![EDWARDS United Technologies logo]

EST VES

Integrated mini PA/VA unit

- Stand alone or TCP/IP network architecture

- All in one – independent wall mount EN 54-4/16 PA/VA unit

- Impedance speaker monitoring

- Remote management

- Up to 254 devices can be connected on the network
  (incl. fireman and zone microphones)

- Ability to connect standalone EST VES units
  via fiber optic/copper or both cables

EN 54-16

EN 54-4

Integrated mini PA/VA unit

EST VES is scalable Public Address & Voice Alarm unit suitable for multi-purpose architectures. Devices from EST VES 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 performace 1438-CPR-XXXX).

Whole concept of the system is based on the high quality audio network distribution nodes equipped either with two independent 160 W or 320 W class D amplifiers, which distribute 100 V signals to 4 or 8 speaker lines depending on the type. The system also ensures operation of a backup amplifier for the Emergency priority type of signals.

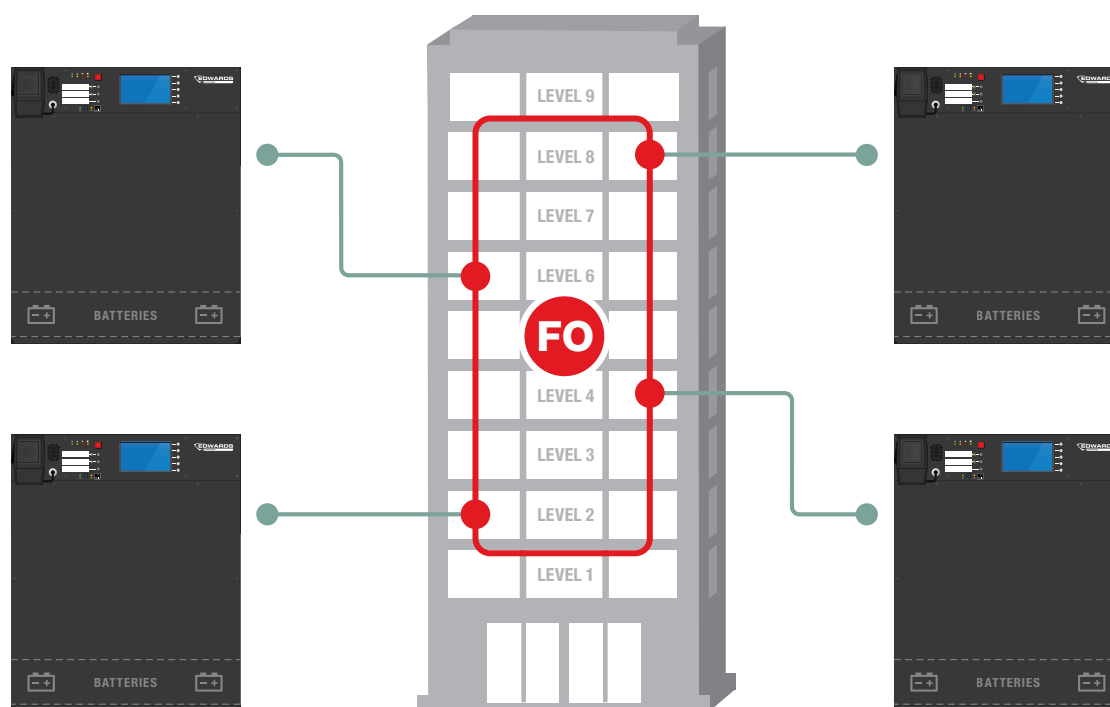EST VES is equipped with integrated backup power supply and EN 54-4 compliant charging unit.

EST VES is designed to be a Plug & Play device with all elements expected from Voice Evacuation Systems; including a built-in fire microphone, touchscreen for global control, DSP, programmable contact inputs and buttons, time scheduler, charger with battery mounting space and expandable memory size for messages – all fitted into IP30 chassis.

EST VES belongs to the family of independent EVAC systems which can be networked together and extended by desktop zone microphones or fireman microphones via TCP/IP network to provide live announcements and background music inputs. The system has been designed to be wired using CAT5 cables for paging microphones and fibre-optic redundant interlink connections between the systems.

