The smart approach to better understanding

Unified Communication through Public Address /
Voice Alarm and Intercom solution.

smartVES   miniVES   midiVES

ambient SYSTEM

Stay connected. Stay Safe

Integrated PAVA and SIP systems

Modern facilities require an integrated approach into their security and communication systems.

Ambient System presents an integrated solution that combines the functionality of an EN 54 certified Voice Alarm System, fully digital SIP Intercom & PBX system, as well as a visualization and management platform, which shall allow to control over the above – and other system – in one unified fully configurable Graphic User Interface (GUI).
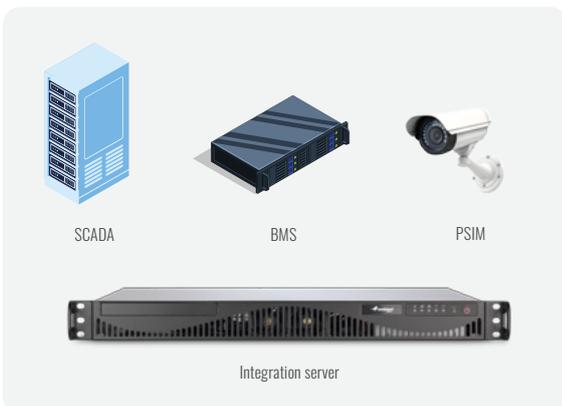
BUILDING C

Paging microphone

midiVES

miniVES

BUILDING D

Paging microphone

Firefighter's microphone

Zone microphone

smartVES

BUILDING A

midiVES

BUILDING B

miniVES

BACKBONE LAN NETWORK

Remote control system visualization

SCADA

BMS

PSIM

Integration server

Firefighter's microphone

IP-PBX

SIP paging station

System Gateway

The challenges - Integrated security

One-way Communication

✓ Automated emergency broadcasts controlled by the FIRE ALARM SYSTEM and BUILDING MANAGEMENT SYSTEM, scheduled daily broadcasts, ad-hoc messages spoken by the facility staff.

✓ EN54 compliant Voice Alarm offers high reliability by implementation of built-in redundancies and self-monitoring functions ensuring the system works at all times.

Two-way Communication

✓ Intercoms located throughout the facility allow the staff to communicate and other facility users to quickly receive information or call for aid.

✓ Seamless operation - facility staff is equipped with desktop SIP paging station, used in dual role of paging microphone and intercom.

PAVA Solutions

Ambient System offers a portfolio of 3 types of EN 54 certified PAVA systems: **smartVES, midiVES** and **miniVES.**

UNIFIED MICROPHONE ECOSYSTEM

One shared family of TCP/IP based remote paging microphone, including a Firefighter's Microphone.

SEAMLESS AUDIO INTEGRATION

All our systems share a single software platform, ensuring full audio and control compatibility for building extensive, integrated audio networks.

SINGLE SOFTWARE SOLUTION

Our ecosystem utilizes a single, unified software platform designed for real-time monitoring of every system component.

smartVES system

smartVES is a fully digital, IP based, Public Address & Voice Alarm (PAVA) system designed to improve intelligibility.

smartVES is a digital system representing the next stage in the development of Ambient System's Voice Alarm Solutions. It ensures full backward compatibility while expanding capabilities with advanced DSP algorithms and an AUDIO BUS feature that enables amplifier sharing. Designed for the most acoustically demanding environments, smartVES meets the highest standards of performance, reliability and safety.

» Designed to work in large networks – scaling up to 375 IP devices and allowing to meet the requirements of even the biggest installations

» Fully compliant and EN54-16/4 certified, ensuring high performance and reliability under emergency situations

» Modular Architecture allowing to optimize system costs

» Can be configured up to No Single Point of Failure

» DSP with implemented: 3-band parametric EQ on all inputs; 8-band parametric EQ, delay, audio limiter and feedback eliminator on each of the audio outputs.

» External audio inputs in all control units and zone microphones

» Up to 12 secured amplifiers fully supported

» Cost-efficient solution allows for up to 4 messages to be played simultaneously

ADAPTIVE AUDIO CONTROL

Automatic, multi-point process of adjusting the sound of the loudspeakers and their level to the changing conditions in listening area.

SPEECH ENHANCEMENT

A unique algorithm that changes the pace and length of speech in real time maximizing the intelligibility of the transmitted messages.

SMART VOICE PLAYBACK

Playback of voice messages at optimal volume level, with maximum achievable speech intelligibility under given conditions.

