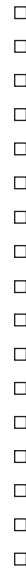


# VARIZONE

DIGITAL PUBLIC ADDRESS SYSTEM

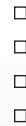
VAB-Line



Voice Evacuation



Announcement



BackGround Music



# VARIZONE

## VAB-Line

Safety - Evacuation - Information - Ambience

*... now affordable for every building*

*You think specifying and installing a digital public address system is complex and expensive? Why should you face the daunting challenges of digital technology? Think again!*

*KLOTZ DIGITAL's VARIZONE VAB-Line makes digital PA as easy as a walk in the park. Far better, VAB-Line combines top-level security with audio infotainment in the same PA system.*

*It offers the opportunity to create a unique atmosphere in any facility and at the same time to transfer information exactly to the place where it is needed. You still have your doubts? To make the most of it, you can get all these digital advantages at an affordable price.*

Voice Evacuation



Announcement



BackGround Music





## The Power of Simplicity

**Based on only two components** – the VAB1 Controller and a Powered Speaker System with integrated Amplifier Module (I-PAM) – the VAB-Line fulfills the requirements of “simplicity”.

It is easy to plan, install and redesign which makes it a real plug and play PA solution. At the same time **the VAB-Line reduces overall cost** making the advantages of digital PA systems more affordable for everyone.

Small to medium sized facilities such as hotels, schools, hospitals, office buildings, department stores and other commercial applications of the same size benefit from this new and fully digital public address system. A variety of expansion modules enable users to customize the VAB-Line and its services with minimal effort.

The VAB-Line meets the current standards for **Voice Alarm Systems** in public places, like **EN 60849**. For example each loudspeaker as well as the complete system is monitored automatically and controlled without the cost of an external and expensive monitoring and control system.

## VAB1 Controller – Central Router and Control Engine

The new VAB1 Controller (Voice Evacuation, Announcement, Background Music Controller) acts as a central router and control engine in one and is the core of the VARIZONE Voice Evacuation, Announcement and Background Music System. It makes VARIZONE VAB-Line **attractive to small and medium sized PA applications.**

To realize a public address system which is completely digital even to the point of any speaker KLOTZ DIGITAL combines VAB1 and I-PAMs. To realize a traditional 70/100 V system VAB1 is installed together with the Line Manager. It is even possible to create a hybrid system which combines digital I-PAM technology with 70/100 V systems.

### Main Features:

- 51 inputs to 32 outputs router
- Unlimited number of zones
- Multiple inputs can be assigned to various zones and assigned to various outputs by the system at the same time (8 channels per DSS bus and 32 channels system-wide).
- Priority level management
- DSP signal processing included
- Complete system control included
- Configuration via an intuitive Graphical User Interface

VAB1 is in accordance with international standards, such as EN 60849.

### It provides all the important safety features of:

- Solid system monitoring
- Priority management for paging & evacuation
- Internal message memory
- Push-to-talk handheld microphone
- Monitoring of the speaker lines down to each single speaker without additional cabling
- Interfaces to multiple control devices
- Clearly arranged front panel display
- Link to fire command center and other control devices



## VAB1 - Technical Specifications:

### Standard Inputs:

- 2 microphone preamplifier inputs
- 3 analog line level inputs

### Standard Outputs:

- 2 analog line level outputs
- 4 powered 8-channel DSS outputs (125W each)

### Available Expansion Cards:

VAB1 consists of a 19" 4 RU Frame with seven slots for optional expansion cards offering the opportunity to customize the VARIZONE solution to individual project requirements. A variety of expansion cards are available:

- EVAC option – turns the VAB1 Controller into a EVAC system according to EN 60849
- Paging option – allows to build a paging network
- DSS interface card – extends the number of output bus lines

### Remote Surveillance and Control:

The VAB1 Controller offers a variety of interfaces for 3rd party control and surveillance, such as

- USB interface for configuration and remote control via PC
- 8 trigger inputs and 8 trigger outputs (GPI)
- 4 control voltage inputs
- RS422 interfaces for intelligent 3rd party communication
- Control module interface

This enables you, for example to control and monitor the entire VAB-Line comfortably from any location you choose via Internet or tie-in fire detection systems.

