
ambient
SYSTEM
We make everyday life safer
www.ambientsystem.eu

Who we are

- *Innovative European manufacturer of Voice Evacuation Systems (VES) based in Gdansk, Poland*
- *20 years experience in integrating, supplying and maunufacturing of VES*
- *Focus on the development of certified, flexible solutions for demanding public and commercial projects*

Experience *and* ***versatility***

20 years on the market

What makes us unique

- / *Our speciality is the manufacture of advanced, certified VES (EN 54 standards)*
- / *A long and competent track record in the market as a VES supplier and integrator*
- / *Specialist engineers developing products and involved in implementation and after-sales support*
- / *Active participation in the creation of industry standards and regulations*
- / *Competent design of optimized systems - especially in acoustically challenging locations*
- / *Experience in developing cost-effective and functional systems for different types of locations, such as airports, shopping malls, stadiums, office buildings, hospitals*
- / *Fast and flexible response to our partners' needs.*

Experience *and* **versatility**

20 years on the market

Our product profile

We specialize in the production of certified, flexible and efficient VES.

Our product range consists of elements enabling the configuration of any VES – regardless of size, location or place.

- / ***Control Units (EN 54-16)***
- / ***Fire-fighter & zone microphones (EN 54-16)***
- / ***Amplifiers – Class D (EN 54-16)***
- / ***Power Supply Equipment (EN 54-4)***
- / ***Fire Alarm Loudspeakers (EN 54-24***

MULTIVES | *Intelligent Voice Evacuation Investment*

Experience *and* ***versatility***

20 years on the market

Continuous development

Mercor System Sp. zo.o.

1992

/ *A regional company operating in the fire alarm systems (FAS) market*

Ambient System Sp. z.o.o.

2005

/ *Leading VES supplier in Poland, beginning of Europe-wide operations*

2013

/ *European and Middle East coverage as VES manufacturer*

Credibility and References

Implementation of the largest VES investments in Poland:

Large-scale projects	***Shopping malls, UEFA approved stadiums, airport terminals , refineries, theatres, concert and sport halls***

Our products are trusted by major global brands:

Hypermarkets	***Auchan, Geant, Castorama, Carefour, Selgros, OBI and others***
Hotels	***Hilton, Mercure, Sofitel, Novotel and others***
Office buildings	***Danone, Orange, GTC, IBC, T-Mobile, Zepter and others***

We cooperate with global integrators and suppliers:

Global partners	***Siemens, UTC F&S, Notifier, Schrack, LST***

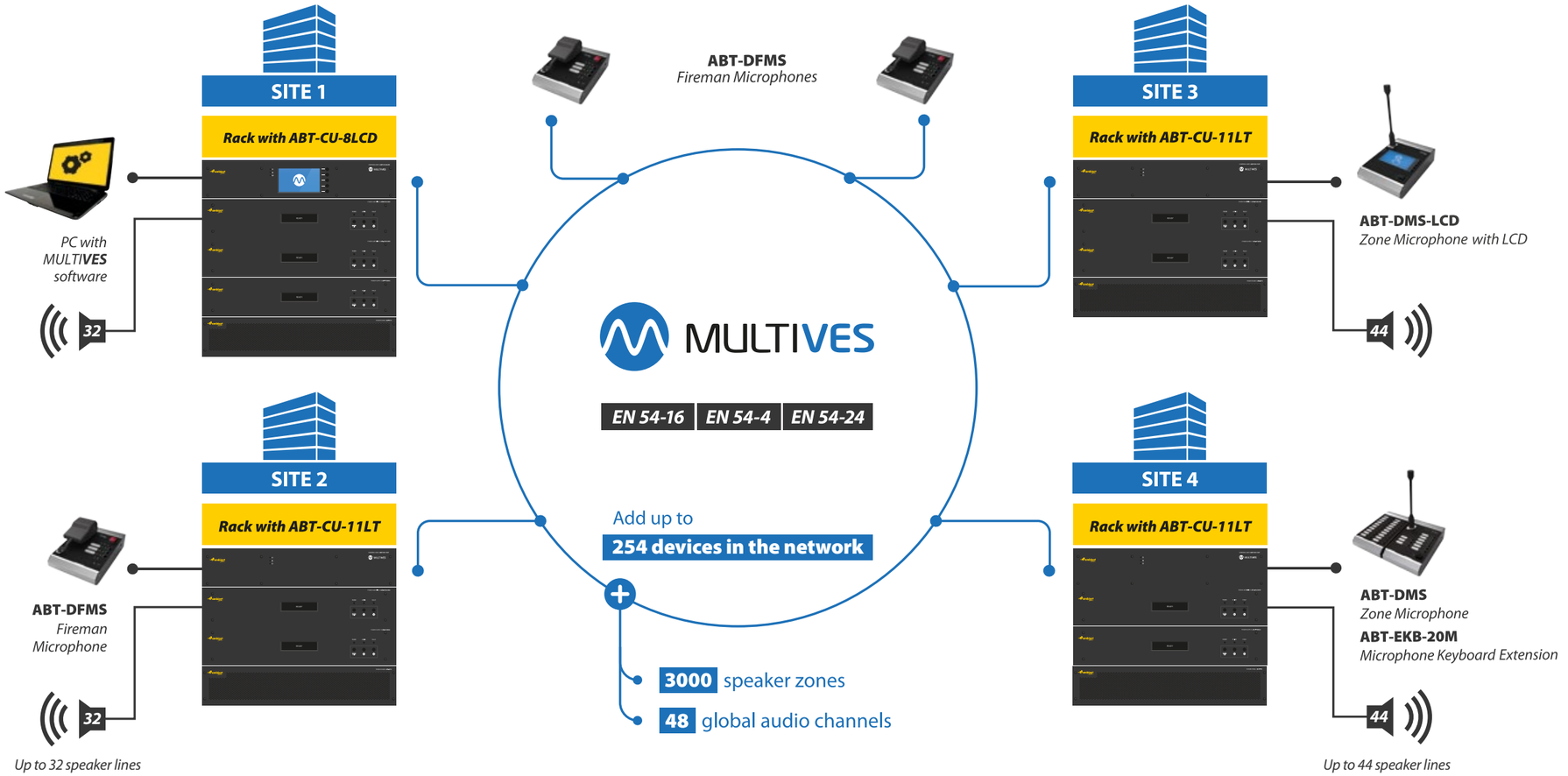
MULTIVES

Intelligent Voice Evacuation Investment

Area of application of the MULTIVES system

*MULTI**VES** system is designed with a view to a possibility of its versatile application – it is extremely suitable for both decentralised and centralised systems. The architecture of this system, based on fibre optic TCP/IP connections between control units and other elements of the system, allows for its application in structures most extensive in terms of area and functionality such as air terminals, oil fields and refineries, commercial centers and office complexes.*

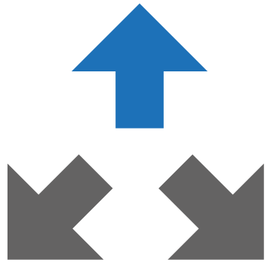
MULTIVES flexible structure



Main features of MULTIVES System

MULTIVES

multi
SAFETY



multi
FLEXIBLE

multi
COST-EFFECTIVE

MULTI SAFETY

MULTIVES

- *Distributed intelligence of the system*
- *Redundant processor card in ABT-CU-8LCD control unit*
- *Ease of installation fully redundant connection between control units and fire microphones via fiber loop*
- *Remote control and management via Ethernet and WAN connection*
- *Variety of solutions for loudspeakers line monitoring (impedance, EOL)*
- *Comprehensive supervision of each system component from amplifiers, speaker lines, fire and zone microphones to internal cards and memory*
- *Fully integrated with Fire Alarm Systems – monitored contact inputs / relay outputs and RS485 interfaces for FAS*