EST VES support up to 45 high quality audio signals distributed over 254 devices in the network.

EST VES main features

- All in one – independent wall mount EN54-4/16 PAVA unit
- Stand alone or TCP/IP network architecture
- DSP audio processing on board
- Compatibility with RACK mounted modular EST ENT VES
- Professional Sound Quality
- Evacuation, paging message and background music features
- Impedance speaker monitoring
- Simple installation
- User friendly and intuitive programming software

	EST-VES-2001-L/LN*	EST-VES-4001-L/LN*	EST-VES-4002-L/LN*
No of AB zones	2	4	4
No of speaker lines	4	8	8
No of control inputs	7	7	7
No of relay outputs	3	3	3
NO of amplifiers / Power	2 / 160 W RMS	2 / 320 W RMS	2 / 320 W RMS
Redundant amplifier	Yes – 160 W RMS	Yes – 320 W RMS	Yes – 320 W RMS
No of messages played at the same time	1	1	2
Protection	Over-temperature, short circuit, overload, ground leakage		
Battery working time	30 hours + 30 minutes evacuation		
Ingress protection	IP 30		
Operating condition	-5 to + 45°C / 5% to 95% humidity with no condensation		
Gross Weight	2001 – 26 kg / 4001 – 31 kg / 4002 – 31,5 kg		
Dimensions (W x H x D)	440 mm x 525 mm x 350 mm		
Finish	Black		
Optional functions			
No of audio inputs	1 – Stereo to mono		
No of audio outputs	1 – mono line output		
Network card	2x SFP module 1 Gb/s, 1x POE 1 Gb/s, 100 Mb/s, 1x LAN 1 Gb/s, 100 Mb/s connection; RS485 port; 1xLAN/WAN 100 Mb/s connection		
Basic Network card	2x Lan 1 Gb/s, 100 Mb/s, 1x LAN/WAN 100 Mb/s connection		
GUI	4,5'' color touch screen		
DSP	Input EQ, outputs EQ, Feedback eliminator and audio limiter		
* All devices available with optional touch screen LCD (L) and network card with 2 x SFP modules and POE (N)			

Microphones

EST-M01 Microphone

The EST-M01 microphone is an affordable fully analog device. It is equipped with a built in gong generated onboard the device, accessible through the switch on the back panel. The gong as well as the microphone itself has an individual volume control knob also placed on the back panel of the device.

To operate the device press the MIC ON button, the status LED will switch to steady green light. In the event of an active built in gong, the status LED will turn green once the gong has ended. When finished transmitting the message release the MIC ON button to deactivate the gooseneck mic.

EST-M04 Microphone

The EST-M04 is a 4 button analog microphone with built in gong, push to talk and bi-color LED indicating the ready-to-speak status.

To operate the device first select the Zones by pressing designated buttons and then press MIC ON button, the status LED will switch from red (not ready for broadcast) to steady green light. In the event of an active built in gong, the status LED will turn green once the gong has ended. When finished transmitting the message release the MIC ON button to deactivate the gooseneck mic.

	EST-M01	EST-M04
Operating voltage	20-57 VDC	
Efficiency	10 mV/a	
Output level	775 mV	
Maximum distance from amplifier	250 m	
Recommended cable type	UTP	
Connector Type	8P8C (RJ45)	
Dimensions without packaging (not more than)	150 x 60 x 165 mm	
Net weight (not more than)	1,2 kg	

