

## **VARIODYN D1**

Digital Public Address and Voice Alarm System



## The Role of Voice Alarm

Voice Alarm is increasingly important in the safe management of buildings. A voice message informs occupants exactly what to do in an emergency and it is a long established fact that people respond more quickly and are more likely to take the correct action during an evacuation if voice messages are used instead of tone sounders.

### Benefits

- Clear directions to people in the building
- Live messages giving exact instructions to people who are not familiar with the surroundings
- Customised pre-recorded messages (available in multiple languages)
- Up to 20 minutes shorter response time to fire alarm
- Serial Interface to Honeywell fire panels for EVAC guidance and time-controlled evacuation
- High-end non-emergency features such as equalizing, automatic volume control and multi-channel announcements as well as background music
- Alarm cancellation and manual evacuation override control

## Public Address - more than Voice Alarm

Voice Alarm systems are more frequently used as public address and entertainment systems than only as automatic evacuation system in public buildings with a high number of visitors.

### Features Public Address provides additionally:

- Paging and evacuation with zone-dependent messages
- Integration with airport/train station management systems
- Multiple channel/zone music broadcasting
- Sport/concert hall and stadium sound system integration
- Time-scheduled announcements
- Touch screen operation panels
- Operation from intuitive computer management systems
- High quality background music for high class shopping experience



# Voice Alarm - Competence for you

Selecting, designing and commissioning a PA/VA system can be challenging. At Honeywell we have a team of experts that will help you build the most suitable system for your building.

The first step is to decide exactly what type of PA/VA system you will need. This will largely depend on the size and functional complexity of your building.

The following two types of systems are available that start from small 'Compact Solution' packages suitable for single storey buildings such as shops and offices and move up to a custom made 'Modular System' that will consist of a number of distributed systems linked together for large structures such as exhibition fairgrounds and airports.

## Systems Key Features

- Controlling and indicating equipment certified to EN 54-16 and EN 54-4
- Complete range of EN 54-24 certified loudspeakers
- Flexible systems that supports both simple and the most complex communication needs
- High quality digital audio matrix
- Intuitive touchscreen Graphical User Interface that manages the entire system
- Phased evacuation scenarios
- Situation, location & evacuation phase dependent voice messages
- Exact guidance regarding evacuation routes
- Freely configurable evacuation scenarios with logical dependencies
- Dedicated Honeywell design and project support