SMART-CU11-LCD/LT / SMARTVES CONTROL UNITS

SMART-CU-11LT Control Unit (CU) is a matrix mixer of input signals which it routes to 4 100 V internal audio buses, a 45-channel digital system buses or directly to audio outputs in a unit. SMART-CU-11LT is designed to work for small PA and VE systems or as an extension unit in more complex systems.

» Compliance with EN 54-16

» Network-based system allowing configuration, diagnostics and management via Ethernet

» Managing up to 254 devices on the network

SMART-DU1604 / ADAPTIVE SOUND PROCESSOR

The SMART-DU1604 is a central processing unit, simultaneously processing up to 16 audio streams corresponding to 16 loudspeaker zones and up to 4 independent streams from system microphones. Using digital audio processing tools, the SMART-DU1604 dynamically maximises the speech intelligibility parameter.

» Certified system EN 54-16:2011 No. 1438-CPR-0948

» 2 inputs and 2 logic outputs programmable on board

» 2x 1Gbit ports available for system expansion

SMART-PA / SMARTVES POWER AMPLIFIERS

The Amplifiers are designed for perfect integration into the Ambient System solutions. Thanks to their flexibility, they can also be used for any other Public Address and Voice Evacuation applications. These amplifiers have been developed to meet the specific requirements of the EN 54-16 standard for safety installations.

» 100 / 50 Volt available via terminal blocks at the rear

» SMART-PA2650/E: 1 × 1300 W by daisy-chaining 50 V tapping (input on parallel)

» SMART-PAXXXX/E series combines with the SMART-PSM48/E Power Supply Manager (charger and back-up supply)

SMART-PSM48 / SMARTVES POWER SUPPLY EQUIPMENT

SMART-PSM48/E Power Supply Manager is designed for distribution of DC Power Supply from Power Supply Units (PSU) and a back-up battery. The unit controls battery charging and distributes power supply to all Voice Evacuation System (VES) equipment at max. 60 A. When the system uses battery back-up, the power supplied is 3.2 kW (48 V).

» Modular power supply built around the SMART-PSM48 power manager

» Each SMART-PSM48 allows to connect up to 4x smart-PS48800 PSU units

» Allows for N+1 PSU redundancy

All in one – independent rackmount EN 54-4 /16 PAVA unit

miniVES and midiVES are scalable Public Address & Voice Alarm units suitable for multi-purpose architectures

Devices from miniVES and midiVES series are voice alarm compact control units containing all components within one compact housing, which meet all the requirements of EN 54-16 and EN 54-4 (certificate of constancy of performance 1438-CPR-0527).

Designed to work in large networks – scaling up to 250 IP devices and allowing to meet the requirements of even the biggest installations.

Can be configured to No Single Point of Failure.

Fully compliant and EN54-16/4 certified, ensuring high performance and reliability under emergency situations.

DSP with implemented: 3-band parametric EQ on all inputs; 8-band parametric EQ, delay, audio limiter and feedback eliminator on each of the audio outputs.

Equipped with unique proprietary DSP algorithms ensuring real-time speech intelligibility optimization.

Easy to use configuration and management software.

Specification	miniVES 2001	miniVES 4001	miniVES 4002	miniVES 8002	midiVES 8003	midiVES 2x8003
No of AB zones	2	4	4	8	8	16
No of speaker lines	4	8	8	16	16	32
No of logical inputs			7+2*			14
No of relay outputs			3+2*			6+2*
Total audio load of the system	320 W	640 W	640 W	640 W	1500 W	3000 W
Backup amplifier				Yes		
No of messages	1		2		3	6
Audio inputs			1			2
Audio outputs			1			0

Units with network cards with 2xSFP modules and PoE.

Paging microphones for PAVA systems

The following TCP/IP paging and analogue microphones are compatible with all of the Ambient System EN54 certified PAVA solutions.

The product range consists of ABT-DMS and ABT-DMS-LCD paging microphone, the ABT-DFMS Fireman's microphone and ABT-EKB-20M expansion keyboard compatible with all these units.