Examples of implementations

STORE / PA system
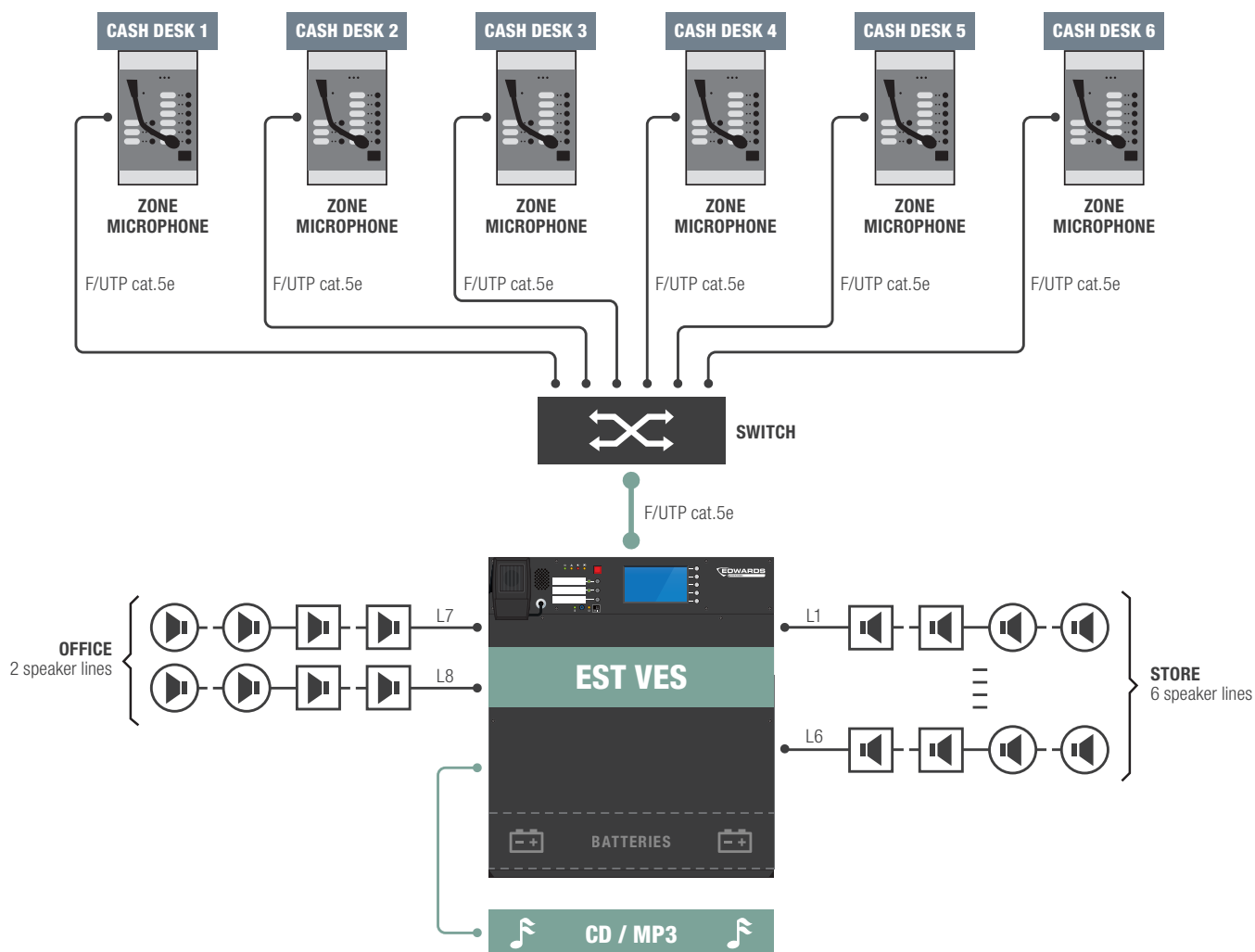
PA system within the store
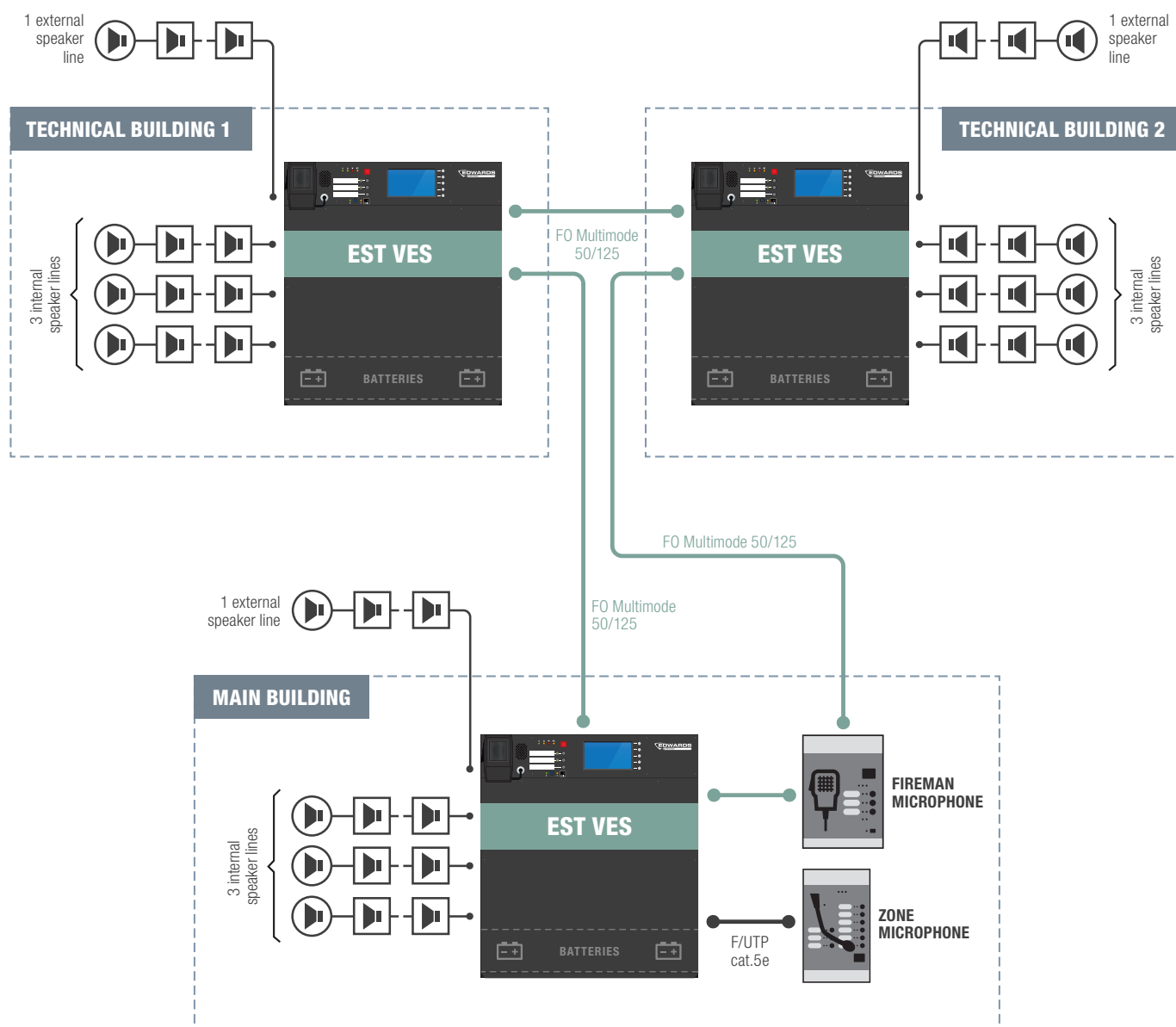
- **Zone microphone in the office:**
    - It acts as the PA control panel allowing to select zones, switch on/off specific sound sources and regulate the sound volume;
    - Ethernet protocols enable seamless communication between zone/fireman microphones and the control units via standard switches connecting mic cables to EST VES control unit;
    - In-built audio setup can be used to connect external sound sources to broadcast marketing announcements or to provide background music in the venue.

