



TEMA TELECOMUNICAZIONI

"IP COMMUNICATION AND SECURITY COMPANY"

WWW.TEMATLC.IT

Application Note

TAN101-AD610-AA11/PA

AD615/S Encoder in combination with AD610 Audio IP Decoder or AA-11/PA analog interface to launch announcements from each IP-PBX extension phone in Multicast channels

Serie Audio Over IP Network

"SipComStage"

Products for VoIP SIP LAN networking Communications, Paging Amplifiers Systems and Audio Applications. Zone Announcements, Night Ringer, Multicast general call, Background music, Standard SIP call or Emergency call, SD memory with pre-recorded messages, Relays for LAN drives.

TEMA TELECOMUNICAZIONI is a certified company



UNI EN ISO 9001:2015

Revision	Date	Revision reason	Prepared	Checked/Approved
0	01/06/2018	First release	DP	DP, FL

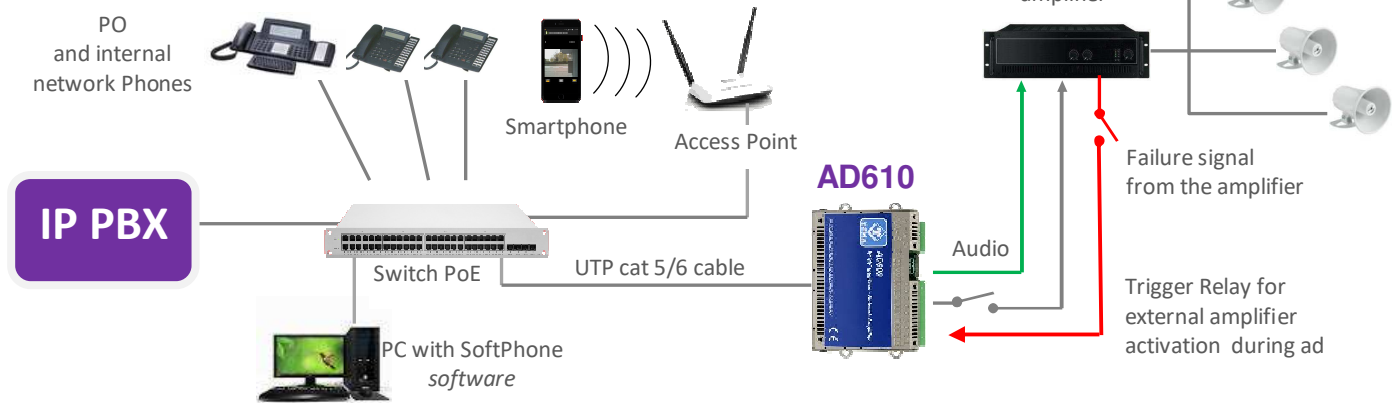
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1. AD610 standard application

The AD610 product is an IP-SIP interface that normally is used is to adapt a SIP telephone network to an existing audio amplifier, of any power, in order to extend the performance of the audio plant and to allow to launch an announcement by any telephone of the internal telephone network connected to the IP-PBX.

Figure 1

AD610 typical application with IP-PBX



From any internal telephone network extension phone, it is possible to call the number associated with the AD610 interface and, after the warning tone, start speaking to make the announcement. The AD610 converts the digital signal from the PBX and the LAN into an analog signal suitable for being managed by a line input of the existing audio amplifier.

The audio output from the AD610 is isolated by an audio transformer inside the device, an internal relay can be programmed to activate the external amplifier.

For every other detail on the AD610 device please refer to the specific brochure and technical manual of the product.

