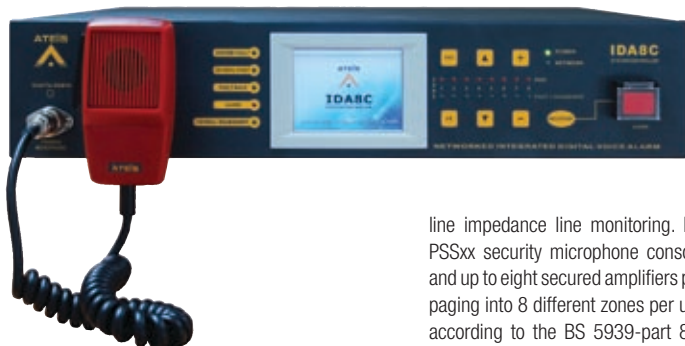Public Address - Voice Alarm

Audio Distribution over IP

Commercial Audio

Intelligent Acoustic Solutions

Intercommunication

Loudspeakers

ATEÏS

IDA8C

Networkable PAVA system - EN54-16 - CONTROLLER UNIT

ATEÏS has more than 30 years of experience in the research and development of Public Address and Voice Evacuation systems. We now proudly introduce a new system that perfectly integrates Fire-Alarm with Voice-Alarm according to the EN54-16 (VACIE&FACIE), BS5839-part 8 and ISO 7240-16. ATEÏS has developed and will continue developing dedicated systems for Voice-Alarm applications.

The IDA8 is a third generation modular system that complies with current architectural demands requiring IP-and/or Fiber-optics Networking to cover for any complex design possible. IDA8 responds to Public Address and Voice Alarm requirements as stated in EN54-16, ISO 7240-16 and BS5839/8, with specific attributes for compliance in large installations.

IDA8C

The IDA8C Controller unit houses: Audio digital signal processing (DSP), matrix control functions, digital message player. Front panel access with; fully monitored fireman microphone, emergency message trigger button(s). Amplifier monitoring with hot-swap amplifiers, loudspeaker line impedance line monitoring. It can support up to four PSSxx security microphone consoles with color touch pad and up to eight secured amplifiers plus two backup amplifiers, paging into 8 different zones per unit with A/B-line detection according to the BS 5939-part 8. Two free card-slots are available for two optional 4 ch 0 dB audio in-or output cards or two 4 ch AES/EBU cards.

IDA8S Slave units can extent the system configuration with an additional 8 inputs and 8 outputs. The slave units are available with A/B speaker line configurations (IDA8SAB), or for simple single speaker lines per zone (IDA8S).
Each input and output channel is fitted with a wide range of pre-and post-processing devices such as; volume controllers, routing mixers and switches, priority and paging components, equalizers, compressors, limiters, delay-lines, etc.

