

The expression of excellence in both Audio Over IP and VoIP SIP technologies

Network LAN Speakers for Paging and communication

The AD638 IP-SIP loudspeaker is part of a series of TEMA loudspeakers to be connected in a standard LAN for public address Paging (PA) audio announcements, prerecorded messages and music, in offices, companies, hotels, medical clinics, hospitals, public places, schools, etc.

AD638 is particularly suitable when sound power and high sound quality is required at the same time with a pleasant and attractive design. The system, unlike the other models in the series, incorporates 2 speakers for low-medium and high frequencies sounds. The AD638 also incorporates a quality microphone for bidirectional communications and allows all the extended services of the AD63x SipComStage series.

The systems are equipped with PoE power supply to take direct power on the UTP cable and an input from an external 230Vac/12-24Vdc power supply to double the maximum power output.

Power Amplifier Technology

Two amplifiers in class "D" with high efficiency and low power consumption generates 40W (2x20W) and is self-protected against overloads and short circuits at the outputs.

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 daily and weekly.

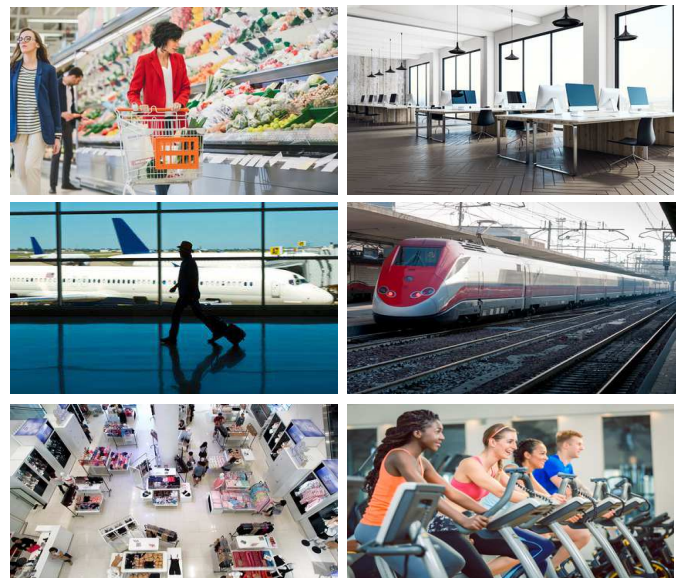
iOS and Android APP

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

AD638 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, Conference Rooms
- ◆ Warehouses, Supermarkets, Parkings
- ◆ Hotel, Fitness Centers, Restaurants
- ◆ Hospitals, Clinics, Schools
- ◆ Outdoor Public Areas
- ◆ Railway Stations, Airports, Ports

- **Launch of PA Paging** announcements from each telephone of the company telephone network by calling the SIP account of the AD638 speaker
- **Keyboard Security code** to start the announcement
- **2nd SIP account** with night call repeater function, sounds and melodies from freely customizable files
- **Output for the 2nd passive speaker** 20W 8Ω to extend the served area or generate a 100V-20W audio line
- **Double internal audio amplifier** 40W (2x20W) (maximum deliverable power with external power supply)
- **PoE (Power over Ethernet)** IEEE802.af standard, only one connection cable
- **2 internal relays** for LAN drives of external devices
- **16 multicast channels** for background music broadcast, silenced by ads with high quality 16bit linear codec selectable at 8KHz-16KHz-32KHz-44.1KHz
- **Separately adjustable volumes** for all Multicast/Announcements/Ringtones audio channels
- **Internal microphone** for 2-way communications and Monitor
- **1 alarm input** for one of the following functions:
 - Generate a VoIP phone call and sends a message of alert ("SIP Security Info Call" function)
 - Pre-recorded announcements launch (Notice/Deterrence)
 - "Push to Talk" feature for phone communication driven by local external button (not included)
- **1 external push-button input** of normal VoIP phone call to a programmable SIP number or IP address (P2P)
- **P2P (Peer to Peer)** LAN operation even without PBX
- **Integrated Web Server**, remote programming via LAN
- **Compatible with every SIP standard IP-PBX**, of all brands and models of the national and international market
- **IP65** environmental protection class, suitable for installation in indoor and outdoor environments
- **Easy** to install and configure, easy to use and manage, compatible with the Tema "ADAM" Management software

Ideal for creating Paging PA (Public Address) audio systems of any size using the existing LAN network infrastructure! Perfectly integrated with the PBX and the security system.