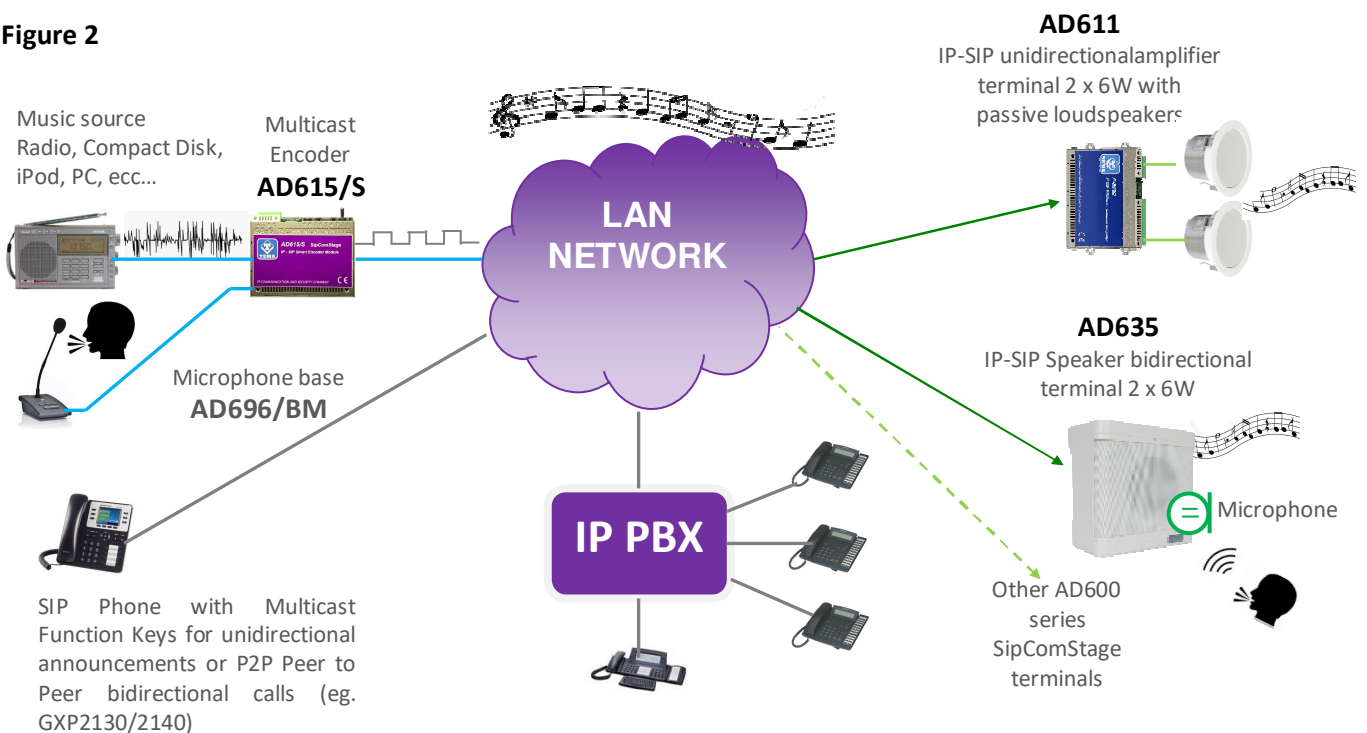
2. Special application AD615/S encoder with AD610 decoder or AA-11/PA interface

In a Paging PA (Public Address) sound system based on a LAN network with IP components such as the TEMA SipComStage product series, the AD610 product finds a new application in conjunction with the Encoder Multicast mod. Tema AD615/S.

In the figure below it is showed a typical corporate telephone system that has been completed by Tema SipComStage systems to distribute background music via LAN network, launch announcements from a microphone base in Multicast channels that can reach all the decoder terminals and SIP speakers with amplifier incorporated. Moreover, from every telephone of the internal telephone network, it is possible to make a SIP call on every single SipComStage terminal and launch an announcement and/or bidirectionally communicate with the AD600 SIP speakers series since they incorporate a microphone which therefore allows two-way communication like a regular SIP hands-free phone, but with much higher volume.

In the diagram below, however, we note that it is only possible to send a general call alert or security announcement to the SIPComStage terminals on a priority multicast channel only from the microphone base station. **It is not possible to launch an announcement of this type from any telephone in the internal network since they can make a call to a single SipComStage terminal at a time.**