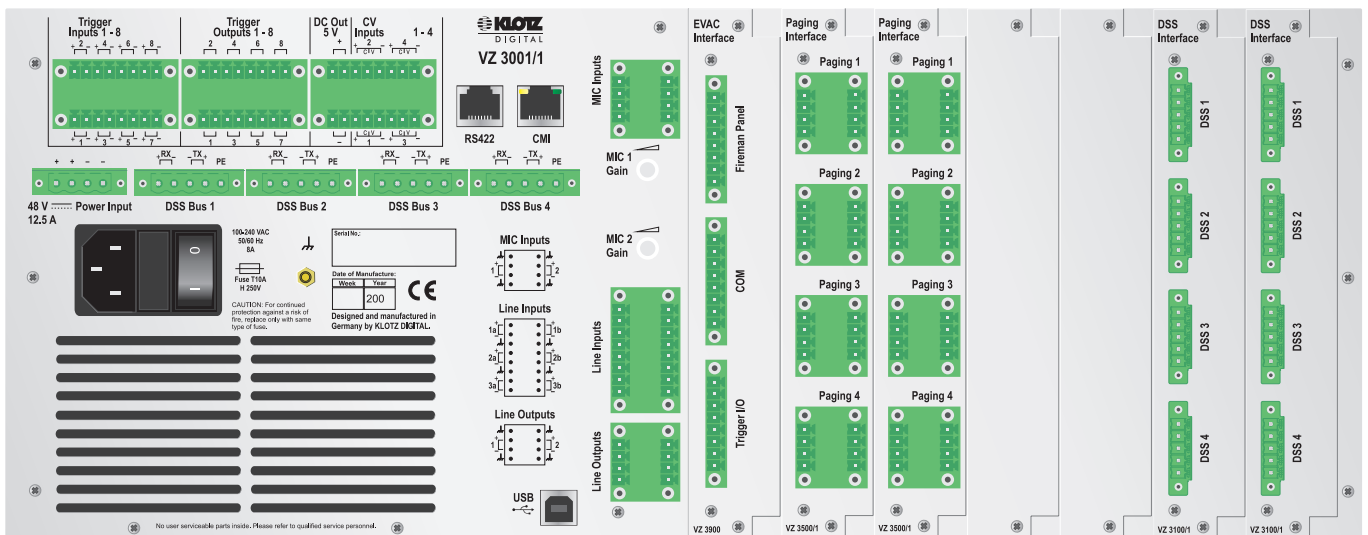
## Compatible VARIZONE components

### Standard:

- I-PAM
- Line Manager

### For special applications:

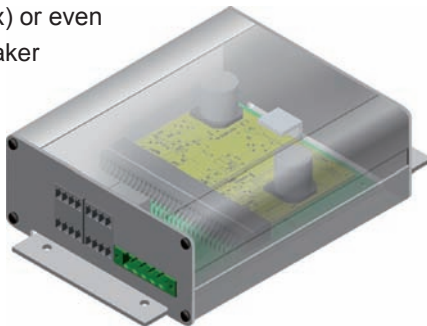
- Paging Station  
Priority managed announcements or message memory playouts to any pre-defined zone
- Ambient Noise Sensing Module  
Automatic adjustment of zone gain as ambient noise levels rise and fall
- Volume Control and Channel Select Extension  
Controls any zone gain and any source from anywhere in the facility
- Power Bridge  
Increases the length of your speaker line
- Power Injector  
Feeds power into additional Digital Speaker System (DSS) busses
- GPI Box  
Adds additional priority managed trigger inputs and outputs to the system
- DSS to Fiber Converter  
Expands copper DSS bus lines by the incorporation of long distance fiber optic cable subsections



## I-PAM – Digital Multi Channel Amplifier Module at a Glance:

The I-PAM is a small distributed Class D 2-channel digital amplifier module with integrated control functionality. It allows above-ceiling mounting in close proximity to the loudspeaker (I-PAM box) or even integration into the speaker enclosure (I-PAM bulk).