# The Compact Solution: COMPRIO D1

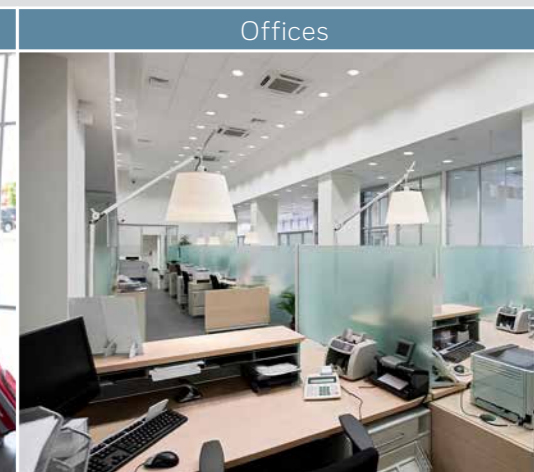
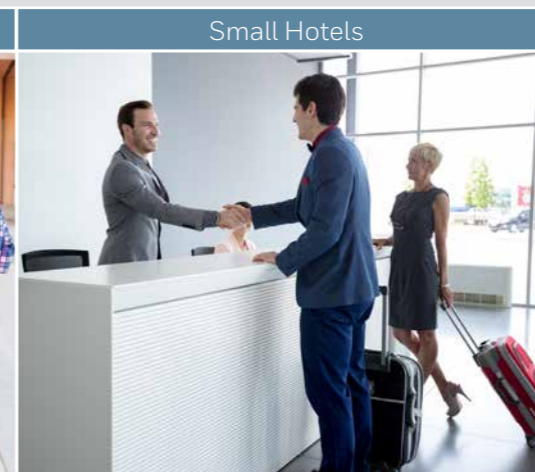
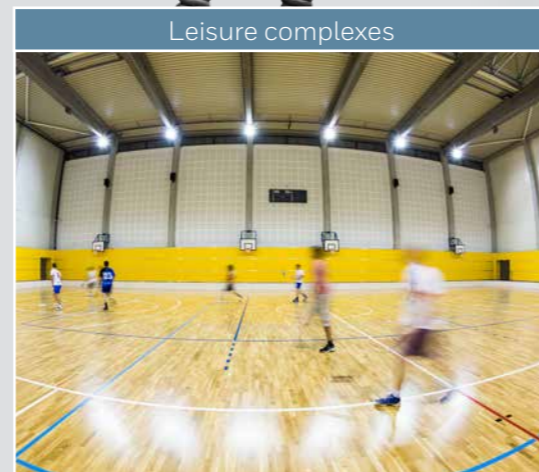
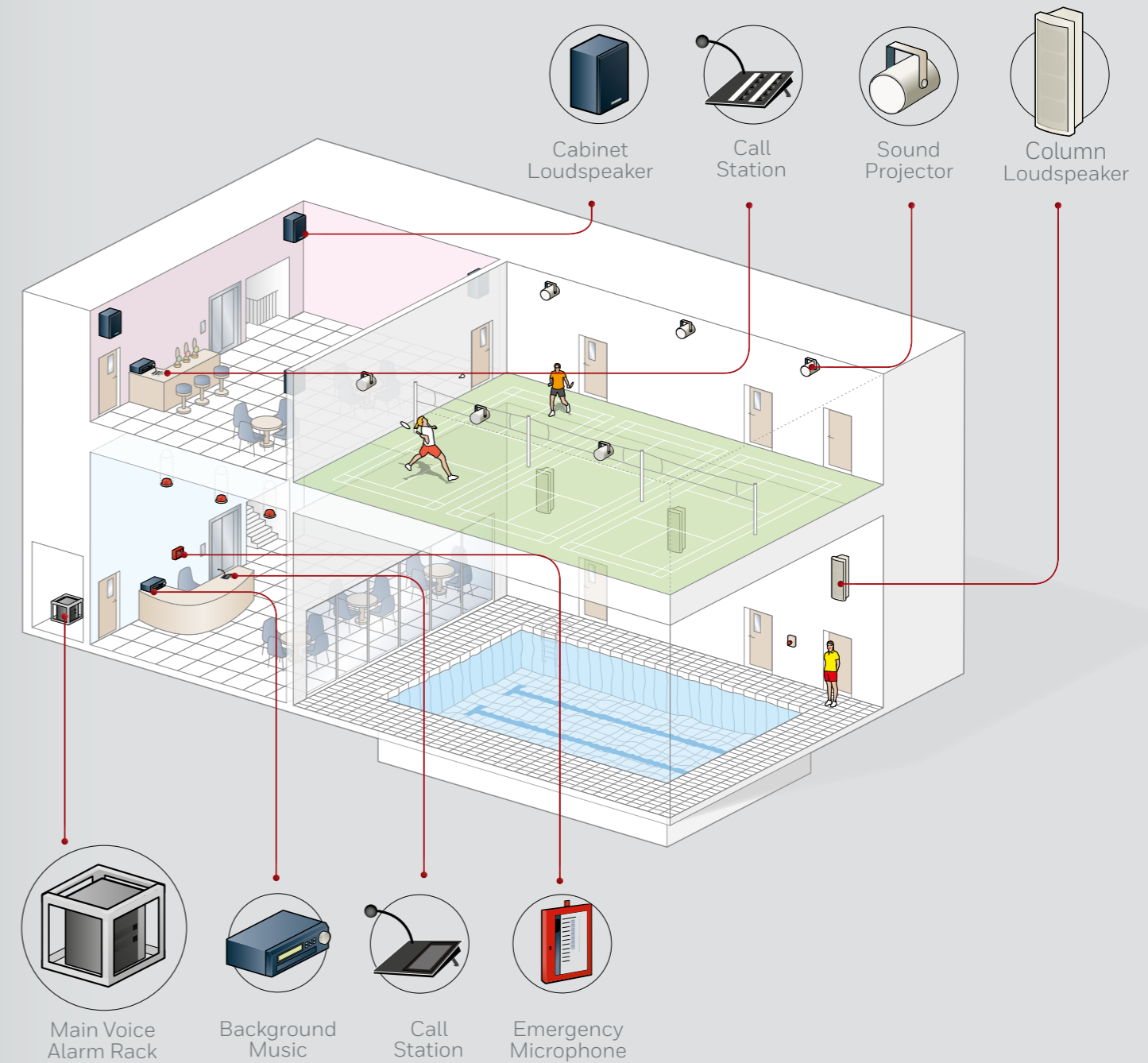
An easy-to-install PA/VA system. Suitable for small to medium buildings with up to 24 loudspeaker zones.