ABT-DMS-LCD
ZONE MICROPHONE WITH LCD

- » 4.5" LCD touch screen for fast and clear matricing and system management
- » Ability to select zones and messages to be played (pre-recorded or 'live') and other audio input
- » Monitored connection of the unit to the system

ABT-DFMS
FIREFIGHTER MICROPHONE

- » Monitored microphone and connection of the microphone module to the system
- » A dedicated evacuation key
- » 3 fully-programmable keys with a possibility of connecting up to five 20-key extensions

ABT-DMS
ZONE MICROPHONE

- » Monitored connection of the unit to the system
- » 9 fully-programmable keys with a possibility of connecting up to five 20-key extensions
- » 4 non-symmetrical audio inputs, (1/8") stereo jack connector

ABT-EKB-20M
MICROPHONE KEYBOARD EXTENSION

- » Each extension attached to a fireman microphone or a zone microphone offers additional 20 function keys which can be programmed as required. POE or external feeder based power supply. Black-box function – recording all announcements played during an alarm

ABT-M04N
MICROPHONE STATION

- » The ABT-M04N is a 4 button analogue microphone with push to talk and LED indicating the ready-to-speak status

Additional devices

Increase the functionality of PAVA systems.

WMC / WALL-MOUNTED CONTROLLER

» 4,3" LCD touch screen for fast and clear matricing and volume change

» Non-symmetrical audio input, (1/8") stereo jack connector

» Stereo jack sockets for Headset / Audio out

» Power supply via PoE or locally 48 VDC

For intuitive and easier operation, WMC has been equipped with a touch-screen display. Navigation in the menu and change of settings is possible by means of both control buttons located next to LCD display, and touch-screen display. Wall mounted controller is equipped with Bluetooth audio module which provides wireless audio connection for up to 40 meters between WMC and other Bluetooth source like mobile phone.

WMC has 2 local audio inputs on board and 1 audio output which allows for further system extension. Communication with control units takes place via Ethernet 10/100BASE -TX, 1 LAN port. The WMC controller, via a touchscreen colour display, allows convenient and quick selection of the audio source, volume control of audio inputs and sending to selected zones in the system.

ABT-DFMS-A PP / PLATFORM ANNOUNCEMENT POINT

» Built-in 2 contact inputs and 2 relay outputs

» POE or external power supply

» Black-box function – recording all announcements played back during an alarm

» IP 65 housing

» Both copper and fiber optic TCP/IP interface

The ABT-DFMS-A PP is a monitored emergency microphone unit designed to operate a platform announcement point. The device connects to the core paging system via TCP/IP network, using either copper or redundant fibre optic interface. The ABT-DFMS-A PP can be used to make live broadcasts to pre-programmed zones or zone groups. It shall also allow to trigger alarm mode and broadcast pre-recorded messages from the

systems memory. The ABT-DFMS-A PP is able to detect and report a button failure and audio path failure, including that of the microphone capsule (the unit supports acoustic surveillance of the microphone component). The ABT-DFMS-A PP is equipped with an intercom function, allowing to communicate with other emergency microphones in the system.

SPEAKERS

PAVA

FAS

PAVA

INTERCOM

Yellow – Security System Visualization Software

A very important aspect for advanced life-safety and security systems is how the system shall interact with its Operator.

YELLOW is a software for system visualization, management and third party integration. It allows to constantly monitor multiple connected PAVA system and present their status information via a GUI and a shared operation log. YELLOW can be used as an integration server for third party system, allowing to control the PAVA via SNMPv2 protocol.

» Activation of virtual and local control inputs in smartVES / miniVES

» Visualisation of statuses Virtual outputs, Zones, Group zones, System statuses

» Identification of playing sources in all visualized zones

» Activation of evacuation mode in smartVES / miniVES / midiVES systems

» The use of TCP/IP, UDP and RS232 and RS485 interfaces

» Object-oriented visualization, vector and in web browsers

» Visualization of many independent systems

» Automatic presentation of the alarm location

EN 54-24 certified Fire Alarm Loudspeakers

Fire Alarm Loudspeakers are EN 54-24 compliant solutions designed for voice evacuation and alarm systems, offering a clear and reliable communication in safety-critical environments.

ABT-LA10B/ABT-LA40B
LINE ARRAY LOUDSPEAKERS

ABT-S136
CEILING SPEAKERS

ABT-S206B
CEILING SPEAKERS

ABT-W6
WALL LOUDSPEAKERS

ABT-P20/P20P
WALL/ CEILING LOUDSPEAKERS

ABT-SW176
SOUND PROJECTORS

ABT-T1510
HORN LOUDSPEAKERS

ABT-HP240EN
HIGH POWER LOUDSPEAKERS

ABT-TNL100
TUNNEL LOUDSPEAKERS

Special application loudspeakers

Special-purpose loudspeakers designed for demanding environments, delivering high directivity, speech intelligibility, and reliable performance.