The I-PAM receives power and 8 different audio signals in addition to bi-directional control data from the Digital Speaker System (DSS) bus. It selects and amplifies two audio channels from the bus for playout via the connected speakers. In addition trigger and control interfaces on the I-PAM allow building a complete distributed control network.



### Volume Control and Channel Select Extension

Volume Control and Channel Select Extension can be connected directly to the I-PAM and allow a change of the selected signal or a volume adjustment.



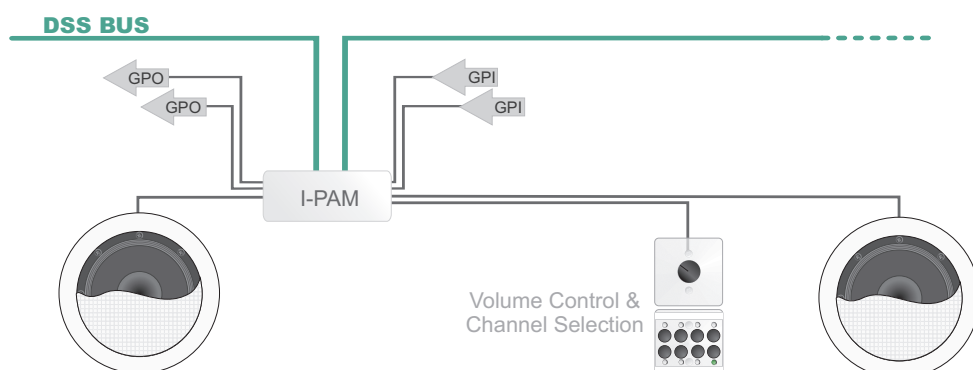
These wall control panels allow the selection of up to 8 different channels provided by the DSS bus and volume control for a predefined zone or group of zones (e.g. for volume control in hotel rooms for hotel residents).

#### I-PAM features:

- Allows installation of up to 2 speakers
- Power supply via speaker line bus
- Output power: 2 x 6 watt
- Individual selection of audio channels from the DSS bus
- Built-in volume control of the selected audio signal
- Control interface for connection of remote controls
- 2 trigger inputs and 2 trigger outputs centrally controlled (e.g. emergency strobe lights or alarm buttons)
- Individual monitoring of the connected speakers via a 20kHz pilot tone
- Individual adjustment and monitoring of all installed I-PAMs via the VAB1 Controller