## Applications

- Leisure complexes
- Supermarkets
- Schools
- Hotels
- Offices

## Benefits

- Amplifier with build-in PSU available
- 'Off the Shelf' Package
- Installation within two hours
- Only 8 HU rack space incl. amplifier, charger and batteries
- Ensured compliance to EN standards
- Complete solution for up to 24 zones
- max. 2000 W output power expandable with additional DOM/AMPs



# The Modular Solution: VARIODYN D1

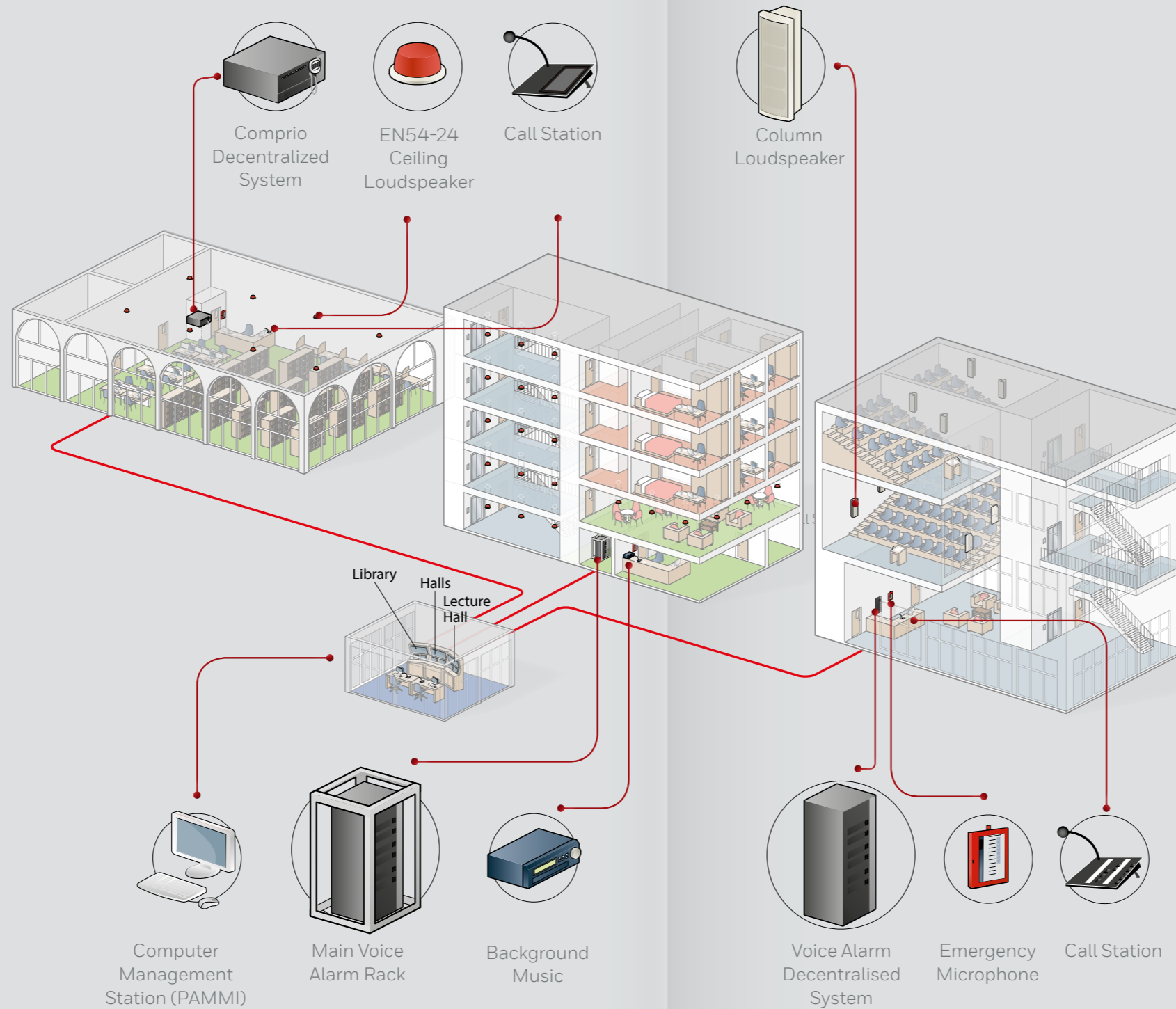
Our PA/VA systems can be distributed and networked together to deliver the most comprehensive and powerful solution for a wide range of applications. Suitable for mid to large and complex sites.