MULTI FLEXIBLE

MULTIVES

- *Scalable configuration – fully digital audio transmission based on TCP/IP connections between control units and other elements of the system*
- *Components auto detection and recreation of the system topology*
- *Simplicity of the system expansion – by distribiuted inteligence architecture*
- *Control units tailored to Clients' requirements – modular construction*
- *Ability to attach any number of fireman and zone microphones*
- *Matrixing of the audio signal on the low voltage and 100 V side*
- *Multi-channel, and bridgeable Class D amplifiers: 8x80 W, 8x160 W and 2x650 W*
- *External audio inputs in every Control Units and microphones*

MULTI COST-EFFECTIVE

MULTIVES

- *Possibility of building extensive distributed systems based on existing IP networks*
- *Intercom function between all zone microphones*
- *Reduce the quantity of amplifiers and increase number of zones by:*
  - *Applying one of the specially designed control cards with 4 – ABCD loudspeaker lines*
  - *Use 4 internal 100 V audio buses*
- *Integrated DSP with implemented 3 band parametric EQ on all inputs on control units , 16 band parametric EQ and Delay lines on each of the audio output*
- *Power Over Ethernet available on every control units for powering fire and zone microphones*
- *Complete integration of the 100V and low impedance public address sound systems*

Main parameters of the MULTIVES system

MULTIVES

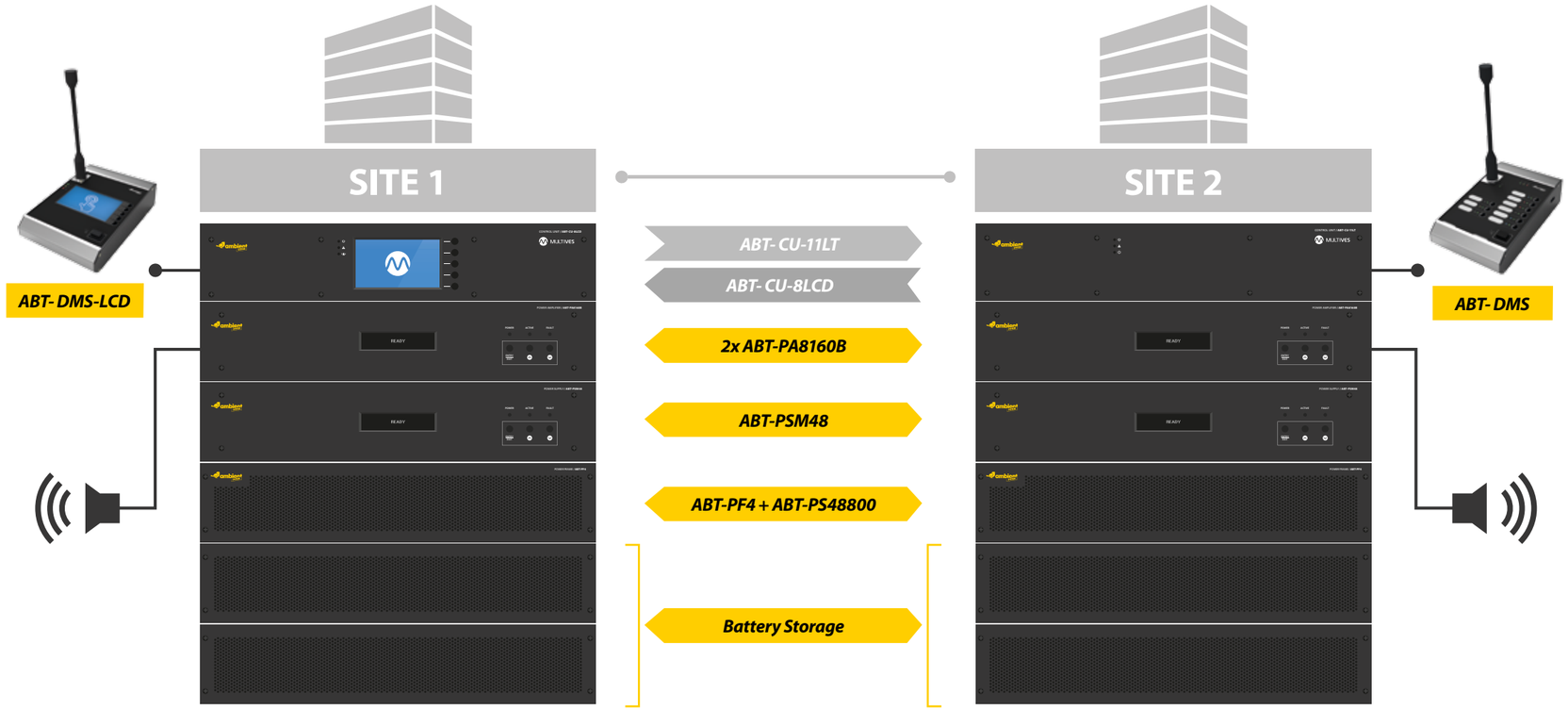
- *Compliance with EN 54-16, EN 54-4, EN 60849*
- *Digital signal processing on each audio input and output*
- *Digital message player and recorder available*
- *Advanced audio matrix*
- *Sophisticated scheduler combined with programmable system events*
- *Practically unlimited number of speaker zones*
- *Number of simultaneously played messages limited only to the number of xCtrLine-4 and xCtrline-2 cards in the system*
- *48 global audio channels for all Control Units in the network*
- *4 common 100 V audio buses in every Control Unit for spare amplifiers and budget solutions with maximum 3 at the same time played messages*
- *Max 254 units in the network inluding fireman and zone microphones*
- *Practically unlimited number of speaker zones*
- *Every control unit fitted with industrial SD/MicroSD card, capacity up to 32 GB (45 h of messages)*

Elements of MULTIVES System

Exemplary configurations

Exemplary configurations of the MULTIVES system with dedicated 8 channels ABT-PA8160B amplifiers and battery back-up.

Two buildings *(fiber optic connection between 2 CU),* ***16 zones****,* ***16 audio channels*** *(working simultaneously).*



Elements of Integrated MULTIVES System

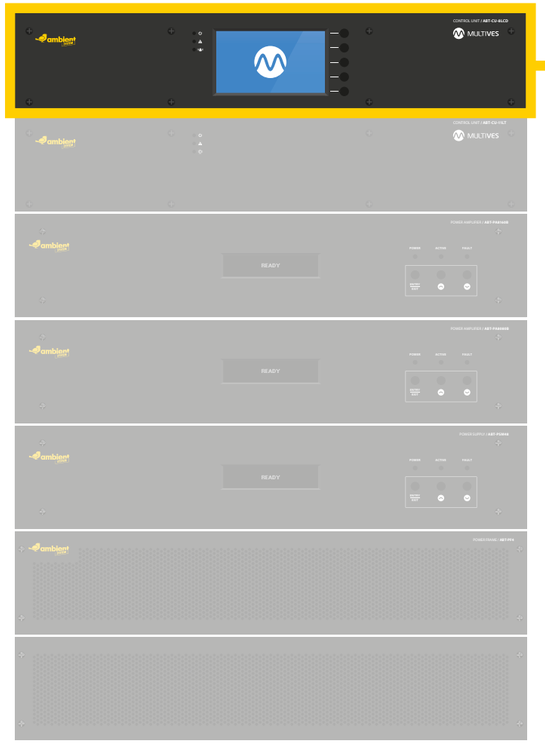
MULTIVES Devices	
ABT-CU-8LCD	control unit – 8 zones with touch screen
ABT-CU-11LT	control unit – 11 zones LIGHT
ABT-CU-11LCD	control unit – 11 zones with touch screen
ABT-DFMS	desktop fireman microphone station
ABT-DMS-LCD	desktop zone microphone with touch screen
ABT-DMS	desktop zone microphone station
ABT-EKB-20M	extension keyboard 20 keys
ABT-ISLE	island – communication module and audio signal splitter with RS485 for external systems