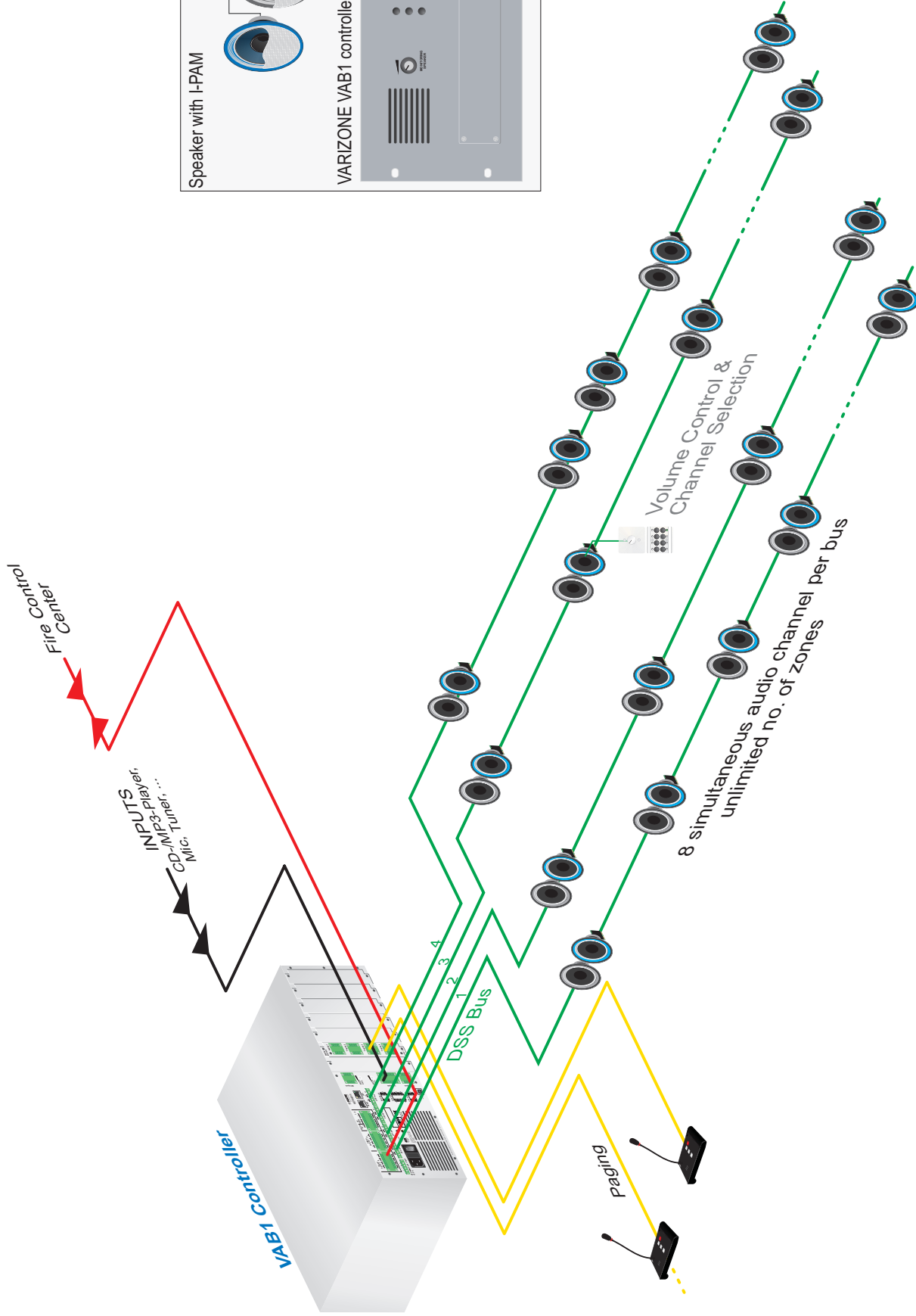
#### Main features:

- Connection of Volume Control and Channel Select Extension at one I-PAM
- Power supply of the Volume Control and Channel Select Extension via the I-PAM
- Volume Control unit with rotary encoder for volume control
- Channel Select Extension with 8 push-buttons and 8 LEDs for source selection
- Volume Control and Channel Select Extension are designed for compatibility with the 50x50 mm DIN 49075 standard



# VARIZONE VAB-Line

## System Diagram VAB1 Controller



# VARIZONE VAB-Line

## Line Manager – The Bridge to 70/100 V Audio Distribution

*When it is easier to have one speaker run, for example if requirements on zoning are low or the sizes of zones are very large, 70/100 V audio distribution could be the preferred solution. This can also be the case, if an existing installation is expanded or an out-dated central unit replaced where 70/100 V lines already exist.*

It is even possible to create a hybrid system which combines digital I-PAM technology with 70/100 V systems. For example 70/100 V audio distribution is adequate in a car park, while in the department stores of the same facility a digital public address system is used.

**The VAB-Line is appropriate for both types of installation, analog and digital.**

The VAB1 controller provides analog I/O to bridge the gap between fully digital and 70/100 V technology. Furthermore KLOTZ DIGITAL invented the “Line Manager”, which is linked to the VAB1 Controller via DSS bus and guarantees monitoring of amplifiers and analog speaker lines in accordance to EN 60849 as part of 70/100 V systems.