## Applications

- Industrial facilities
- Universities
- Airports and transport hubs
- Stadiums
- Exhibition halls and fairgrounds
- Mega Shopping Malls
- Large Office buildings

## Benefits

- Scalable and modular to adapt to constant changes and demands
- Supports a large number of evacuation and/or paging zones
- Manages complicated evacuation strategies in the event of an emergency
- IP connectivity to link multiple nodes (VARIODYN D1 DOM)
- Up to 120 announcements at the same time
- Pre-recording and playback of messages
- Secured data link to various Honeywell Fire Alarm Systems
- Decentralized and redundant system architecture
- Interface to Building Management Systems (e.g. Honeywell EBI)
- Redundant network and Call Stations links

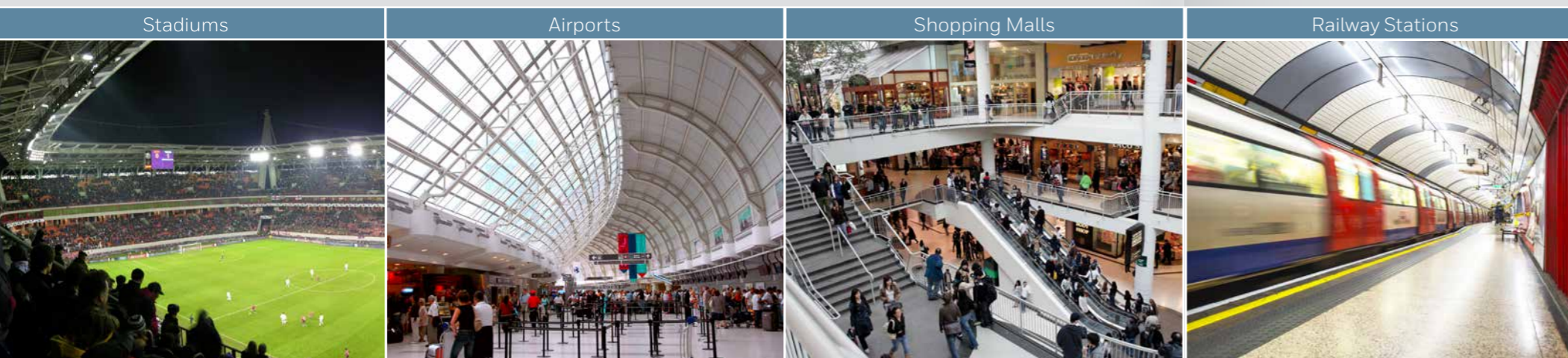


# Customised Control

The **PAMMI** (Public Announcement Man Machine Interface) software provides monitoring and control of the Honeywell Voice Alarm System via a graphical user interface on a Microsoft Windows® based personal computer.