- **Zone microphone at the till:**
    - Public announcements;
    - Fully programmable buttons can be easily activated to broadcast specific announcements e.g. previously recorded public information regarding opening of tills or staff announcements.

INDUSTRIAL FACILITY – networked Voice Evacuation System

- EST VES control unit's network cards allow to join several industrial buildings into one integrated system.

- Use of fibre-optic loops between EST VES central units guarantees that in the event of a single fault/damage, the system will continue to function properly.

- Microphones located in the main building enable broadcasting of live announcements and/or pre-recorded automatic messages to selected zones in all buildings.

- Fireman microphone can perform all key functions of a EST VES control unit e.g. activate alarm messages or public announcements in selected or all zones and to broadcast live voice messages.

- Once the fire warning is triggered (automatically via the fire alarm system or manually using fireman microphones), the system starts broadcasting alarm messages recorded on each EST VES control unit. Loss of connectivity in one part of the networked system (including damage to messaging memory of one control unit) does not impact on the system's ability to broadcast warning messages – the devices work independently thus ensuring continuous alarm warning functions.

- Loudspeakers lines in open spaces are connected to central units via certified power surge protectors thus ensuring safety of devices during electric storms or lightning.

TRAIN / TUBE / BUS STATIONS – using Voice Evacuation System
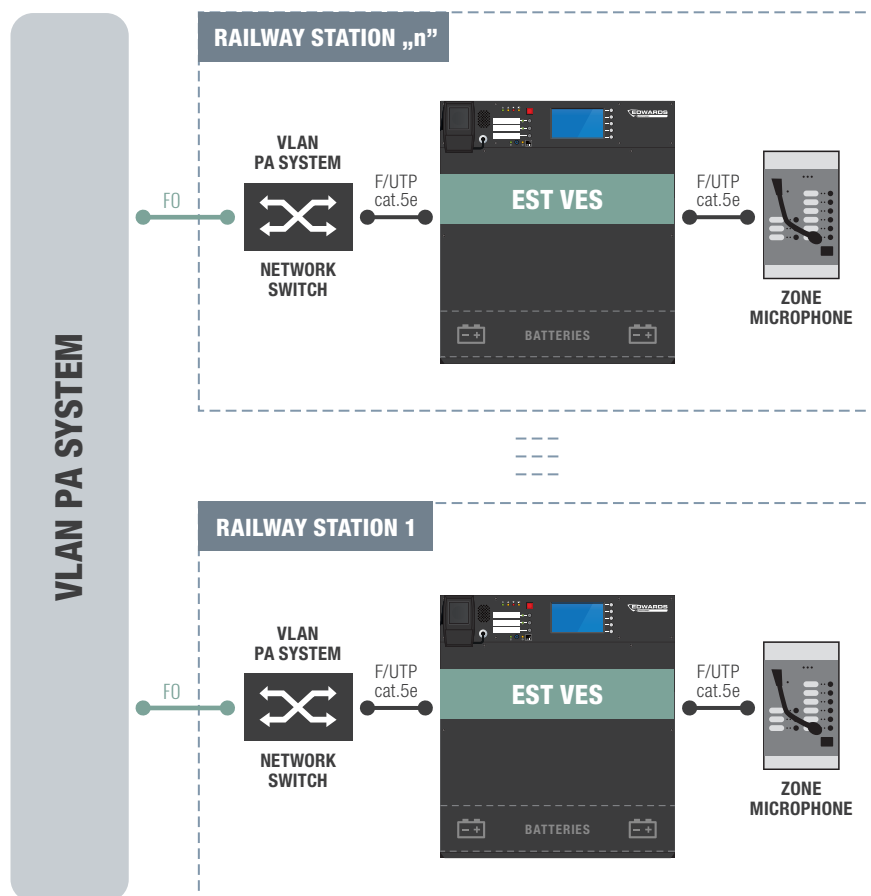
- EST VES control unit's network cards allow to join several stations into one integrated system via Ethernet and VLAN protocols.

- Zone microphones located at each station enable broadcasting of live announcements and/or pre-recorded automatic messages to selected zone(s) at the station as well as to all zones in the whole system. Information can be broadcasted by staff to all or selected platforms to advise passengers of changes in the timetable or to warn them of an emergency.

- In-built audio inputs in each central unit and microphones allow to connect external sound sources and to transmit information controlled by the external authority.

- In-built buffering function enables recording of lower priority information to be transmitted once the priority zones are freed up.

Expansion of EST VES system – connection with EST ENT VES

- Connecting EST VES system to EST ENT VES system, designed to work with medium and large structures, can provide full networking capabilities. A networked solution of EST ENT VES and EST VES can be then installed at large train stations, airports and other complex structures while providing tangible cost efficiencies.

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