ABT-P20A
ACTIVE SOUND PROJECTOR

ABT-OMN100
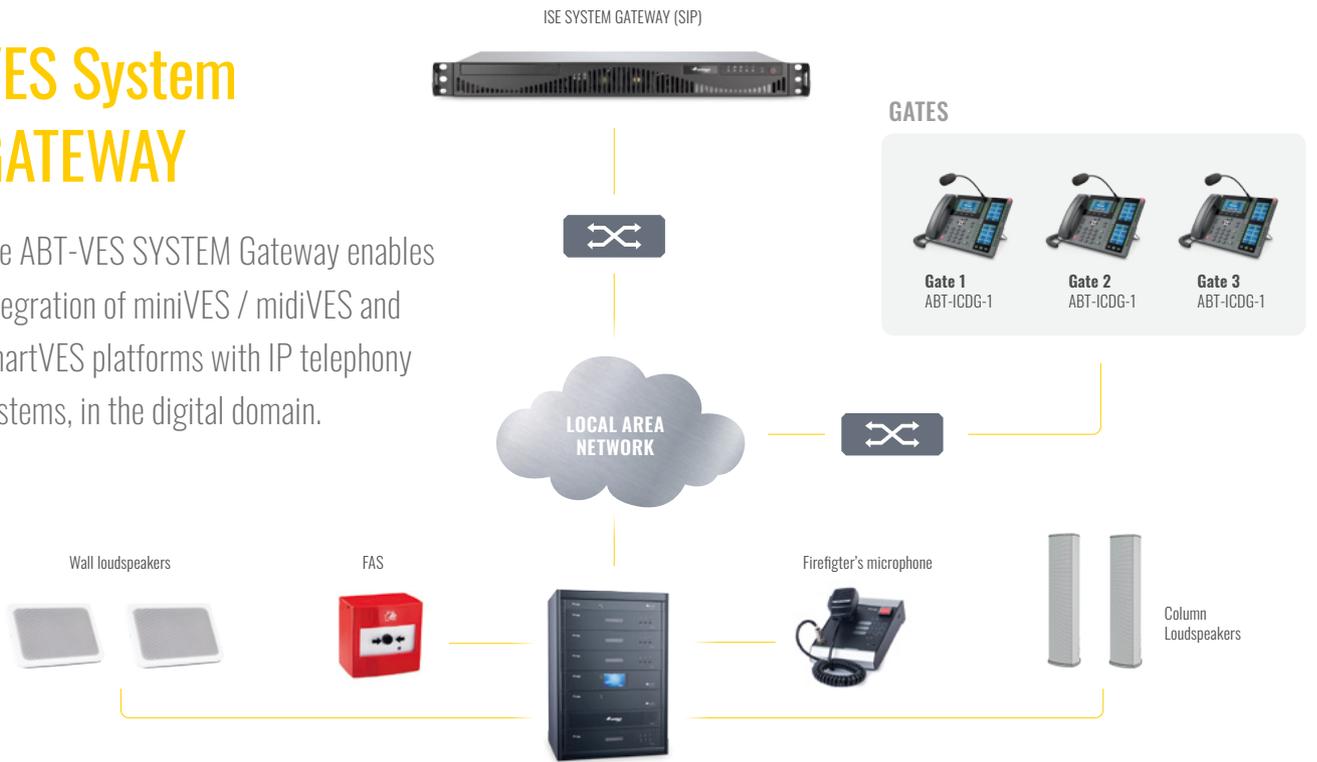OMNIDIRECTIONAL LOUDSPEAKER

ABT-TNL100-1
TUNNEL LOUDSPEAKER

ABT-BS140/ABT-BS220
ACTIVE BEAM STEERING LINE ARRAY

	Power	Net weight, kg	Enclosure material	Dimensions, mm
ABT-LA10B	10W, 100V	2	Aluminium	95 × 268 × 100
ABT-LA40B	40W, 100V	3	Aluminium	92 × 738 × 100
ABT-S136	6W, 100V	0,82	Steel	Height 113 × 134
ABT-S206B	6W, 100V	1,13	Steel	Height 115 × 199
ABT-W6	6W, 100V	1,75	Steel	260 × 180 × 80
ABT-P20/P20P	20W, 100V	2,4	Aluminium	Length 210 × 143
ABT-SW176	6W, 100V	1,2	Steel	Height 80 × 170
ABT-T1510	10W, 100V	1,75	ABS UL94V0	Length 236 × 156
ABT-HP240EN	240W, 100V	29	Glass fiber	500 × 500 × 735
ABT-TNL100	100W, 100V	34,2	Stainless steel	1714 × 1020 × 450
ABT-P20A	20W	2,1	Aluminium	Length 210 × 143 mm
ABT-BS140	140W	4,6	Aluminium	900 × 95 × 119
ABT-BS220	220W	5,8	Aluminium	1450 × 95 × 113
ABT-OMN100	100W, 100V	24	Aluminium	750 × 400
ABT-TNL100-1	10W, 100V	14,5	Stainless steel	729 × 365 × 253

VES System GATEWAY

The ABT-VES SYSTEM Gateway enables integration of miniVES / midiVES and smartVES platforms with IP telephony systems, in the digital domain.

ISE SYSTEM GATEWAY (SIP)

GATES

Gate 1
ABT-ICDG-1

Gate 2
ABT-ICDG-1

Gate 3
ABT-ICDG-1

LOCAL AREA NETWORK

Wall loudspeakers

FAS

Firefigter's microphone

Column Loudspeakers

M-CAST AUDIO

Segment 1
smartVES

Segment 2
miniVES

Segment 3
midiVES

Segment 4
midiVES

Segment 5
midiVES

Segment 6
midiVES

Control signals

This allows to call in to selected zones and triggering pre-recorded messages by any SIP compatible VoIP system. The gateway also incorporates a digital voice announcer controller via an easy-to-operate web browser interface.