Figure 2



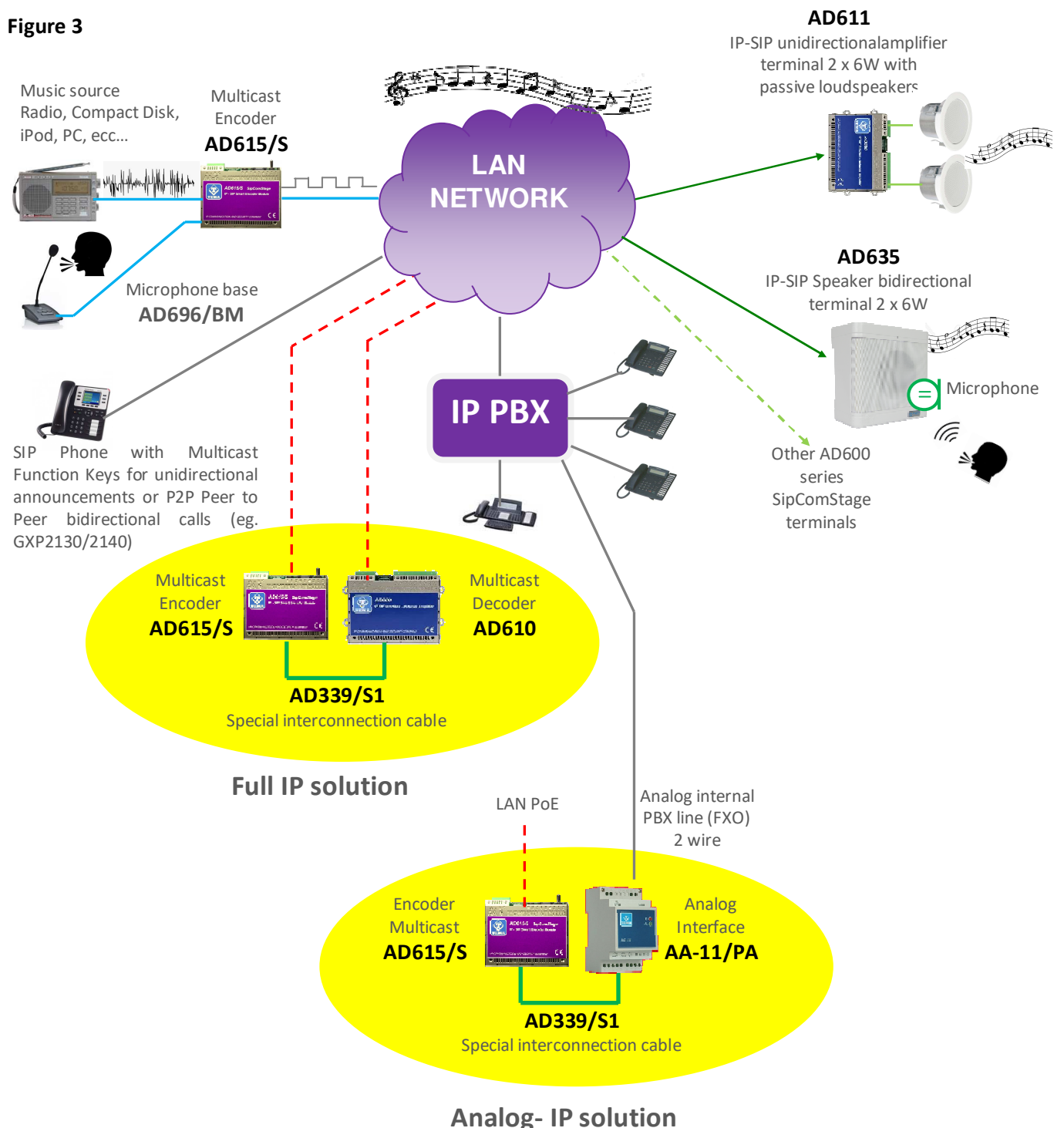
Solution

By inserting into the plant a pair of Encoder/Decoder AD615/S and AD610, it is possible to make a general call warning or safety announcement that reaches all the SipComStage terminals on a priority Multicast channel from **any telephone of the internal network and any technology** (IP SIP, BCA, Wireless Dect, etc.). The number to call is the one associated with the AD610 decoder which will reply and connects the decoded audio to the AD615/S encoder through the supplied special cable AD699/S1. After that AD615/S will activate a priority Multicast channel able to reach all the SipComStage terminals in the LAN network tuned on that channel.

The AD339/S1 special cable carries the audio signal and a command generated by AD610 to activate the AD615/S encoder. It is necessary to configure into AD615/S a Multicast channel (IP address) different from the one programmed in the other Encoder devices in the network that support microphone bases to avoid conflicts and establish the desired priorities.