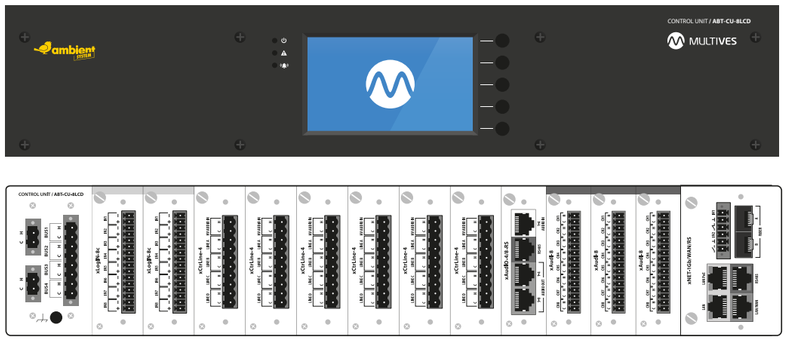
MULTIVES Exchangeable modules	
ABT-xCPU	CPU card
ABT-xNET-1Gb/WAN/RS	comunication card
ABT-xLogIN-8f	logical Input card for function slot
ABT-xLogIN-8c	logical Input card for control slot
ABT-xLogOUT-8f	logical output card for function slot
ABT-xLogOUT-8c	logical output card for control slot
ABT-xAudIO-4/8-RS	audio card 4 IN / 8 OUT AUDIO / RS485
ABT-cAudIO-4/12	audio card 4 IN /12 OUT AUDIO
ABT-xAudI-8	audio card 8 IN AUDIO
ABT-xCtrLn-2	2 loudspeaker line control card
ABT-xCtrLn-4	4 loudspeaker line control card

Control Unit 8 slots

EN 54-16

ABT-CU-8LCD / with touch screen





ABT-CU-8LCD
CHARACTERISTICS:

- EN 54-16 certified system
- fully network-based system allowing for configuration, control and diagnostics via Ethernet
- a possibility of managing up to 254 devices in the network
- 8 slots available for any configuration of loudspeaker control cards, control inputs and outputs cards
- Additional 4 slots dedicated only for audio input / output cards and control input/ output cards
- 8 messages played simultaneously into different zones
- Up to 12 secured amplifiers supported
- Built in 2 control inputs and outputs
- 1x POE port
- 2x1Gbit ports available for system extantion
- Up to 32 GB SD flash memory dedicated for playback and recording messegas (48 kHz, 32 bytes)
- 48-channel digital audio bus common for the whole system
- Integrated DSP with implemented 3 band parametric EQ on all inputs on control units , 16 band parametric EQ and Delay lines on each of the audio output
- comprehensive solution based on RS485 allowing for integration MULTIVES system with devices offered by other producers thanks to implementation of standard and proprietary communication interfaces

Control Unit 11 slots

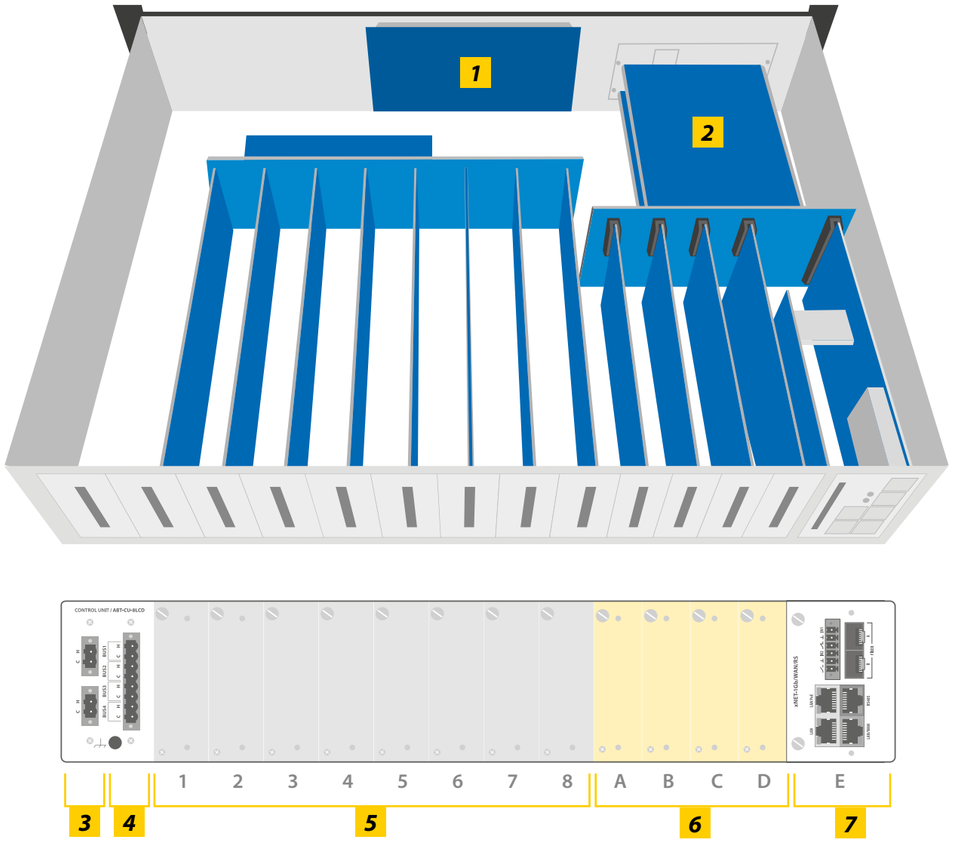
EN 54-16

ABT-CU-11LT / LIGHT

ABT-CU-11LT
CHARACTERISTICS:

- *EN 54-16 certified system*
- *fully network-based system allowing for configuration, control and diagnostics via Ethernet*
- *a possibility of managing up to 254 devices in the network*
- *11 slots available for any configuration of loudspeaker control cards, control inputs and outputs cards*
- *Built in audio card with 4 inputs and 12 audio outputs*
- *12 messages played simultaneously into different zones*
- *Up to 12 secured amplifiers supported*
- *Built in 2 control inputs and outputs*
- *1x POE port*
- *2x1Gbit ports available for system extantion*
- *Up to 32 GB SD flash memory dedicated for playback and recording messegas (48 kHz, 32 bytes)*
- *48-channel digital audio bus common for the whole system*
- *Integrated DSP with implemented 3 band parametric EQ on all inputs on control units , 16 band parametric EQ and Delay lines on each of the audio output*
- *comprehensive solution based on RS485 allowing for integration MULTIVES system with devices offered by other producers thanks to implementation of standard and proprietary communication interfaces*

Control Units elements



MULTIVES CONTROL UNIT ELEMENTS:

1. ***GUI Card*** *for ABT-CU-8LCD*
2. ***ABT-xCPU card***
3. ***Power Supply***
4. ***100 V audio global BUS***
5. ***1 – 8 slots*** *for loudspeaker line control cards and logical output and input cards*
6. ***A –D slots*** *for logical and audio output and input cards*
7. ***E slot*** *for communication card with fiber SC and copper RJ45 connectors*

Exchangeable modules

GUI CARD
ABT-xLCD

DESCRIPTION

It is a 4.5" FT LCD touch screen with a control module. It allows to get fast and easy access to interactive system menu's such as: loudspeaker zones control, defect detection, alarm cut off, dynamic routing, log archives, intercom and many others.

CPU CARD
ABT-xCPU

DESCRIPTION

It is a card which integrates ABT-CU8 and ABT-CU-8LCD control units with other elements of the Multives system. CPU controls whole network traffic from ABT-xNET card and manages audio routing, digital matrix (8x8) as well as all DSP functions.