### Line Manager – all Features at a Glance:

- Permanent surveillance of amplifier channels
- Permanent surveillance of speaker runs through impedance measurements
- Error messages for short-circuit, ground leakage interruptions of speaker run and amplifier faults
- 8 audio channels and control/surveillance on a single CAT5 cable
- Automatic switch to hot standby amplifier in case of amplifier fault



### Advantages of VAB-Line 70/100 V Line Manager Solution:

- Convenient distribution of 8 audio channels via digital bus (DSS bus) to Line Manager units
- Safety in operation due to full surveillance of the entire system: Matrix – Line Managers – Amplifiers – Speaker Lines - Speakers
- Fail-safe operation with 2 hot standby channels in case of amplifier failure
- Flexibility to use any type of amplifier on the market.
- Use of pulsed 20kHz pilot tone makes it inaudible and provides lower energy consumption

**The VAB-Line combines 70/100 V systems with digital technology successfully.**







## Paging System – Targeted Intelligible Announcements

**The VAB-Line Paging System is a powerful network for announcements, prioritized paging, trigger of message memory play-outs and provides access to BGM sources.**

The paging network can be equipped with up to 32 push-to-talk Paging Stations that allow calls to single zone, a group of zones, or all zones.

The Paging Station is fully supervised and contains all system functions and status indications required by current standards like EN 60849. The VAB1 Controller supports power for the Paging Station and for its extension.

The intuitive Graphical User Interface for VAB-Line allows comfortable configuration. All the buttons on the panel can be configured as zone selectors, message buttons and/or music selectors.

### Paging Stations – all Features at a Glance:

- Powerful paging system with up to 32 Paging Stations
- Up to 1 km distance from VAB1 Controller
- Power supply via external paging bus or PSU
- Easy cabling by using standard wall mount sockets possible
- Kensington security slot for anti-theft protection

### Outstanding Functionality:

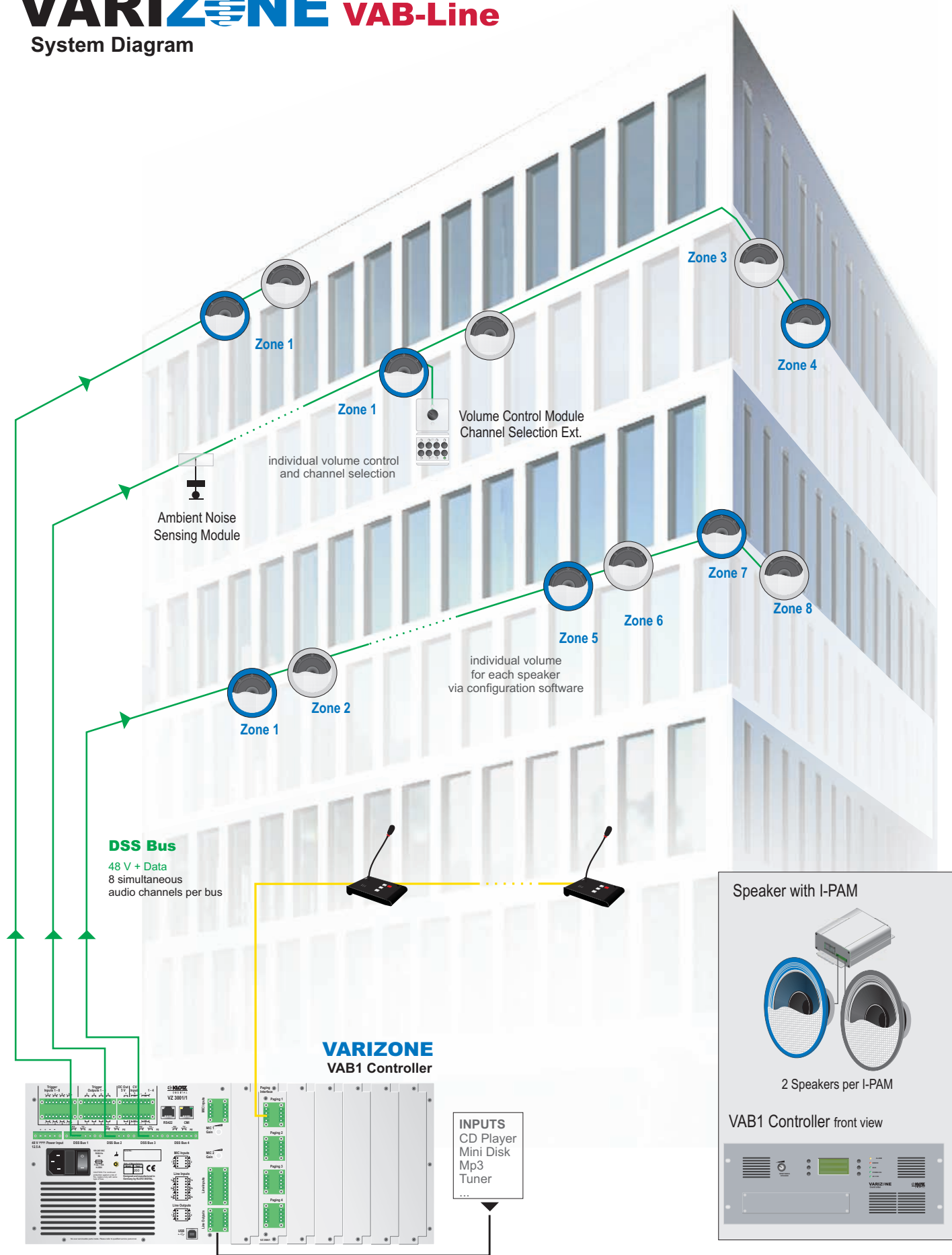
- Permanent supervision of microphone capsule
- 3 LEDs for status/fault indication
- Announcements and priority paging
- Priority management with up to 100 priorities
- Trigger messages from message memory
- Select Background Music sources