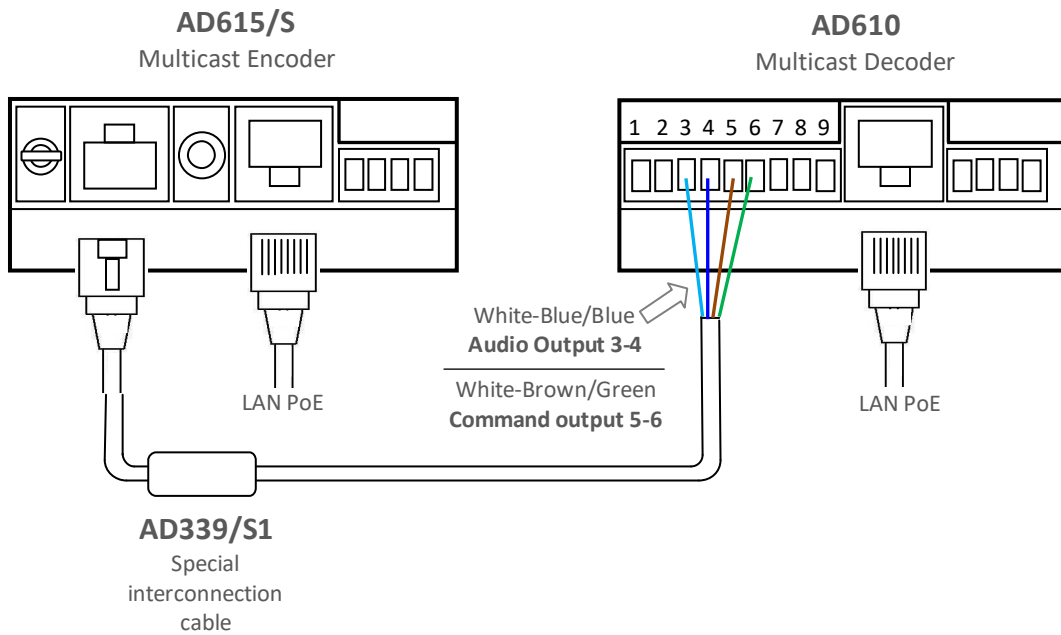
The same function may be obtained using an analog interface model AA-11/PA connected to an FXO PBX line.