## Key Features

- Full-screen application, may be operated by touch screen
- Graphic display (e.g. building layout)
- Zone scheme with selection and status
- Recording, pre-listening and discarding of announcements
- Simultaneous playback of pre-recorded audio messages
- Scheduler function for automatically controlled audio messages
- System status indication and logging
- Open Interface to other Management Systems
- Volume and audio control functions



# Perfect Symbiosis - Voice Alarm and Fire Alarm

Synergies arise through digital coupling of the fire alarm system with the voice alarm system, thus facilitating an orderly, area-specific evacuation during emergencies: If a fire is detected by the connected fire detectors and then received by the fire alarm control panel, this automatically activates the voice alarm system. The endangered areas are then selected automatically and informed via the PA/VA system, while at the same time the fire alarm control panel activates fire protection systems, for example, fire doors, air-conditioning and ventilating systems, elevator controls or smoke dampers.

The combination of voice alarm and fire alarm technology not only offers functional advantages, there are economical advantages as well: PA/VA reduces the total EVAC time drastically, a PA/VA system is not much more expensive than standard sounders, while it adds valuable support by increasing productivity of building occupants.

## Area by area, targeted and orderly: Evacuation procedure example at the airport



**1.** There is a short-circuit in the baggage sorting area on the 1st sub-level, section B of the airport.



**2.** The fire detector detects the formation of smoke and transmits the information to the fire alarm control panel.



**3.** The fire alarm system simultaneously initiates alarms to the security services and the voice alarm system.



**4.** The security inspector assesses the situation via the video camera installed on-site and then activates a stored announcement to the personnel with the push of a button.



**5.** Due to the increasing formation of smoke, the fire alarm system automatically closes the fire door in the affected area.



**6.** The fire alarm control panel takes over the elevator control and prevents the elevators from stopping in the affected areas and/or moves the elevator to a pre-defined end position.



**7.** The PA/VA system automatically initiates an announcement for the immediate evacuation of the affected area.



**8.** The people in the closest area (sub-level 1, arrivals)—one floor above the baggage carousels of the airport section B—are guided to the corresponding exits by specific information. Here, standard announcements are stopped and all EVAC announcements have priority. But the highest priority have the fire fighter call stations.