COMUNICATION CARD
ABT-xNET-1Gb/WAN/RS

DESCRIPTION

ABT-xNET is a communication card composed of two independend 1 GB network switches. Network switch no. 1 is destined solely for transsion of data connected with the basic functionality of the Multives system, i.e. working of the emergency sound system and AVB operation whereas network switch no. 2 is used for remote connections. ABT-xNET consists of one RS485 port (RJ45), one POE port, two 1Gb ports and two SFP modules.

Exchangeable modules / Function cards

4 AUDIO INPUT / 12 AUDIO OUTPUT CARD
ABT-cAudIO-4/12

DESCRIPTION

This card is destined solely for an ABT-CU-11LT Control Unit. It offers 4 symmetrical line audio inputs (RJ45 connector) and 12 symmetrical outputs to lead out audio signals to the external devices or amplifiers of the MULTIVES system.

4 AUDIO INPUT / 8 AUDIO OUTPUT CARD
ABT-xAudIO-4/8-RS

DESCRIPTION

This audio intput/output card is destined for a function slot of ABT-CU-8/LCD. It offers 4 line audio inputs via an RJ45 connector as well as 8 symmetrical outputs via an RJ45 connector for leading out audio signals to the external devices or amplifiers of the MULTIVES system. The card is also equipped with an RS485 interface with the help of which the MULTIVES system can be controlled or integrated with devices offered by other producers.

8 AUDIO INPUT CARD FOR FUNCTION SLOT
ABT-xAudI-8

DESCRIPTION

This audio input extension card is destined for a function slot of ABT-CU-8/LCD. It offers 8 symmetrical line audio inputs via an RJ45 connector.

Exchangeable modules / Function cards

LOGICAL OUTPUT CARD FOR FUNCTION SLOT
ABT–xLogOUT-8f

DESCRIPTION

The logical input card a function or control slot has 8 control inputs which may receive signals from other systems in order to trigger a desired reaction of MULTIVES system. Inputs of an ABT–xLogIN-8f card offer two modes of work: a non-potential mode (normally shorted /normally opened) and a voltage mode. Moreover, the card monitors shortings and openings of cables connected to inputs.

LOGICAL INPUT CARD FOR FUNCTION SLOT
ABT–xLogIN-8f

DESCRIPTION

The logical input card a function or control slot has 8 control inputs which may receive signals from other systems in order to trigger a desired reaction of MULTIVES system. Inputs of an ABT–xLogIN-8f card offer two modes of work: a non-potential mode (normally shorted /normally opened) and a voltage mode. Moreover, the card monitors shortings and openings of cables connected to inputs.

LOGICAL OUTPUT CARD FOR CONTROL SLOT
ABT–xLogOUT-8c

DESCRIPTION

The logical input card a function or control slot has 8 control inputs which may receive signals from other systems in order to trigger a desired reaction of MULTIVES system. Inputs of an ABT–xLogIN-8c card offer two modes of work: a non-potential mode (normally shorted /normally opened) and a voltage mode. Moreover, the card monitors shortings and openings of cables connected to inputs.

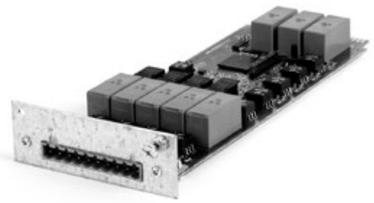
Exchangeable modules / Function cards

LOGICAL INPUT CARD FOR CONTROL SLOT
ABT–xLogIN-8c

DESCRIPTION

The logical input card a function or control slot has 8 eight control inputs which may receive signals from other systems in order to trigger a desired reaction of MULTIVES system. Inputs of an ABT–xLogIN-8c card offer two modes of work: a non-potential mode (normally shorted /normally opened) and a voltage mode. Moreover, the card monitors shortings and openings of cables connected to inputs.

4 LOUDSPEAKER LINE CONTROL CARD
ABT-xCtrLn-4



DESCRIPTION

This card is destined for a control slot of every control unit and it offers 4 independent loudspeaker line outlets. Measurement of the lines can be done by 2 methods: the impedance method or the EOL module method. The card detects failure of the amplifier and switches the 100 V signal between internal buses and individual amplifier input on the card. Thanks to built-in dedicated measuring component on an ABT-xCtrLn-4 card monitors the status of the internal rail.

2 LOUDSPEAKER LINE CONTROL CARD
ABT-xCtrLn-2

DESCRIPTION

An ABT-xCtrLn-2 card is destined for a control slot of every control unit and it offers two independent loudspeaker line outlets (A, B). Measurement of the lines can be done by two methods: the impedance method or the EOL module method.
The card detects failure of the amplifier and switches the 100 V signal between internal buses and individual amplifier input on the card.

Fireman microphone

EN 54-16

ABT-DFMS

ABT-DFMS
CHARACTERISTICS:

- monitored microphone and connection of the microphone module to the system
- dedicated evacuation button
- three fully programmable buttons and a possibility of connecting up to five 20-button extensions
- built-in 2 contact inputs and 2 relay outputs
- POE or external feeder based power supply
- black-box function – recording all announcements played back during an alarm
- built-in SFP modules and CAT5e for simplicity of implementation of the loop topology
- RS 485 for communication with external systems
- Intercom function between all fireman and zone microphones

Zone microphone with LCD

EN 54-16

ABT-DMS-LCD

ABT-DMS-LCD
CHARACTERISTICS:

- *4,5” LCD touch screen for fast and clear matricing and system managment*
- *monitored connection of the unit to the system*
- *five fully programmable buttons with a possibility of extension up to five 20-button modules*
- *four non-symmetrical audio inputs, (1/8”) stereo jack connector*
- *built-in speaker*
- *stereo jack socets for Headset*
- *implemented intercom function*
- *power supply via POE*

Zone microphone

EN 54-16

ABT-DMS

ABT-DMS-LCD
CHARACTERISTICS:

- monitored connection of the unit to the system
- nine fully programmable buttons with a possibility of extension up to five 20-button modules
- four non-symmetrical audio inputs, (1/8") stereo jack connector
- built-in speaker
- stereo jack socets for Headset
- implemented intercom function
- power supply via POE

Microphone extension

EN 54-16

ABT-EKB-20M / keyboard extension

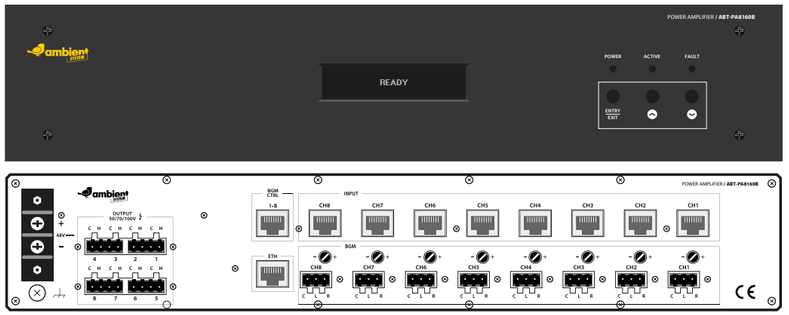
ABT-EKB-20M
CHARACTERISTICS:

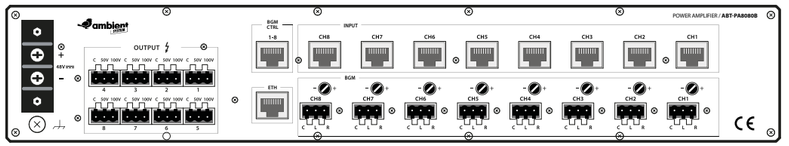
- **Each extension attached to a fireman microphone or a zone microphone offers an additional 20 function buttons**

Amplifiers

EN 54-16

ABT-PA8080B / 8160B / 2650B





AMPLIFIERS CHARACTERISTICS:

- ***Designed accordingto EN 54-16 standards applicable to Voice Evacuation Systems***
- ***Can be used in every Public Address system***
- ***Destined for Ambient System PA & VE systems: ambientONE, MULTIVES***

Amplifiers

EN 54-16

ABT-PA8080B / 8160B / 2650B

ABT-PA8080B

8x 80 Watt class-D power amplifier.