» Acts as an exchange server connecting distributed PAVA systems with IP telephony via SIP Trunk

» Handles up to 8 simultaneous SIP calls with flexible routing to specific zones

» Includes functionality to record incoming calls for later review

» Features a built-in message player and scheduler for automated broadcasts

» Manageable via an intuitive, password-protected web browser interface

SIP Audio Intercoms

SIP Audio Intercoms are advanced communication devices designed to ensure safe,
reliable two-way communication in security-critical environments.

ICO EMERGENCY / IP INTERCOM

- » Intercom with emergency button / RFID reader
- » Compliance with DIN EN 50726-1 VDE 0827-1:2025-06 standard
- » Up to 3 programmable buttons
- » Vandal-resistant housing IK08/IP54
- » Acoustic monitoring of speaker-microphone path
- » DSP functions: noise reduction, echo cancellation, automatic volume control

ICO EMERGENCY S01/S02 / IP INTERCOM FOR TUNNEL APPLICATIONS

- » Wall-mounted intercom equipped with a handset
- » Up to 2 programmable buttons
- » Vandal-resistant housing IK10/IP65
- » Acoustic monitoring of speaker-microphone path
- » DSP functions: noise reduction, echo cancellation, automatic volume control
- » Integrations available via SNMP v3

ICO FRONTIER / IP INTERCOM

- » Basic intercom
- » Up to 3 programmable buttons
- » Vandal-resistant housing IK08/IP54
- » Acoustic monitoring of speaker-microphone path
- » DSP functions: noise reduction, echo cancellation, automatic volume control
- » Integrations available via SNMP v3