Technical Features

LAN, protocols:	TCP/IP Network 10/100BaseTx, SIP 2.0
Grade of protection:	IP65
Power Supply:	PoE, Injector PoE or ext power supply
PoE:	IEEE802.3af class 0
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:	1
Contact rating of the 2 internal relays:	max 30Vdc – 1.5A
Technology:	IMX25 400MHz processor
Memory:	256MB Ram, Micro-SD Flash 2GB
Housing material:	Abs
Operating temperature:	from -20° to +55°C
Storage temperature:	from -20° to +65°C
Umidity:	up to 100%
Installation:	wall mount, including Horiz./Vert. adj. bracket
Dimensions:	190 x 195 x 290mm
Weight:	3,3Kg including bracket

Audio Amplifier:	40W (Ext. Pwr Supply) Class "D" (10W PoE)
Acoustic unit impedance:	8 Ohm
Audio Bandwidth:	50 – 20.000Hz
Acoustic pressure (SPL):	93 dB A (1KHz at 1 meter)
Internal Microphone:	omnidirectional electret 30Hz-18KHz
Multicast Audio Streaming:	G711μ, G711a, G722, L16 8...44 kHz
Audio Communication:	Unidirectional and Bidirectional
Additional speakers:	1 passive speaker 8 Ohm 20W
Messages/Sounds:	n. 6 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:

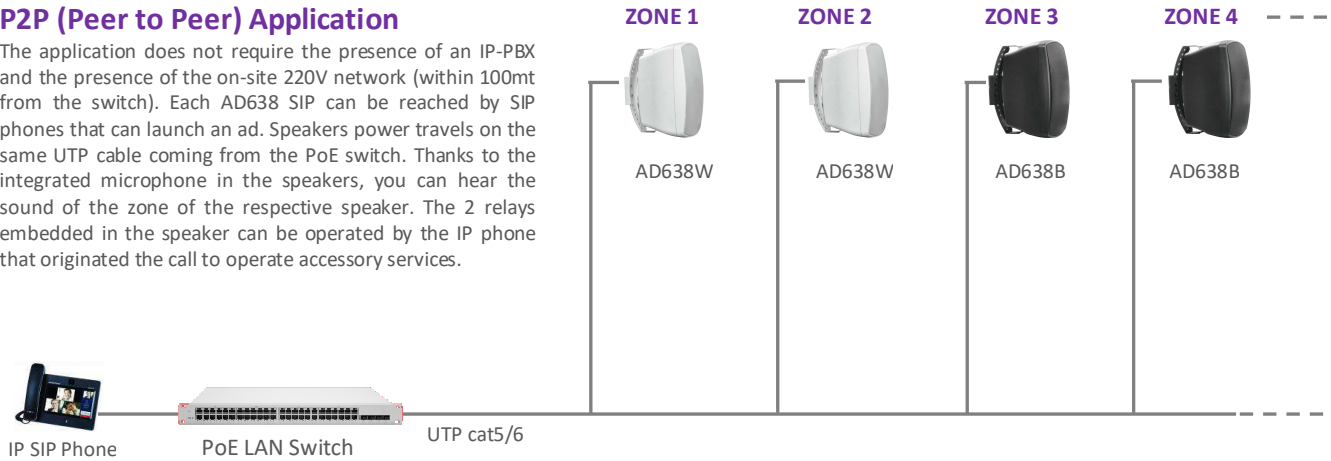
SIEMENS - AVAYA - ALCATEL - PANASONIC - SAMSUNG - NEC - 3CX
 LG - WILDIX - AASTRA - ASCOM - NITSUKO - SELTA - PHILIPS
 ASTERISK BASED SYSTEMS

Packing List

- 1 IP VoIP SIP AD638W or B (white-black) Speaker
- 1 Paper manual
- 1 CD-ROM with complete documentation

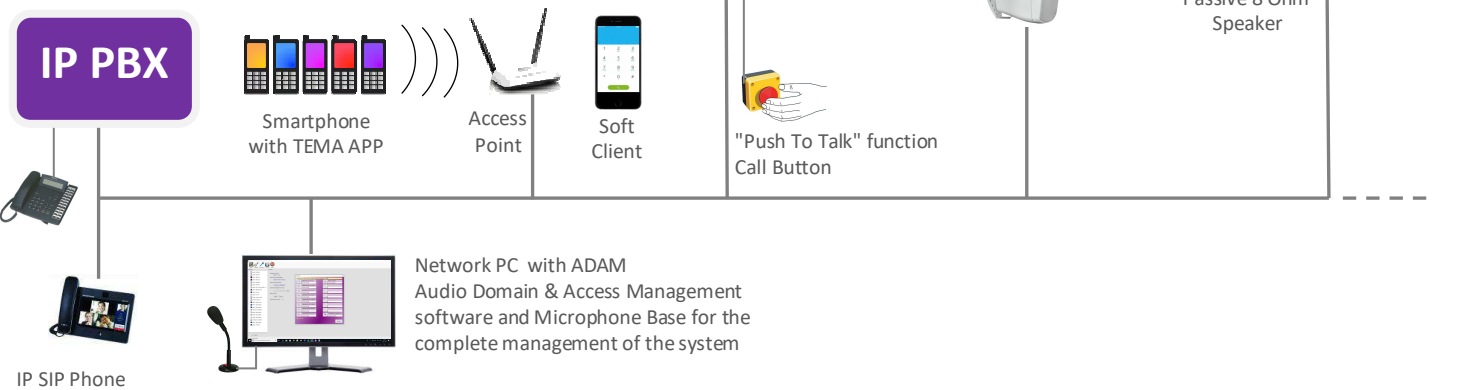
P2P (Peer to Peer) Application

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 AD638 SIP 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.