Can be bridge into:

1x 160 W + 6x 80 W; 2x 160 W + 4x 80 W; 3x 160 W + 2x 80 W or 4x 160 W

ABT-PA8160B

8x 160 Watt class-D power amplifier.

Can be bridge into:

1x 320 W + 6x 160 W; 2x 320 W + 4x 160 W; 3x 320 W + 2x 160 W or 4x 320 W

ABT-PA2650B

2x 650 Watt class-D power amplifier.

Can be bridge into: *1 x 1300 W*

ABT-PAXXXXB casings: are 2U high, 19-inch rack mountable.

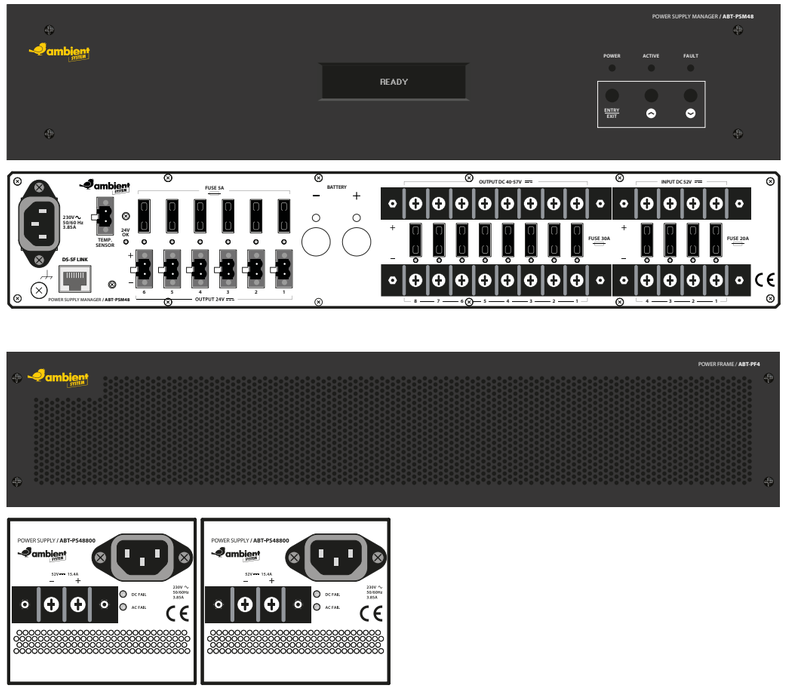
AMPLIFIERS CHARACTERISTICS:

- ***Quiescent curent in sleep mode: 30 mA (1000W)***
- ***Front panel indicators include:***
  - ***General status:*** *Mains, Battery and General health*
  - ***Detailed status:*** *Signal, Clip and Ready (Ready = out of sleep mode)*
- ***100 / 70 / 50 Volt available via terminal blocks at the rear***
- ***Output channels can be linked into:***
  - ***ABT-PA8080B, ABT-PA8160B:*** *4 x 160 W or 4 x 320 W by daisy-chaining 50 V tapping (input on parallel)*
  - ***ABT-PA2650B:*** *1 x 1300 W by daisy-chaining 50 V tapping (input on parallel)*
- ***ABT-PAXXXXB series combines with the ABT-PSM48 Power Supply Manager (charger and back-up supply)***
- ***At the rear of the ABT-PAXXXXB you will find:***
  - ***Mains switch with fuse***
  - ***Individual level adjusters***
  - ***General fault contact (Dry contact)***
  - ***Commercial use disabled contact***
  - ***Lamp test input contact***

Power supply

EN 54-4 | EN 12101-10

Power manager ABT-PSM48 / Power frame PS48800



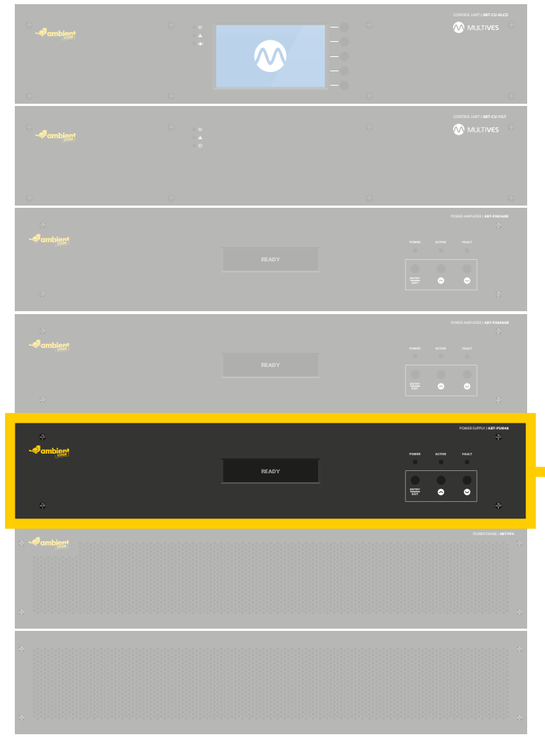
POWER SUPPLY CHARACTERISTICS:

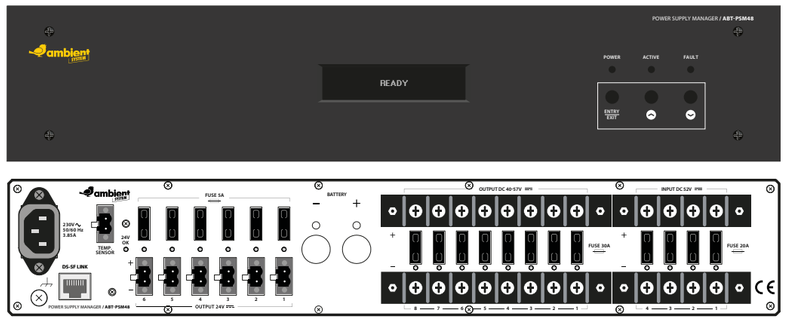
- ***Designed according to: EN 54-4 standard applicable to Voice Evacuation SystemEN 12101-10 standard applicable to Smoke and Heat Control System***
- ***ABT-PSM48 – destined for Ambient System PA&VE systems: ambientONE, MULTIVES***
- ***ABT-PSM24 and ABT-PSM48 – can be used in every 24 V or 48 V PA & VE and other systems***

Power supply

EN 54-4 | **EN 12101-10**

Power manager ABT-PSM48





ABT-PSM48 CHARACTERISTICS:

- *Maximum configuration: 1x ABT-PSM48: power supply distributor; 4x ABT-PS48800: power supply modules*
- *AC power supply: 230 V AC +10% -15%; 50/60Hz*
- *Maximum power consumption: 885 W*
- *Efficiency at rated power: > 90%*
- *DC inputs: 4; bolted terminals; dedicated power supply unit (ABT-Z800A)*
- *DC input protection: 4x 20 A 80 V DC*
- *DC outputs: 8 x 48 V; terminals; each output: 40…57,6 V DC ; max. 30 A*
- *Total: 60 A max. (at 40 V DC); 2.4 kW; 6x 24 V;*
- *Phoenix 2 pin-type couplings; 5.08 mm raster;*
- *each output: max. 5A; total 6 A*
- *Summary maximum DC output load (24 V and 52V): 2,400 W; I max a = 60 A at 40 V; 60 A for 40 V; power: 2,400 W; 6A for 24V, power 150 W*
- *Battery (type): 4 pcs., VRLA 12 V 42-200Ah; max. 8mΩ*
- *Charging current: max. 14 A*
- *Charging voltage: 54.6 V +/-0.6 V (at 25 OC)*
- *Maximum resistance of wiring and fuses: 10 mΩ*

Power supply

EN 54-16

Power supply PS48800 / Power frame PS4

ABT-PS48800
CHARACTERISTICS:

- *AC power supply: 230 V AC +10% -15%, 50/60 Hz, 3.85 A*
- *Wire with IEC 60320 C13 3x 0,75mm² coupling (supplied with the unit)*
- *Maximum power consumption: 885 W*
- *Efficiency at rated power: > 90%*
- *AC input protection: T6.3A/250 V 5x20 mm slow-blow fuse (accessed when the casing is open)*
- *Protection from electric shock: Class I (EN 60065)*
- *DC output: 4 DEGSON bolted terminal; 13 mm raster; 52 V DC; max. 15.4 A*

System configurations

MULTIVES software

***MV SELECTOR** is an essential tool for MULTIVES system configuration via PC. MV SELECTOR allows to select and match Public Address & Voice Evacuation MULTIVES Systems with a great number of similar or different devices to be configured, supervised and controlled centrally from a single user interface.*

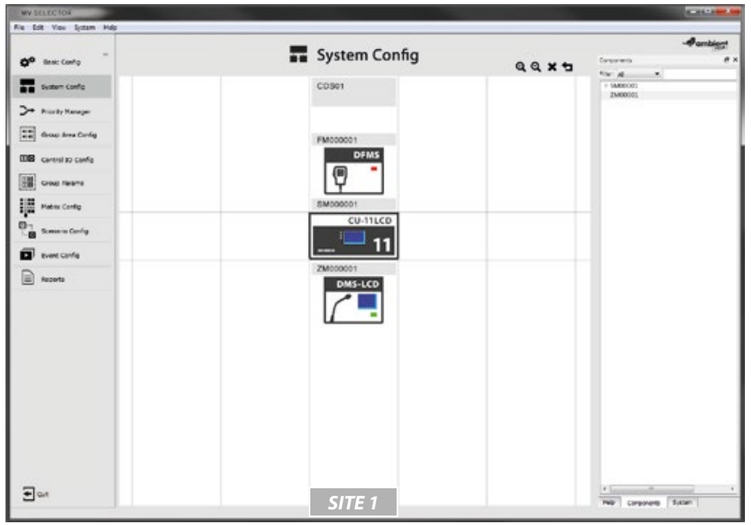
MV SELECTOR supports all IP-based MULTIVES devices offering control and configuration for control units (ABT-CU-8LCD, ABT-CU-8, ABT-CU-11LT) and microphones (ABT-DFMS FIREMAN MICROPHONE, ABT-DMS-LCD ZONE MICROPHONE WITH LCD, ABT-DMS ZONE MICROPHONE).

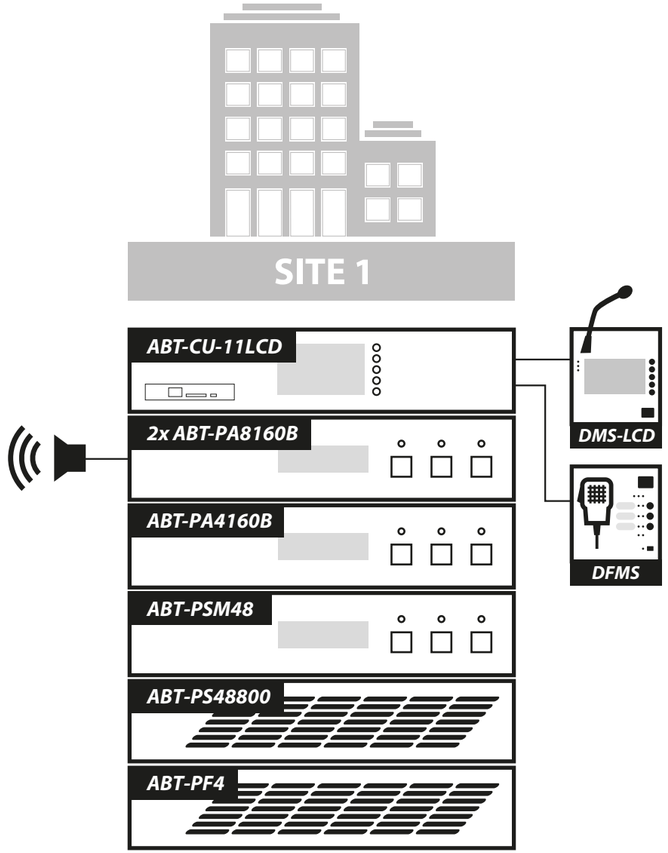
At the same time MV SELECTOR is ready for future expansion in conjunction with the family of Ambient System amplifiers (ABT-PA8080, ABT-PA8160B, ABT-PA2650B) and Power Supply Equipment (ABT-PSM48 with PS48800 and ABT-PSM24 with PS24500). It will offer configuration, control, logs and reports for all the devices working in the system.

System example 1 / Hotel

Exemplary configurations of the small MULTIVES system:

- / *1 building / Hotel*
- / *32 – loudspeaker lines(16 AB)*
- / *8 audio channels*