ICO CLEANROOM / IP INTERCOM FOR CLEANROOM APPLICATIONS

- » Intercom for clean rooms
- » Antibacterial protective coating
- » Resistance to chemical agents PZH hygiene certificate
- » Full backlit keypad OLED display
- » DSP functions: noise reduction, echo cancellation, automatic volume control
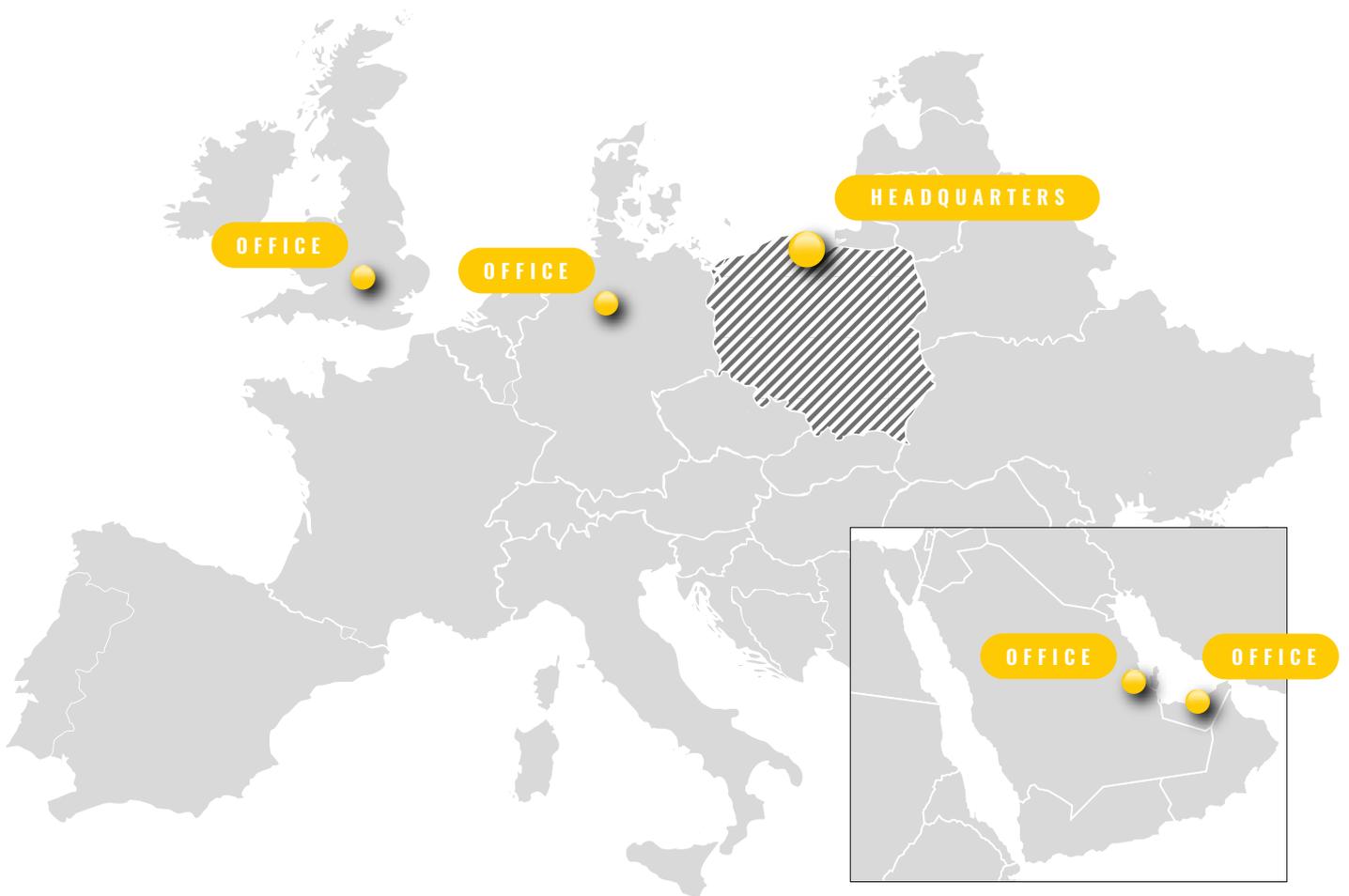- » Integrations available via SNMP v3

ICO STRONG / IP INTERCOM

- » Intercom for special applications
- » Modular design
- » Full backlit keypad
- » OLED display
- » DSP functions: noise reduction, echo cancellation, automatic volume control
- » Integrations available via SNMP v3

ABT-ICDG-1 / IP INTERCOM

- » Desktop station with handset and gooseneck microphone
- » 4.3" main display
- » H.264 video codec support
- » Two 3.5" auxiliary displays
- » Programmable buttons
- » Full functional keypad
- » Headset connection possibility
- » Built-in Bluetooth module

OFFICE

OFFICE

HEADQUARTERS

OFFICE

OFFICE

ABOUT US

Ambient System is a leading European provider of modern systems and comprehensive solutions for critical communication, serving the rapidly evolving, globally oriented security industry. The company's operations span a wide spectrum of projects - from highly complex installations in refineries, airports, stadiums, tunnels and shopping centers to mid-sized and smaller facilities such as hospitals, railway stations, hotels, office buildings, supermarkets and schools.

Ambient System delivers a complete suite of products and services, covering everything from concept and design to system implementation and maintenance. The company provides end-to-end support for clients and business partners at every stage of a project, consistently meeting the highest standards and expectations.

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We make everyday life safer

EN / 02.2026