Up to 4 hours of digital messages can be stored providing live-recording or pre-recorded playback. External files can be uploaded (WAV) from a computer into IDA8C. Up to 4 messages in a single IDA8C Controller unit or a total of 48 messages in an IDA8 system, can be played simultaneously into different zones.
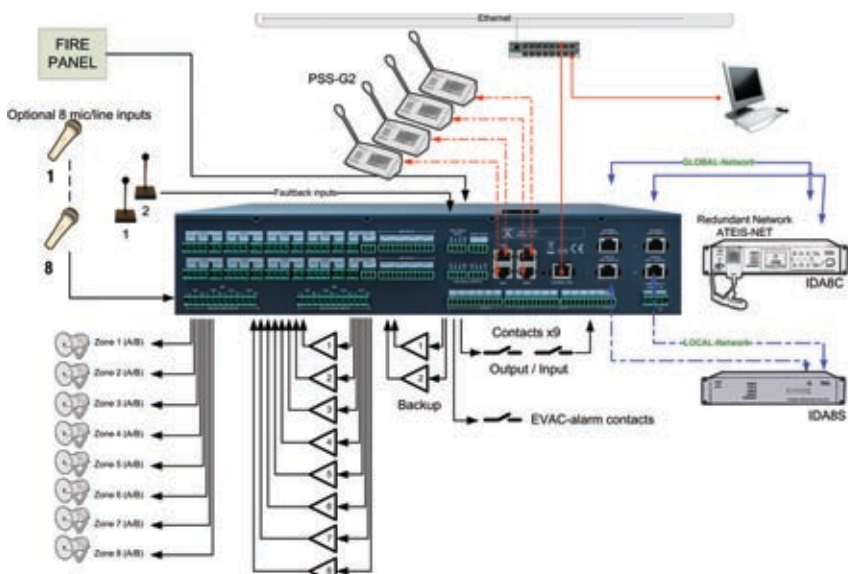
IDA8C Controller unit enables operators to see a detailed overview of the operational status of the entire PA system with a single push button. IDA8C Controller unit is able to run an impedance scan of all components connected to it, covering not only the input paging consoles but including connectors, cabling, processing blocks such as compressors and limiters, delay lines and the network and loudspeakers. It stores a reference measurement of the system as it exists in a given configuration and environment. This reference is subsequently stored in the system. Any alterations to this reference will be reported and are logged in an event log file. User definable thresholds can be applied to these references, allowing for customization to match circumstances.

Being EN54-16/ISO 7240-16 and BS5839 part 8 security systems, all components and peripherals are monitored. All incidents are recorded into a data file which can be consulted on the controller module monitor display or on a PC using the ATEÏS STUDIO remote control software. Also, any detected fault is signaled by a general fault output contact available on the IDA8C Controller unit. A built-in loudspeaker output enables selective listening to all the sources and system's 100 V output signals.

IDA8C Controller unit is easily configured with our PC based ATEÏS-STUDIO global software (Windows compatible). Software access can be password protected. Once programmed, the system will be able to work independently (off-line) without the need of a PC to be connected.

IDA8C Controller unit CHARACTERISTICS

- Interfaces: Standard Local Networking, 2 x RJ45. 100 m.
- Ethernet interface, TCP/IP, MODBUS, Vox-Net and 3rd part devices.
- 4 x Security microphone connection, RJ45, PC1 to PC4 supports: MODBUS, Vox-Net and 3rd part devices.
- 8 balanced audio outputs + 2 audio outputs for back-up amplifiers.
- Return 100 Volt lines input from amplifiers.
- Outgoing 16 (8+8) 100 Volt lines to the loudspeakers. (AB-zoning).
- Optional 2 slots for 8 mic/line or AES/EBU audio inputs/outputs.
- 9 logic inputs and 8 logic outputs.
- Security contacts for: evacuation and fault reporting and fault-back inputs (BSI).
- 4 hours of messages storage playing up to 48 messages simultaneously in a IDA8 System.

IDA8S and IDA8SAB

The IDA8S(AB) Slave units provide audio in- and output expansion of the IDA8 Systems using a secured 48-channel audio and data network over CAT5 or fiber optic. Each IDA8S(AB) expands the IDA8 System with an additional 8 audio inputs and outputs, 2 additional security microphone consoles (PSSG2) and security programmable switching contacts.

The **IDA8 Slave units** come in two versions:
1. **IDA8SAB**, this one has 8 audio outputs for A/B zoning according to the BS5839-part8
2. **IDA8S**, this one has 8 audio outputs for single zoning.

The Network cards that comes with the unit provides a redundant 48 channels audio and data connection, ATEÏS-NET, between one controller and a maximum of 32 IDA8S Slave units in one rack system.

Alternatively, if a greater distance between devices is required, the existing RJ45 redundant connection can be exchanged for the optional Fiber optic NET-L3 cards increasing maximum distance up to 2 km between Controller unit and Slave unit or between Slave units.

IDA8SAB

8 balanced 0 dB audio inputs and 8 balanced 0 dB audio outputs, 2 security microphone access points, control inputs and outputs. Optional ATEÏS-NET Secured Audio Network cards are available. BS 5839 compliant with A/B zoning.