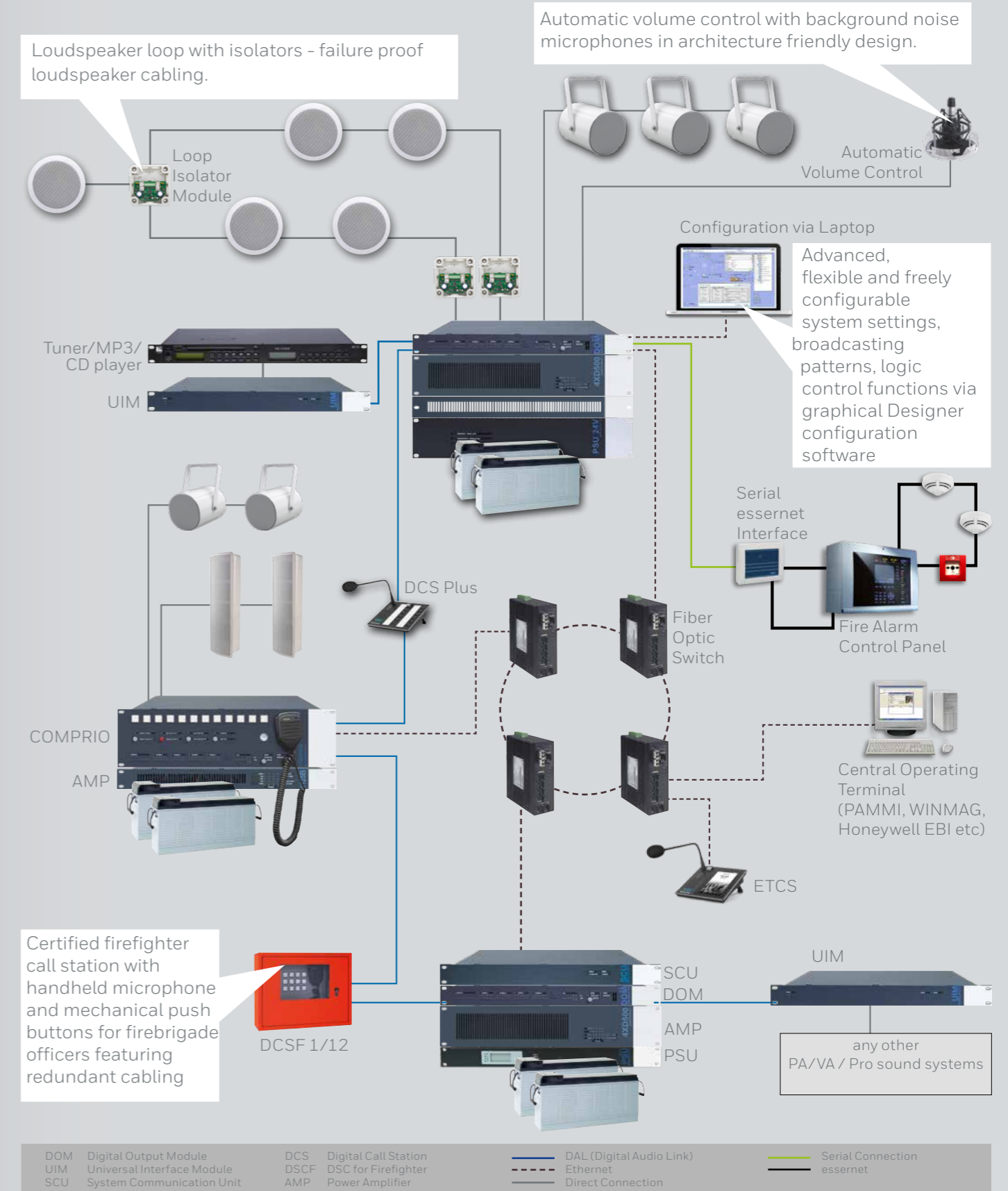


**9.** The fire department arrives and uses emergency firefighter call station for evacuation control of remaining people and later for paging instructions to firefighters.



## VARIODYN D1 and Comprio PA/VA system diagram

Thanks to its modular construction and the various system components, the VARIODYN D1 system can easily be adapted to the object specific requirements.



# WINMAGplus – One Management System for All

The WINMAGplus hazard management system lets you create a scalable software solution with superb levels of integration with different sub-systems.

In case of Voice Alarm system, VARIODYN D1 is connected via Ethernet/RJ45 to the same network as the WINMAGplus server. This enables the VARIODYN D1 integration with systems such as: fire alarm, fire extinguishing, smoke and heat control, escape routes, CCTV, access control, intrusion detection, emergency lighting as well as BMS and others via open protocols.

## Performance features of the VARIODYN D1 interface WINMAGplus driver

- System configuration readout of a VARIODYN D1 network to take it over via import files to WINMAGplus application.
- Fault and status indication of the VARIODYN D1 system components:
  - DOM, SCU, DAL bus devices like DCS and UIM, Amplifiers (each channel)
  - Audio and control contact inputs and outputs
- Display, update and control of:
  - Volume
  - Volume presets (min., max., alarm)
  - Audio signal levels
  - Control contacts
- Call station function:
  - Microphone switched to pre-selectable or fixed targets for live-spoken announcements
  - Playback of pre-recorded announcements on selectable or fixed targets