Application with IP-PBX or Peer to Peer

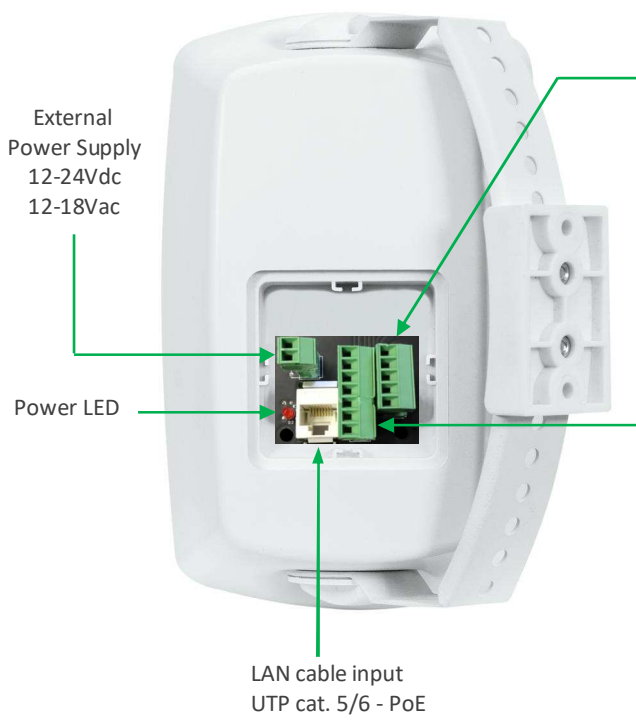
Each AD638 SIP can be reached from SIP phones, Smartphone and other registered terminals in the IP-PBX that can launch ads. The integrated relay can be operated from the SIP phone that originated the call. With a Network PC with installed the free software TEMA "Videoconsole" it is possible to make calls 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.



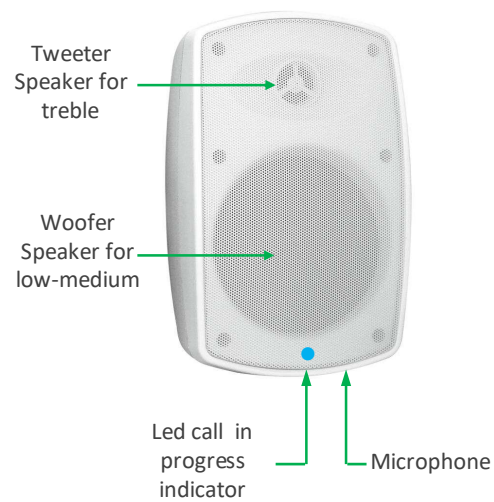
Simple application for waiting rooms

The application allows to create a system of announcements and background music using a few components connected on a PoE switch with UTP cable. The system, although using digital networking technology, is free from the corporate LAN. By connecting a music source (Radio, iPod, Tablet, PC, etc.) to the second input of the Encoder AD615/S it is possible to transmit a low volume background music waiting room, which is automatically muted when an announcement is received from the microphone base.





- 1 Relay n.1 NC
- 2 Relay n.1 NO
- 3 Relay n.1 CC
- 4 +Vout protected
- 5 - Vout (GND)
- 6 IN1 Alarm input
- 7 GND
- 8 P1 for VoIP call
- 9 Relay n.2 NO
- 10 Relay n.2 CC
- 11 SPK 1 - External speaker
- 12 SPK 1 + External speaker



Optionals

<p>AA-39P4 PoE Injector 230Vac/ 48Vdc-0,5A</p> 	<p>AD338W Passive Speaker 8Ω - 40W white</p> <p>AD338B Passive Speaker 8Ω - 40W black</p> 
<p>AA-39E3 Switching DIN Power Supply 220Vca/24Vcc-1,5A</p> 	<p>ADAM Audio Management software</p> <p>AD696/AA Microphone base for PC with ADAM software</p> 
<p>AD320/30 DIN audio line transformer 100V-30W</p> 	<p>AD699/xx Light signals, Flash</p> 

Download the complete documentation and the Application Notes of the Audio over IP systems from the site: <http://www.tematlc.it/audio-ip.asp>

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 certified**.

To date TEMA TELECOMMUNICATIONS 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 ex-ports percentages rising in recent years.

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"IP COMMUNICATION AND SECURITY COMPANY"



Via Costante Girardengo, 1/4 - 20161 Milano MI (Italy) Tel. +39 02 61544.1 Fax +39 02 6152605
 Web: www.tematlc.it e-mail: tematlc@tematlc.it International: sales@tematlc.it