IDA8S

8 balanced 0 dB audio inputs & 8 balanced 0 dB audio outputs, 2 security microphone access points, control inputs and outputs. Optional ATEÏS-NET Secured Audio Network cards are available.
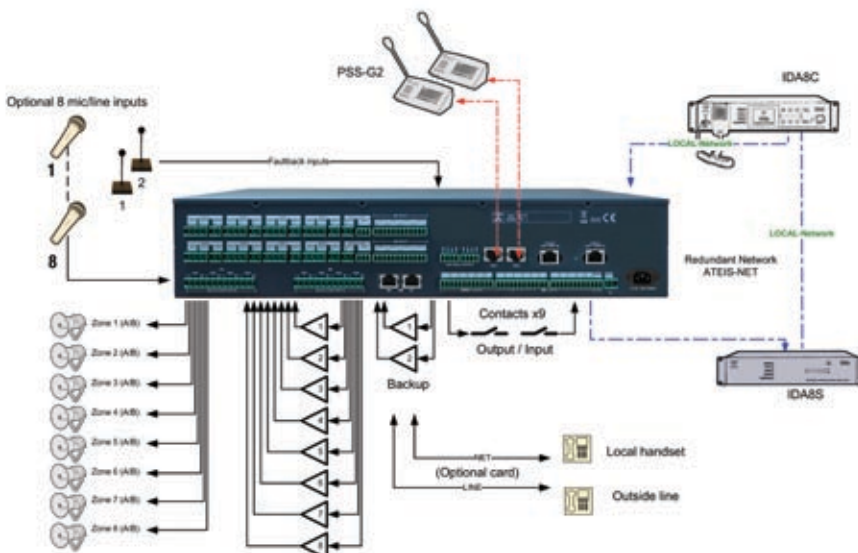
IDA8C and IDA8S(AB) are featuring:

- 8 analogue audio inputs and 8 analogue audio outputs. The outputs have selectable 18 or 20 kHz monitoring signal for end-off-line monitoring or, using defined monitoring windows, individual monitoring with an accuracy of up to 5% of the total line load.

- 8 alarm control inputs and 8 output relays are freely programmable for system actions and priorities can be assigned to these inputs.

- 2 card slots for optional 8 microphone/ line or AES/ EBU audio input/output channels. These inputs/outputs are free software configurable.

- Compatibility with the VNB IP-media streamers allowing for additional IP-Audio IN/EXstreamer units, IP-media consoles and IP-Paging consoles.

- The ATEÏS Net Secured Audio Network that is providing a Single or Multi-mode, 48 audio channels, 32bit, 48 kHz, redundant network.

- Up to 256 priorities that can be configured for up to 256 zones (512 AB) in the LOCAL Network.

- A system configuration that can connect up to 32 IDA8C with IDA8S(AB)'s over the LOCAL Network allowing a system configuration of up to 32 x 8 zones.

- Independent operation without a PC connected to it. The PC can be disconnected after configuring the system.

- Front panel color touch-screen display and corresponding push buttons, that allows for simple navigation through the various system menus.

- Automatic messaging in the IDA8C Controller unit and IDA8S(AB) Slave units with a capacity of up to 4 hours of WAV format audio files. The audio messages can be uploaded via Ethernet link.

- 4 audio streams that can be activated at the same time and up to 48 in the IDA8 System.

- Message player and messages monitoring.

- Full monitoring starting at the capsule of a microphone console to the end of a loudspeaker line. The external cables connected to the control inputs are monitored for short and open circuit and earth leakage.

- Standard test, alarm and chime-tones are stored in the IDA8C Controller unit and IDA8S (AB) Slave units.

- An internal real time clock for automatic scheduled activities like; playback of messages, automatic volume changes during day and night or background music settings.

- Extensive audio pre and post processing possibilities for audio inputs and audio outputs.