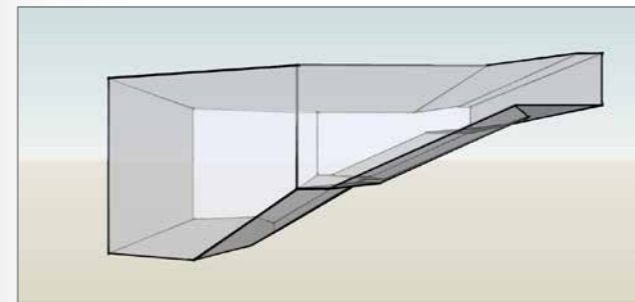
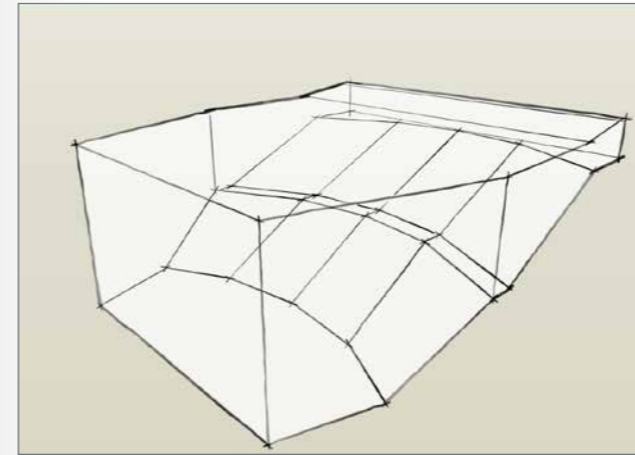


# Challenging Projects Require Best Design and Expertise

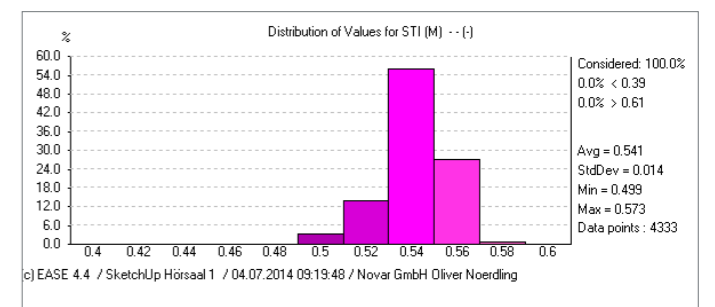
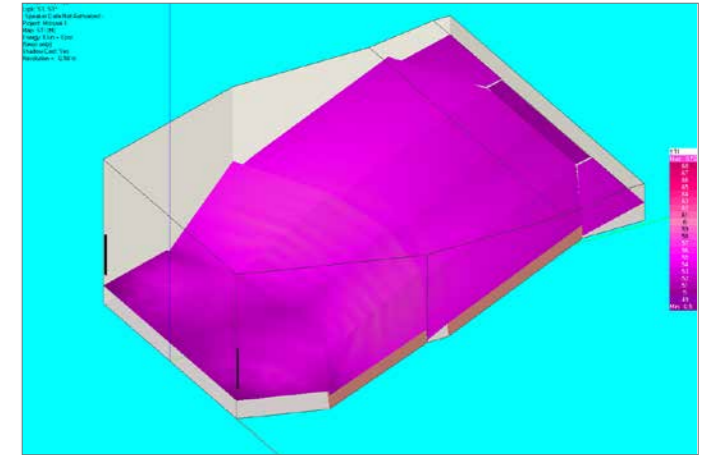
Acoustic simulations are foundations and of necessity of proper PA/VA system design in complex, difficult and large areas. EN 50489 and CEN/TS 54-32 require minimum intelligibility level from installed VA systems. Installing and planning VA systems bears a risk of failure during intelligibility measurements in the handover phase. To prevent such critical situations and underbudgeting of VA systems acoustic simulations are the only guarantee.

By CEN/TS 54-32 European standard VA system can be designed in 2 ways to achieve required intelligibility:

1. Simplified, prescriptive method, requiring loudspeakers mounted every 6 meters or less.
2. Detailed method, requiring in practice acoustics simulations as VA system design base regarding spacing, location, type selection, audio equalizing and proper orientation of loudspeakers.



Example of the acoustic simulation of an auditorium



Acoustic simulation software provides to precisely and reliably assess sound pressure level (dB) and intelligibility level (STI/CIS). The software calculates the simulated room as a space map in 3D, enabling the user to verify the selected type, location and setting of loudspeakers.

Voice Alarm system design for acoustically challenging areas must be based on professional, quality simulations, prepared by experienced acoustic experts.

