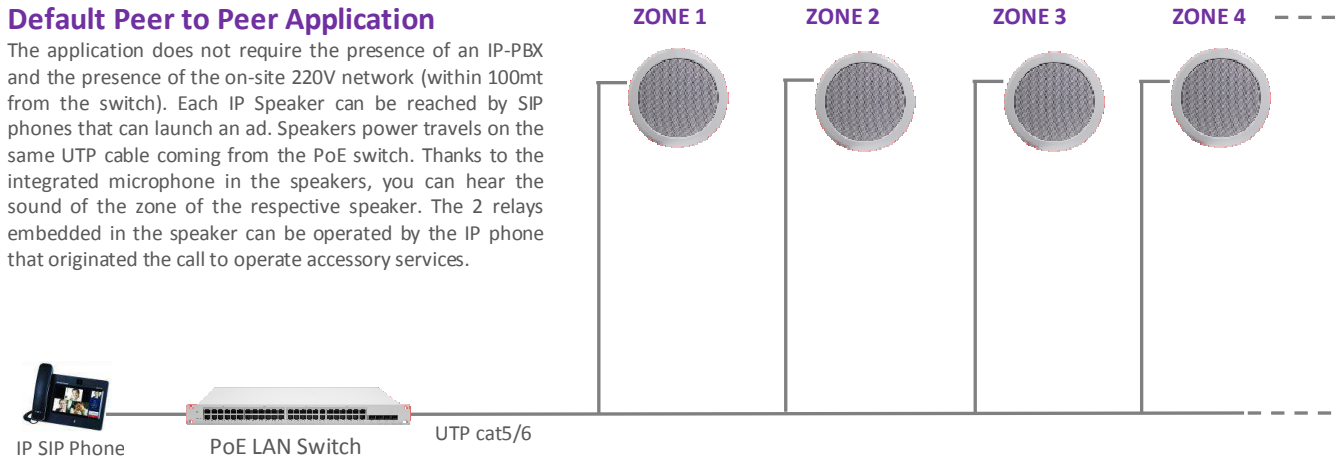*Tested with the most popular PBX brands:*
**SIEMENS - AVAYA - ALCATEL – PANASONIC – SAMSUNG - NEC - 3CX
LG - WILDIX - AASTRA - ASCOM - NITSUKO - SELTA – PHILIPS
ASTERISK BASED SYSTEMS**

Packing List

- 1 IP VoIP SIP AD633C ceiling speaker
- 1 Paper manual
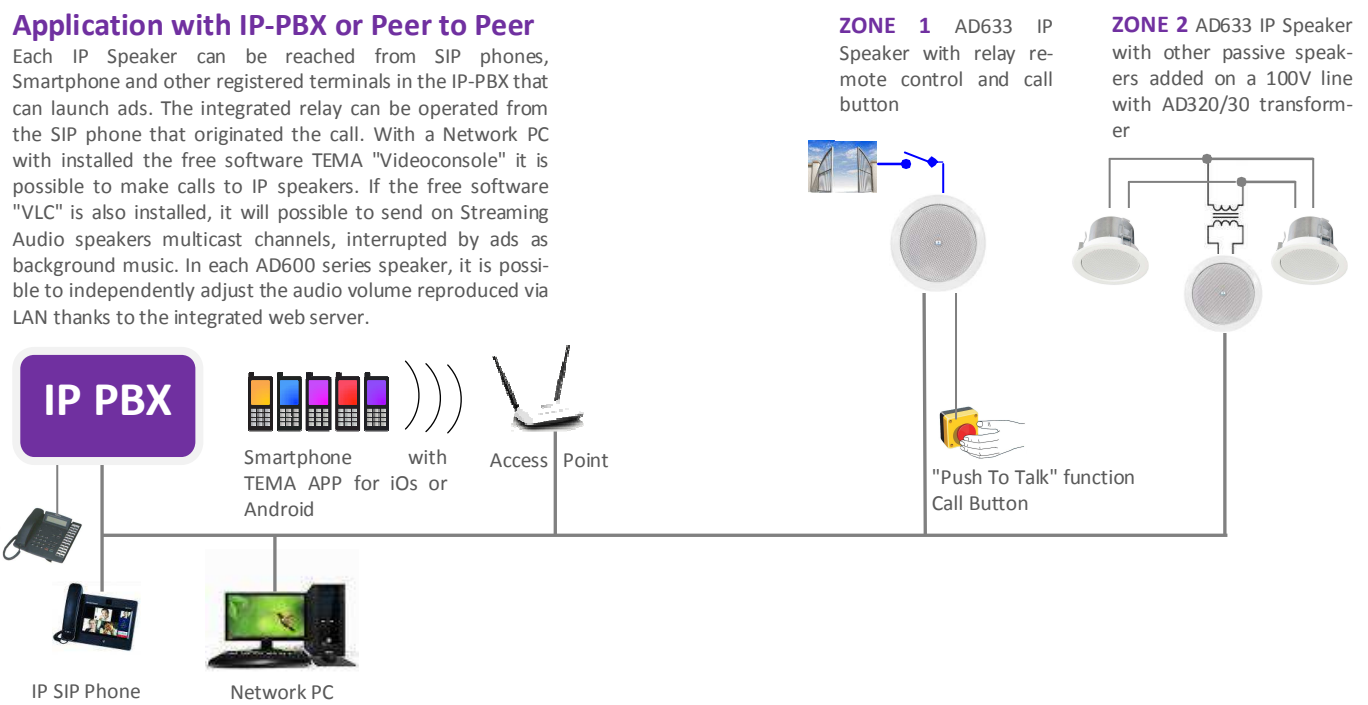- 1 CD-ROM with complete documentation