- A monitoring loudspeaker and fireman's microphone on the IDA8C Controller unit.

- Cost effective solutions using switching mode for multi-zoned amplifier usage.

- Full system redundancy using the IDA8RU redundant switching devices.

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IDA8C Controller and IDA8SAB Slave unit

Dual channel switching

As with the DIVA8 System concept, that is focused on low-entry market solutions, IDA8 System also provides cost effective solutions where only paging or paging with BGM is required. This solution is based on switched audio distribution from a single amplifier into a large number of groups. Besides the switching solution, IDA8 System can create combinations where single-zoned amplifiers are combined with multi-zoned amplifiers.

Adjacent diagram shows **the Multi channel & Dual channel solution where IDA8 System** is linking a single zoned amplifier section with a multi zoned amplifier section.

The 2 amplifiers that are used in the multi-zoned amplifier section are serving zone 17 up 32 having only 2 amplifiers per IDA8SAB Slave unit. One amplifier is used for the PAGING/ALERT signals, the other one for the BGM and the BACK-UP function.

The BGM/BACK-UP amplifier must have the same size as the PAGING/ALERT amplifier for amplifier back-up in case of an amplifier failure.

This solution requires only 2 amplifiers per IDA8SAB Slave unit. The remaining part of this solution is using one amplifier per zone.

Adjacent diagram is also showing a **Dual channel only solution**. IDA8C Controller unit is linking multi zoned amplifiers over multiple IDA8 Slave units.

The 2 amplifiers that are used in the multi-zoned amplifier section are serving zone 9 up to 24 having 2 amplifiers only. One amplifier is used for the PAGING/ALERT signals, the other one for the BGM and the BACK-UP function.
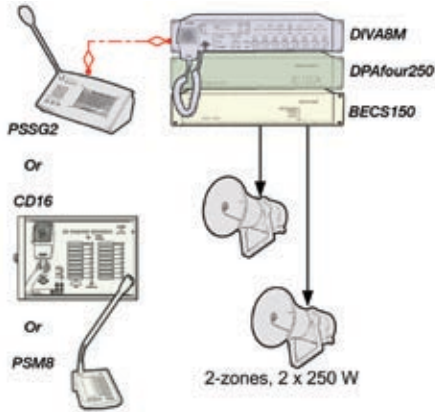
Because of the requested load in this example, the channels 1 to 8 have their own two multi-zoned amplifiers.