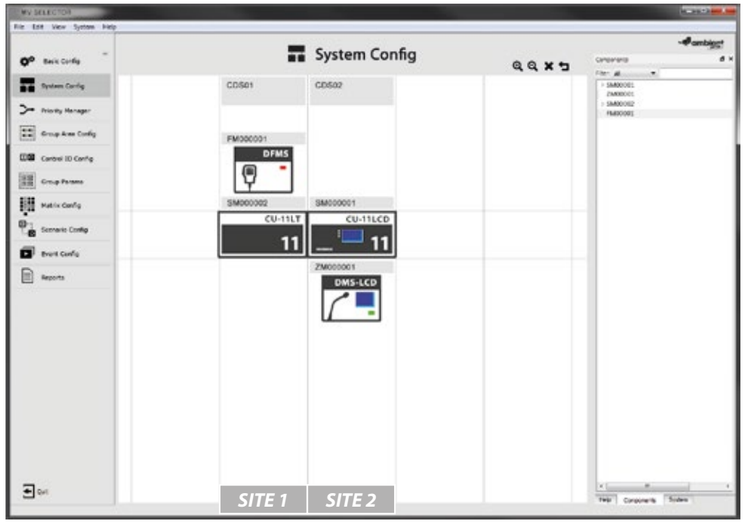


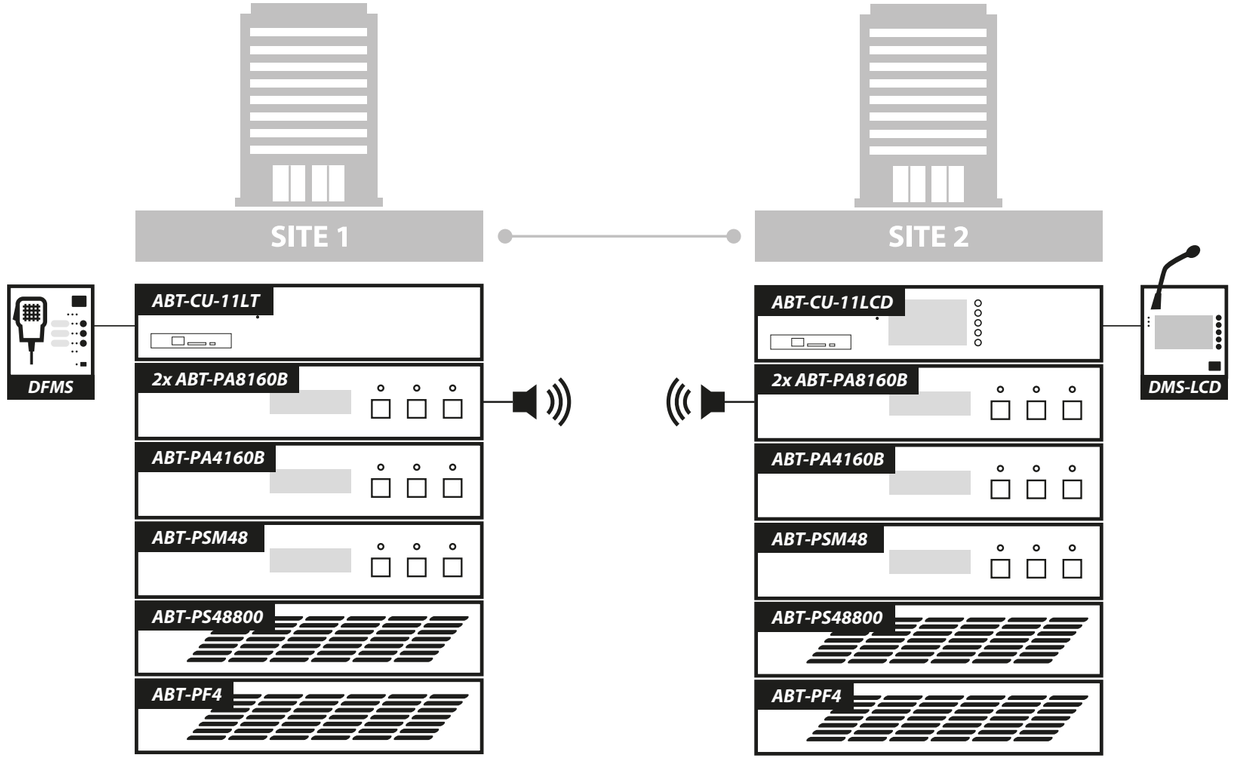


System example 2 / Office Center

Exemplary configurations of the medium MULTIVES system:

- / *2 buildings / Office Center*
- / *64 – loudspeaker lines (32 AB)*
- / *16 audio channels*

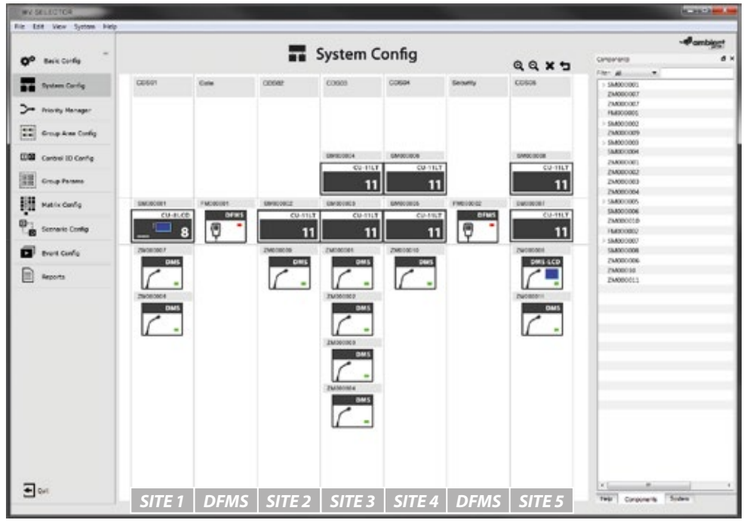


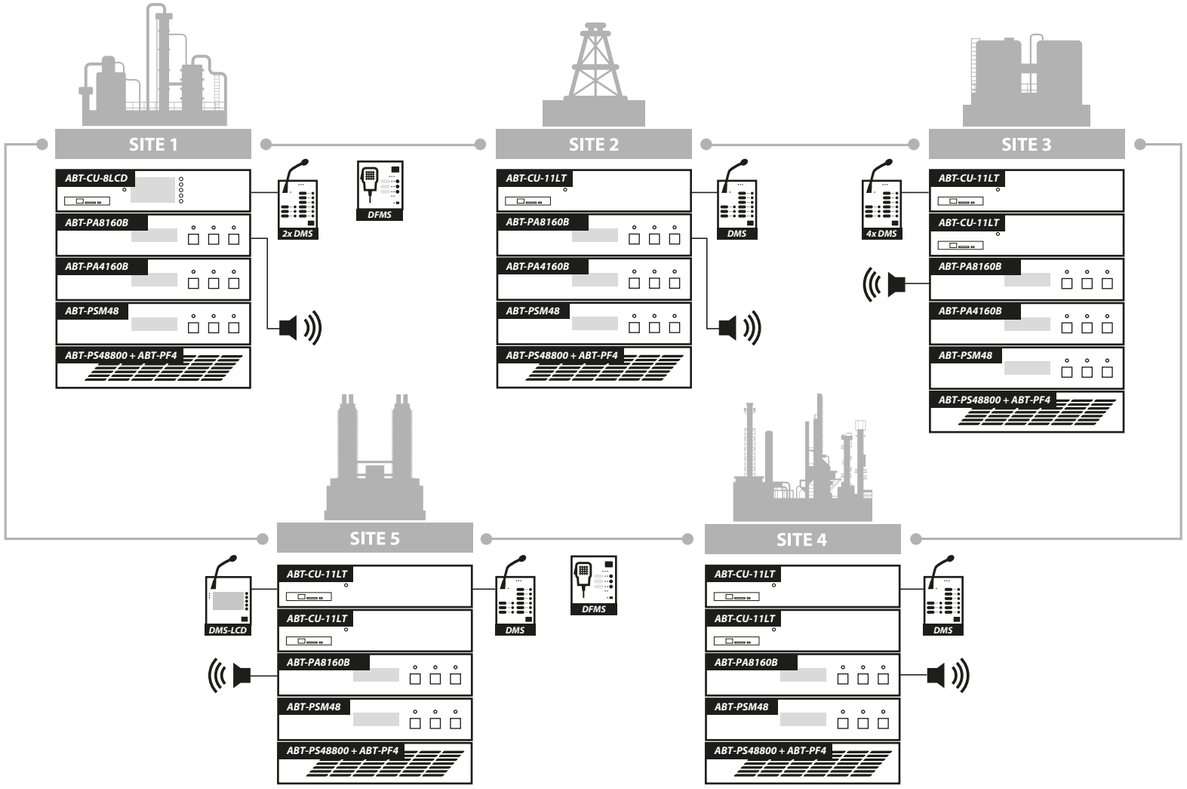


System example 3 / Oil Raffinery

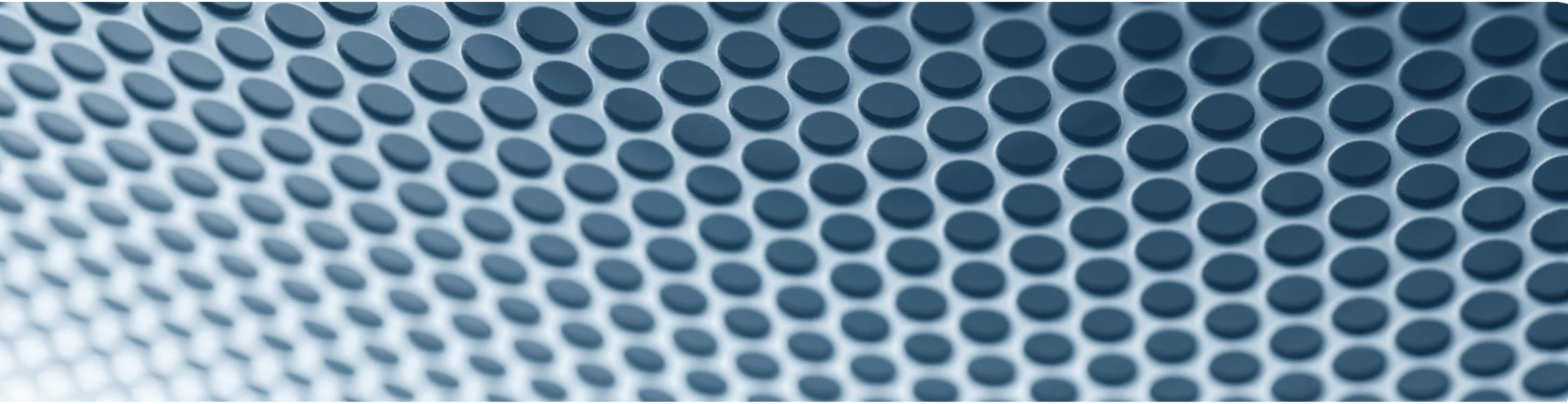
Exemplary configurations of the big MULTIVES system:

- / *5 buildings / Oil Raffinery*
- / *292 –loudspeaker lines (146 AB)*
- / *28 audio channels*





Loudspeakers



Line Array Loudspeakers Columns

EN 54-24

ABT-LA30 / LA60

	ABT-LA30	ABT-LA60
Electrical specifications		
Maximum power, W	48	96
Rated power, W	30	60
Tappings 100 V line, W	30 / 15 / 7,5 / 3,75	60 / 30 / 15 / 7,5
Transformer Impedance, Ω 100V	333,3 / 666,6 / 1333,3 / 2631,5	166,6 / 333,3 / 666,6 / 1333,3
Low impedance, Ω	12	6
Effective Frequency Range, Hz	141 – 20 000	136 – 20 000
Sensitivity @ 4m, 1 W, dB	80	81
SPL @ 4m, Rated power, dB	95	99
SPL @ 1m, 1 W, dB, Test Signal Bandwidth 300 Hz - 6 kHz	92	96
SPL @ 1m, Rated power, db, Test Signal Bandwidth 300 Hz - 6 kHz	107	114
Horizontal coverage angle 1 kHz / 4 kHz, [°]	220 / 110	230 / 110
Vertical coverage angle 1 kHz / 4 kHz, [°]	70 / 18	70 / 8

EN 54-24

Surface-mounted Loudspeaker

MCR-SWSM6

	MCR-SWSM6
Electrical specifications	
Rated power, W	6
Tappings 100 V line, W	6 / 3 / 1,5 / 0,75
Transformer Impedance, Ω 100 V	1667 / 3333 / 6667 / 13333
Driver impedance, Ω	8
Effective Frequency Range, Hz	150 – 18000
Sensitivity @ 4m, 1 W, dB	77
SPL @ 4m, Rated power, dB	85
SPL @ 1m, 1W, dB, Test Signal Bandwidth 300 Hz - 6 kHz	93
SPL @ 1m, Rated power, dB, Test Signal Bandwidth 300 Hz - 6 kHz	101
Dispersion at 1 kHz / 4 kHz, [°]	180 / 60

Sound Projectors

MCR-SMSP20

	MCR-SMSP20
Electrical specifications	
Rated power, W	20
Tappings 100 V line, W	20 / 10 / 5 / 2,5
Transformer Impedance, Ω 100 V	500 / 1000 / 2000 / 4000
Driver impedance, Ω	8
Effective Frequency Range, Hz	150 – 20000
Sensitivity @ 4m, 1 W, dB	78
SPL @ 4m, Rated power, dB	91
SPL @ 1m, 1W, dB, Test Signal Bandwidth 300 Hz - 6 kHz	92
SPL @ 1m, Rated power, dB, Test Signal Bandwidth 300 Hz - 6 kHz	105
Dispersion at 1 kHz / 4 kHz, [°]	230 / 65

EN 54-24

Horn-type Loudspeakers

ABT-T1510 / 2215 / 2430

	ABT-T1510	ABT-T2215	ABT-T2430
Electrical specifications			
Rated power, W	10	15	30
Tappings 100 V line, W	10 / 5 / 2,5 / 1,25	15 / 7,5 / 3,75 / 1,87	30 / 15 / 7,5 / 3,75
Transformer Impedance, Ω 100 V	1000 / 2000 / 4000 / 8000	667 / 1330 / 2670 / 5330	333 / 666 / 1330 / 2660
Driver impedance, Ω	8	8	8
Effective Frequency Range, Hz	340 – 9000	460 – 9000	400 – 7500
Sensitivity @ 4m, 1 W, dB	86	87	88
SPL @ 4m, Rated power, dB	97	99	104
SPL @ 1m, 1 W, dB, Test Signal Bandwidth 300 Hz - 6 kHz	103	104	105
SPL @ 1m, Rated power, dB, Test Signal Bandwidth 300 Hz - 6 kHz	113	116	120
Dispersion at 1 kHz / 4 kHz, [°]	158 / 60	148 / 42	144 / 40

EN 54-24

Ceiling-mounted Loudspeakers

ABT-S106 / S136 // ABT-S2010 / S2710

	ABT-S106	ABT-S136	ABT-S2010	ABT-S2710
Electrical specifications				
Rated power, W	6	6	10	10
Tappings 100 V line, W	6 / 3 / 1,5 / 0,75	6 / 3 / 1,5 / 0,75	10 / 5 / 2,5 / 1,25	10 / 5 / 2,5 / 1,25
Transformer Impedance, Ω 100 V	1667 / 3333 / 6667 / 13333	1667 / 3333 / 6667 / 13333	1000 / 2000 / 4000 / 8000	1000 / 2000 / 4000 / 8000
Driver impedance, Ω	8	8	8	8
Effective Frequency Range, Hz	100 – 20000	60 – 20000	150 – 20000	100 – 20000
Sensitivity @ 4m, 1 W, dB	65	68	77	78
SPL @ 4m, Rated power, dB	73	74	87	88
SPL @ 1m, 1 W, dB, Test Signal Bandwidth 300 Hz - 6 kHz	80	82	94	95
SPL @ 1m, Rated power, dB, Test Signal Bandwidth 300 Hz - 6 kHz	88	90	104	105
Dispersion at 1 kHz / 4 kHz, [°]	180 / 113	180 / 80	170 / 55	150 / 55

EN 54-24

Ceiling-mounted AB Loudspeaker

ABT-S276/AB

	ABT-S276/AB
Electrical specifications	
Number of transducers	2
Rated power, W	2x 6
Tappings, W	2x 6 / 3 / 1,5 / 0,75
Transformer Impedance @100V, Ω	2x 1667 / 3333 / 6666 / 13333
Driver impedance, Ω	8
Effective Frequency Range, Hz	100 – 20000
Sensitivity, dB	82
SPL@1m (1W/1m), dB	94
SPL@1m, max power, dB	101
SPL@4m, rated power, dB	90
Dispersion at 1 kHz / 4 kHz, [°]	180 / 40

EN 54-24

Wall-mounted Loudspeaker (single/AB)

ABT-W6 / ABT- W6/AB

	ABT-W6	ABT-W6/AB
Electrical specifications		
Rated power, W	6	6
Tappings 100 V line, W	6 / 3 / 1,5 / 0,75	6 / 3 / 1,5 / 0,75
Transformer Impedance, Ω 100V	1667 / 3333 / 6667 / 13333	1667 / 3333 / 6667 / 13333
Driver impedance, Ω	8	8
Effective frequency range, Hz	120 – 20 000	150 – 20 000
Sensitivity @4 m, 1 W, dB	79	82
SPL @4 m, Rated power, dB	87	90
SPL @1 m, 1 W, dB, Test signal bandwith 300 Hz – 6 kHz	94	97
SPL @ 1 m, Rated power, dB, Test signal bandwith 300 Hz – 6 kHz	101	104
Dispersion at 1 kHz / 4 kHz, [°]	150 / 60	130 / 30

EN 54-24

Long Distance Horn

ABT-LDH300-94

	ABT-LDH300-94
Electrical specifications	
Number of transducers	2
Rated power, W	350
Tappings, W	300
Transformer Impedance @100V, Ω	33,3
Driver impedance, Ω	8
Effective Frequency Range, Hz	70 – 18 000
Sensitivity, dB	100
SPL@1m, max power, dB	129
Dispersion at 1 kHz / 4 kHz, [°]	90 / 45


ambient
SYSTEM
Thanks for your attention!
www.ambientsystem.eu