Default Peer to Peer Application

The application does not require the presence of an IP-PBX and the presence of the on-site 220V network (within 100mt from the switch). Each IP Speaker can be reached by SIP phones that can launch an ad. Speakers power travels on the same UTP cable coming from the PoE switch. Thanks to the integrated microphone in the speakers, you can hear the sound of the zone of the respective speaker. The 2 relays embedded in the speaker can be operated by the IP phone that originated the call to operate accessory services.

ZONE 1   ZONE 2   ZONE 3   ZONE 4
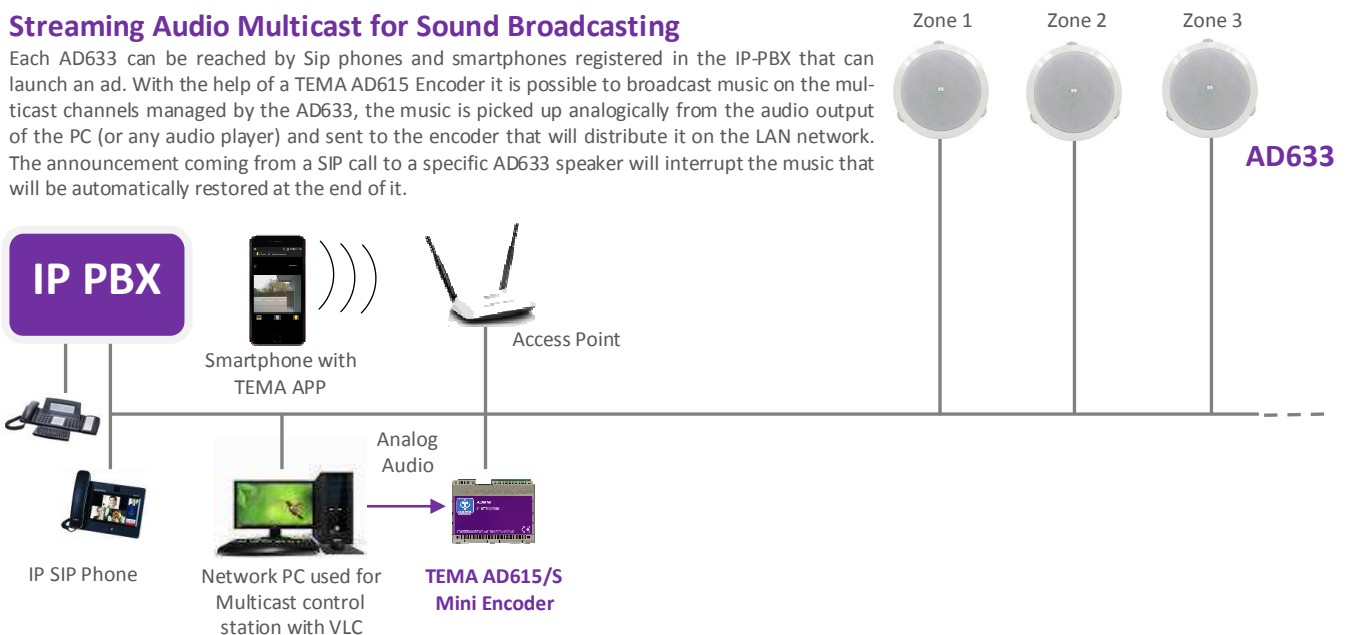
IP SIP Phone   PoE LAN Switch   UTP cat5/6