Our Technical Support Team provides expertise, experience, tools and wide portfolio of certified VA loudspeakers to assure our partners and system designers that VARIODYN D1 system designs will pass acceptance tests.



# VARIODYN D1 Product Family

All of the components of the VARIODYN D1 product family are compatible, interchangeable and optimally adapted to the customers growing needs. As varied as the requirements may be, all of the components are modular designed and can be combined with each other quick and easy.



## Digital Output Module (DOM)

The Digital Output Module (DOM) is the heart of the Honeywell Voice Alarm and Public Address system. Managing either 8 or 24 zones the DOM routes up to 4 channels of audio from amplifiers to any individual zone or group of zones.



## Comprio

Comprio is a voice alarm system optimised for small and medium-size facilities such as schools, hotels, leisure centres and offices. It's characterised by its compact design, wide performance range and its flexibility.



## Class D Power Amplifiers

Combining the latest in digital audio technology with the integrity necessary for emergency Voice Alarm systems to satisfy the requirements of EN54 part 16.



## Ethernet Touch Call Station (ETCS)

This EN 54-16 certified touch screen call station provides a user friendly, multilingual and multi-user interface support with high failure safety due to redundant transmission routes via Ethernet (PoE possible). It includes audio memory up to 27 hour and a USB stick can be connected to play audio files as well.



## Paging Microphone DCSPPlus

The paging microphone allows for the selection of loudspeaker zones, and the transmission of voice announcements via programmable buttons.



## Universal Interface Module (UIM)

Interface module enables audio or control connection to third party systems such as CD players, security systems and other PA/VA or building management control systems.



## System Communication Unit (SCU)

The System Communication Unit (SCU) is an integrated digital audio memory source able to simultaneously record and play back multiple audio data streams.



## Direct Drive Power Amplifier

4-channel Direct Drive Amplifier 4 x 300 W or 4 x 500 W power outputs or unit providing 4 x 125 W or 4 x 250 W power outputs with integral EN 54-4 certified battery charger.



## PAMMI Public Announcement User Interface

The PAMMI software provides connection and control of the Honeywell Voice Alarm System via a graphical user interface on a Microsoft Windows® based PC.



## Emergency Microphones

Emergency Microphone used to select and broadcast pre-programmed alarm messages and live voice announcements during emergency situations by security operator or fire brigade commander.

# Loudspeakers

Honeywell offers loudspeakers, specially designed to meet various requirements and specifications in many project types e.g.

- Excellent acoustic performance to realize clear, understandable voice announcements or high quality background music.
- Cost-effective types
- Well designed, modern appearance
- Easy for installation to reduce time, efforts and costs
- Robust material to offer long lifetime
- Models with ceramic terminal block and thermofuse



## Extract from our extensive product offerings:



### Ceiling Loudspeaker

- Metal or plastic ceiling loudspeakers
- Several power tapings with simple setting
- Partly dual-cone speaker to ensure best audio performance
- Appropriate for indoor applications such as offices, warehouses, schools etc



### Column Loudspeaker

- Flat, directed sound propagation, minimized reverberation
- Intelligible voice and superior sound reproduction
- IP65 rating
- Great choice for theme parks, exhibition halls and any open, high-volume rooms with high reverberation time.



### Horn Speaker

- Clear voice message reproduction for open and outside areas
- Offers a high sound pressure and long-lasting weather resistance



### Sound Projector

- Wide frequency response range, low distortion
- Robust aluminum housing
- IP65 rating
- Best option for applications such as corridors and railway platforms



### Cabinet Loudspeaker

- Simple power setting and easy installation
- Practicable for wall mount application
- Plastic, MDF or metal vandal-proof cabinet



### Spherical Loudspeaker

- Where wall mount or ceiling mounting is not possible
- Variable hanging height
- 360° sound propagation



### Special Loudspeaker for tunnels

- Specially designed and EN 54-24 certified for tunnel applications
- Boundary effect and loudspeaker phasing for best intelligibility in extremely difficult tunnel projects



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Part-No. AT1005.G0

02/2019

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