The BGM/BACK-UP amplifier must have the same size as the PAGING/ALERT amplifier for back-up in case of amplifier failure.
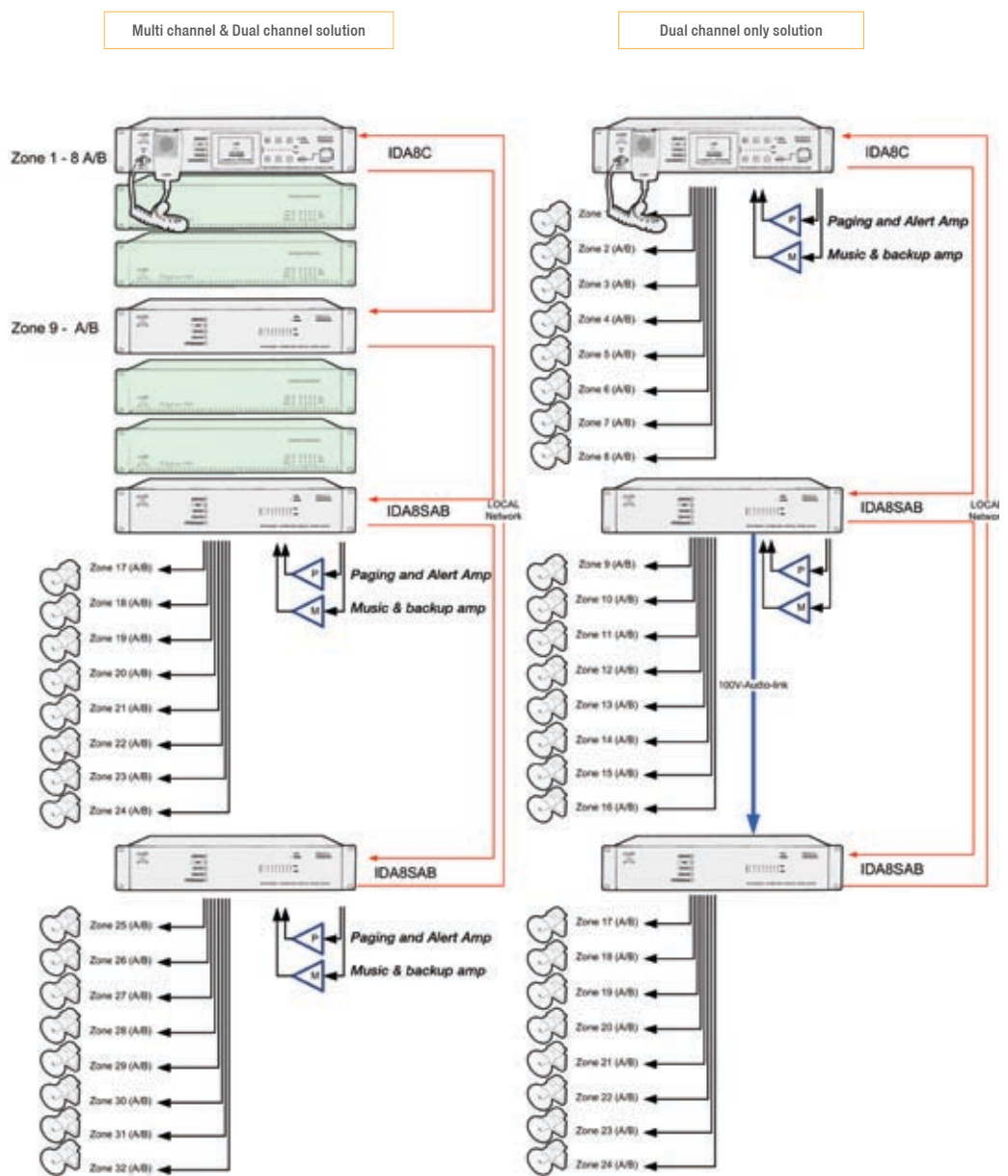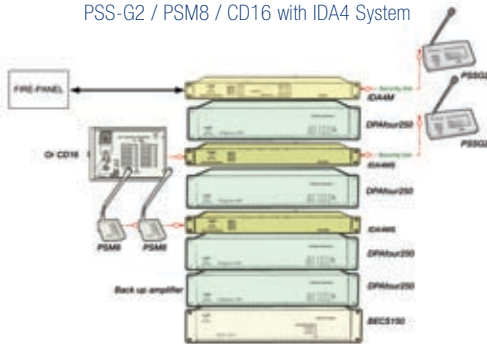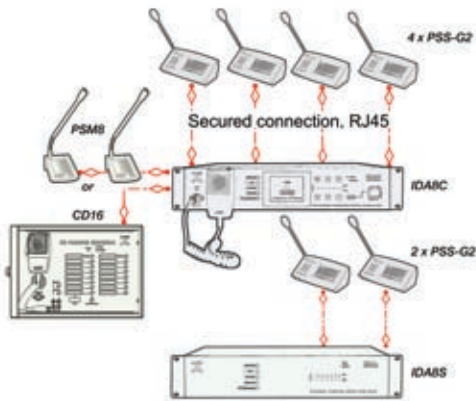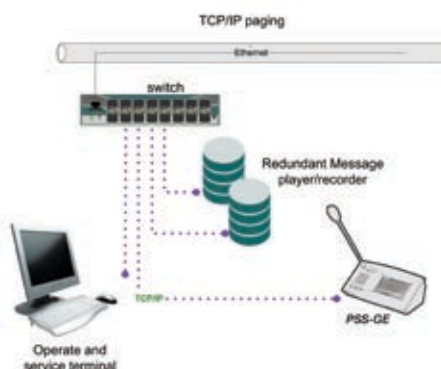
PSS-G2 / CD16 / PSM8 with DIVA8 System