The base Paging Station with 4 configurable push buttons can be fitted with 16-button extension modules. This allows to create Paging Stations with 4, 20, 36, 52 or 68 push buttons.

# VARIZONE VAB-Line

## System Diagram



## VAB-Line – The Most Cost Effective and Technologically Advanced Voice Evacuation System in the World!

Although VAB-Line is an out of the box solution it would be a mistake to assume that simplicity means having less features. The VAB1 Controller together with the I-PAM combines all of the benefits of digital technology:

### ■ Integrated monitoring & control system

Each loudspeaker as well as the complete system is monitored automatically and controlled without the cost of an expensive monitoring and control system.

### ■ Flexible zone creation

Any speaker can be allocated to any zone via software. Zones are no longer equivalent to pre-determined, installed and inflexible speaker runs.

### ■ Easy re-configuration

As zones and loudspeakers are configured by software, “virtual zones” can be changed at any time after installation to facilitate changes or temporary adjustments.

### ■ Scalability of zones

The system allows defining zones independently from the physical speaker wiring. On any speaker run several zones can be generated and at the same time zones can be created across different speaker runs. Last but not least the system allows grouping multiple zones to a new zone. This feature enables the user to broadcast audio content only where it really is required.

### ■ Maximized audio quality

The possibility to control volume for every single speaker allows adjustment to environmental conditions. At the same time the loss-free digital audio transport guarantees a maximized audio quality. The result is enhanced speech intelligibility, which can be extremely important during evacuation messages.

### ■ Reduced installation costs

The VAB-Line installation requires less system components than the available 70/100 V solutions. As a result less cabling is required between the units reducing set up time and cost, enhancing the system’s failure safety.

### ■ Reduced total cost of ownership

Amplifier racks in the equipment rooms are needless as I-PAMs are installed directly with each speaker. Thus the requirements for air-conditioning, installation space and operation costs are drastically reduced.

### ■ Investment security

The system can grow with your requirements and allows easy re-configuration without re-wiring.

**The VAB-Line is not just another PA system. It delivers value, performance and ease-of-use to the system contractor and therefore to the end user.**

Specifications are subject to change without notice

**KLOTZ DIGITAL AMERICA**  
**KLOTZ DIGITAL ASIA**  
**KLOTZ DIGITAL AUSTRALIA**  
**KLOTZ DIGITAL EUROPE**

Tel.: +1-678-966 9900  
Tel.: +60-3-5569 3233  
Tel.: +61 2 9911 3700  
Tel.: +49-89-45672 100

**KLOTZ DIGITAL AG**  
Kapellenstrasse 6  
D-85622 Feldkirchen  
Email: [info@klotzdigital.com](mailto:info@klotzdigital.com)  
[www.klotzdigital.com](http://www.klotzdigital.com)



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