Application with IP-PBX or Peer to Peer

Each IP Speaker can be reached from SIP phones, Smartphone and other registered terminals in the IP-PBX that can launch ads. The integrated relay can be operated from the SIP phone that originated the call. With a Network PC with installed the free software TEMA "Videoconsole" it is possible to make calls to IP speakers. If the free software "VLC" is also installed, it will possible to send on Streaming Audio speakers multicast channels, interrupted by ads as background music. In each AD600 series speaker, it is possible to independently adjust the audio volume reproduced via LAN thanks to the integrated web server.

ZONE 1 AD633 IP Speaker with relay remote control and call button

ZONE 2 AD633 IP Speaker with other passive speakers added on a 100V line with AD320/30 transformer

IP PBX

Smartphone with TEMA APP for iOs or Android

Access Point

"Push To Talk" function Call Button

IP SIP Phone   Network PC

Streaming Audio Multicast for Sound Broadcasting

Each AD633 can be reached by Sip phones and smartphones registered in the IP-PBX that can launch an ad. With the help of a TEMA AD615 Encoder it is possible to broadcast music on the multicast channels managed by the AD633, the music is picked up analogically from the audio output of the PC (or any audio player) and sent to the encoder that will distribute it on the LAN network. The announcement coming from a SIP call to a specific AD633 speaker will interrupt the music that will be automatically restored at the end of it.

Zone 1   Zone 2   Zone 3

AD633

IP PBX

Smartphone with TEMA APP

Access Point

Analog Audio

IP SIP Phone   Network PC used for Multicast control station with VLC   **TEMA AD615/S Mini Encoder**

OPTIONAL ACCESSORIES

AA-39DL	Switching Power Supply 220Vca/12Vcc-1,0A	
AA-39D1A	DIN Switching Power Supply 220Vca/15Vcc-1,0A	
AA-39P4	PoE Injector 230Vac/ 48Vdc-12,95W	
AA-36	Power relay repeater 230Vac/16A – 4KW	
AA-699xx	Flash lights with light bulb Xenon or High Brightness LEDs. Ideal for be controlled by IP speaker relays SIP series AD630, with a call in progress they add a light signal to the acoustic signal	

AD301A	30W Audio Amplifier for DIN rail, 2 channels	
AD320/30	DIN transformer 100V-30W audio line	
AD32	Audio signal isolation transformer, ideal for signal relaunch to remote amplifiers	
AD333/12XTP	Built-in/ceiling passive speaker 8 Ohm 12W with Transformer 12/6/3 W response 80Hz - 20KHz, Diameter 200x160 mm	
AD330/xx	Passive speakers 8 Ohm or 100V various power	

Microphone

Call in progress Led

Microphone and call in progress Led

Clamping springs to the ceiling panel

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, hardware-software, programming languages, audio synthesis and Voice-Audio-video processing, LAN technologies, 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 TELECOMUNICAZIONI can claim an installed base of hundreds of thousands of devices and peripherals integrated with protocols of most major brands of PBX and other special systems for Telecommunications and Security.

Operation is ensured at national level through telephone installers and trusted resellers, with technical and commercial support from both the Milan Headquarter office and Rome Branch office. It also organizes regular technical and commercial training courses. The company's revenue is divided between the domestic market and foreign market with exports percentages rising in recent years.