PSS-G2 / PSM8 / CD16 with IDA4 System

PSS-G2 / PSM8 / CD16 with IDA8 System

PSSG2E with DIVA8 and IDA8 System

COMPATIBILITY	DIVA8 System		IDA4 System		IDA8 System	
CD16	V	1 pcs Secured on Master unit. 2nd and more on Master unit are not secured	V	1 pcs Secured on Master or Slave unit. 2nd and more on Master or Slave unit are not secured	V	1 pcs Secured on Controller or Slave unit. 2nd and more on Controller or Slave unit are not secured
		Max. 10 in Master-slave string		Max. 32 in a system and 10 in Master-slave string		Max. 32 in a system and 10 in Master-slave string
PSS849	X		V	1 pcs per IDA4xx	X	
				Max. 1 in a system		
PABFMP	X		V	1 pcs per IDA4xx Master or Slave unit, using one audio input	X	
PSS96DT	X		V	1 pcs per IDA4xx Master and/or Slave unit	X	
				Max. 32 in a system		
PSSG2-16	V	1 pcs on Master unit (g2)				
		Max. 1 unit in a system				
PSSG2	V	1 pcs on Master unit (g2)	V	1 pcs per IDA4xx Master and/or Slave unit	V	4 pcs per IDA8C unit & 2 pcs per IDA8S unit
		Max. 1 unit in a system		Max. 32 in a system		Max. 64 in a system
PSSG2E	V	Max. 8 pcs over TCP/IP (g2)	X		V	Max. 8 pcs over TCP/IP
PSM8	V	1 pcs Secured on Master unit. 2nd and more on Master unit are not secured. Using 1x audio input	X	1 pcs Secured on Master and/or Slave unit. 2nd and more on Master and/or Slave unit are not secured. Using 1x audio input	V	1 pcs Secured on Controller and/or Slave unit. 2nd and more on Controller and/or Slave unit are not secured. Using 1x audio input
		Max. 10 in Master-slave string		Max. 32 in a system and 10 in Master-slave string		Max. 32 in a system and 10 in Master-slave string
SHM-1	V	1 pcs supplied with the DIVA8 System	V	In combination with IDA-SEC, using one audio input	V	In combination with IDA-SEC, using one audio input
SPM-1	X		V	In combination with IDA-SEC, using one audio input	V	In combination with IDA-SEC, using one audio input
NSM	X		V	1 pcs on Master and/or Slave unit.	V	8 pcs on Controller and/or Slave unit.
EVACg2-x	V	1 pcs on Master unit (g2)	V	1 pcs per IDA4xx Master and/or Slave unit	V	4 pcs per IDA8C unit & 2 pcs per IDA8S unit
DIGIM1	V	Using one audio input with DIGI-INT (Optional EVAQg2 required)	V	Using one audio input with DIGI-INT	V	Using one audio input with DIGI-INT
DIGIM4	V	Using one audio input with DIGI-INT (Optional EVAQg2 required)	V	Using one audio input with DIGI-INT	V	Using one audio input with DIGI-INT
DIGIM8	V	Using one audio input with DIGI-INT (Optional EVAQg2 required)	V	Using one audio input with DIGI-INT	V	Using one audio input with DIGI-INT
PM1	V	Using one audio input + one contact (Optional EVAQg2 required)	V	Using one audio input + one contact	V	Using one audio input + one contact (Optional EVAQg2 required)
PPMIT5	X		X		V	Ethernet multi-target unit. One audio input
URC	X		X		V	Using RS485
URC-200	X		X		V	Using Ethernet