Figure 3



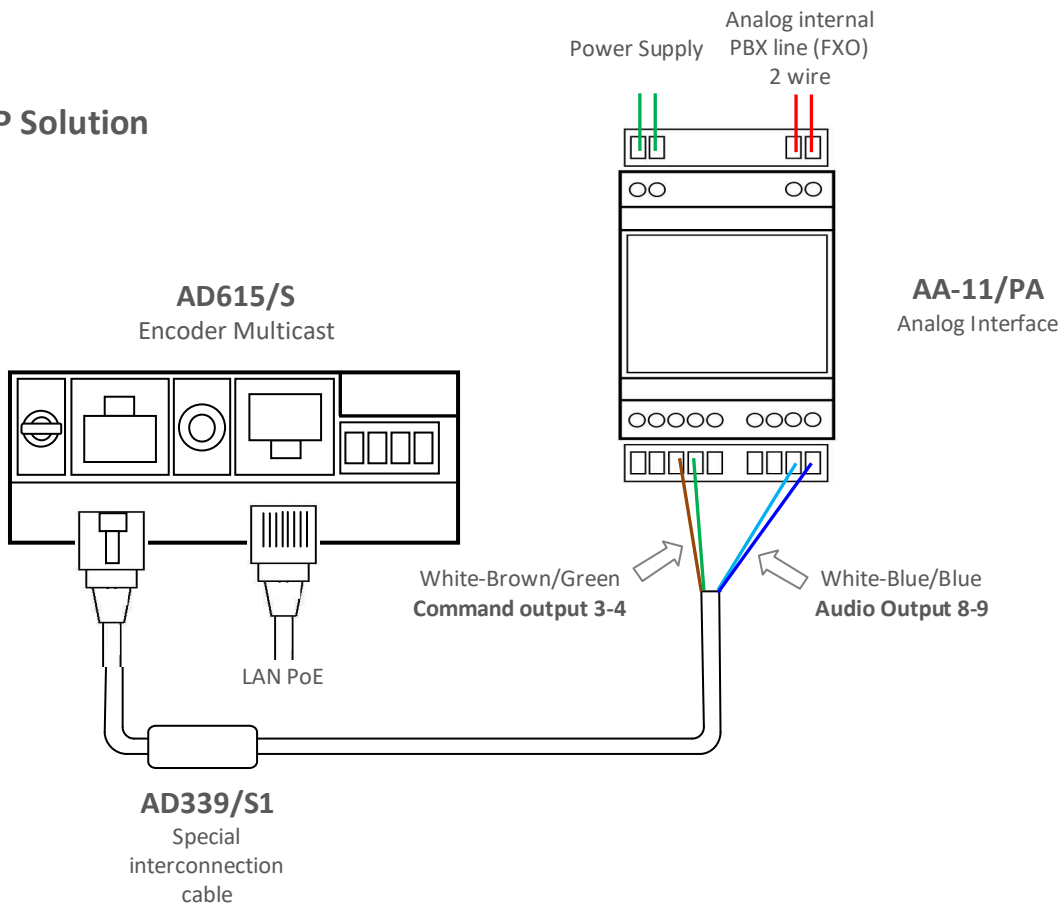
3. Connection diagram

Full IP solution



The two devices are coupled together through a special connection cable cod. AD339/S1 which also allows an adjustment of the analog audio output level to the AD615/S Encoder. The programming of the can be done via the web interface using the respective IP addresses, please refer to the specific documentation of the products.

Analog-IP Solution



4. AD600 “SipComStage” series VoIP SIP Audio products and accessories



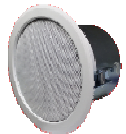
AD630 IP-SIP PoE 25W Horn Speaker with 40W internal amplifier (2x20W) IP65 protection.



AD635 IP-SIP PoE 12W speaker for wall mounting with the possibility of integrating a PoE injector adapter.



AD633 IP-SIP speaker 12W PoE open-to-ceiling version.



AD633C SIP IP-12W PoE Speaker ceiling version with IP54 flameproof cover.



AD610 2X2W PoE IP-SIP Amplifier Module, External Amplifier Adapter with Sound Isolation Transformer. Directly pilot external power amplifiers or 8 Ohm external passive speakers.



AD611 IP-SIP PoE 10W Amplifier Module (2X5W). Directly pilot 8 Ohm external passive speakers.



AD612 IP-SIP PoE 40W (2x20W) Amplifier Module when powered with an external power supply. Directly pilot 8 Ohm external passive speakers.



AD615/S Audio Encoder Module from analog to digital on LAN Network in Multicast/Broadcast Channels.



AD333/12XTP Passive 8 Ohm 12W speaker with anti-flame cover (AD333/12TP without cover), internal transformer for 100V audio line. Ideal for connecting to AD610-611-612 or as 2nd speaker to the AD63x series IP-SIP speakers.



AD335/06TP Passive 8 Ohm 6W speaker with 100V audio line transformer. Ideal for connecting to AD610-611-612 or as 2nd speaker to the AD63x series IP-SIP speakers.



AD330/25T Passive horn speaker 25W 8 ohm with transformer for 100V audio line. Ideal for connecting to the AD610-611-612 modules or as 2nd speaker for AD63x IP-SIP speakers series.



AD330/xx Are available Speakers of different power, Horns and Loudspeakers for flush and ceiling mount.



AA-39DL

Plug Power Supply 220Vac/12Vdc-1,0A.



AA-39D1A

DIN Power Supply 220Vac/15Vdc-1,0A.



AA-39P4

PoE injector 230Vac/48Vdc 0,5A.



AA-39E3 /-E6V

DIN Power Supplies 220Vac/24Vdc-1,5A 220Vac/24Vdc-2,5A.



AD301R

30W analog amplifier, 2 channels, Volume-High-Low +/-12dB controls



AD320/30

PA 100V audio line transformer 30W, constant voltage, high efficiency toroidal type with low magnetic flux leakage.



AD32

Isolation transformer, balanced, mixer, attenuator, audio signal filter, low impedance output. Ideal for decoupling devices of audio sources to other amplifiers to eliminate noises.



AA-36

Protected Power Relay Actuator 250Vac/16A/4KVA, command in AC/DC 12V/24V, 1 contact, Led, contacts protected by electric arcs. Ideal for driving loads up to 4.000W.



AA-697xxx

Flash lights with Xeon lamp or high brightness LEDs. Ideal to be controlled by the relay of the IP-SIP speakers of the AD630 series or by the IP-SIP amplifier AD610, AD611, AD612 modules, with a call in progress add a light signal to the acoustic signal.



5. References

Web sites for download : WWW.TEMATLC.IT
: WWW.TEMA-IPAUDIO.COM

AD610 Datasheet : file AD610-SIP ADAPTER-DEP
AA-11/PA Datasheet : file AA-11PA

AD610 Technical Manual : file MAS-AD610
AA-11/PA Technical Manual : file MAS-AA-11/PA

AD615/S Datasheet : file AD615S-ENCODER-DEP

AD615/S Technical Manual : file MAS-AD615-S