# VZX-8-US 8-Zone audio processor, US

## V series

PRELIMINARY

- 20 processed input sources including 8 High-Quality Mic/Line inputs
- Full Matrix DSP: input EQ, compression, AGC, ANC, Noise Gate, Dynacord FX, room EQ, speaker EQs with FIR and more
- Virtual Mixer with Automixer (AMM) and FX available for live mixing on any zone
- 32 GB MicroSD card included for storing music, messages and configuration files
- Compatible with SONICUE speaker databases for Electro-Voice Loudspeakers and more: maximize the performance of your system, instantly

VZX-8 is the core of a powerful zone audio platform with advanced DSP functionality designed to meet the diverse needs of commercial fixed installations. It reliably handles music, paging, messaging and control with maximum ease and flexibility. VZX-8 is ideal for a variety of applications, such as:

- Bars / Restaurants
- Hospitality Venues
- Retail Outlets
- Fitness Centers
- Houses of Worship
- Education
- Corporate Spaces
- Warehouse

VZX-8 allows system designers to get professional results while providing venue operators with easy, intuitive controls for volume, source, and zone management. It features extensive I/O, flexible control and advanced DSP functionality including a virtual mixer with AMM.
The intuitive VZX Web App enables fast system configuration, setup, and control. Get online instantly using Included URLs and ZeroConf technology; no downloads or apps needed! Access on any device with a browser - a familiar and intuitive workflow eliminates the need for lengthy trainings and certifications.

**Additional features**

- Flexible Control: 8 X GPIO, ethernet control with TCP/IP, JSON RPC;
- 2 x RJ45 Accessory ports work reliably with cable lengths up to 1640 feet (500M) per port, allowing 16 devices total;
- 2 x RJ45 Line Outputs to V-Series amplifiers for fast connections;
- Add VCS-8 Call Stations for zone paging and system control;
- Add VWP Wall Panel Controllers for level, zone, source control with Unicode for 150+ languages.

## Regulatory information

| Regulatory areas | |
|---|---|
| Safety | UL 62368-1<br>CSA C22.2 No. 62368-1 |
| EMC | EN55032:2015+A11:2020<br>EN55035:2017+A11:2020 |
| FCC/ICES | Part 15 (Class B) (US)<br>ICES-003 (Canada) |

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## Parts included

| Quantity | Component |
|---|---|
| 1 | VZX-8 |
| 1 | Mains input AC power cable |
| 4 | 12 Position Terminal Block Plug for inputs and outputs |
| 1 | 20 Position Terminal Block Plug for GPIO |
| 1 | CAN-Termination Plug |
| 4 | Rubber feet for table-top mounting |
| 1 | Quick installation guide |
| 1 | Safety and Security Information booklet |

## Technical specifications

### Electrical

| Audio inputs, General | |
|---|---|
| Total processed sources | 20 |
| Mic/Line inputs | 8 (Euroblock) |
| RCA inputs | 4 (Summed mono) |
| Digital sources (Media Player, Message Player) | 8 (Mono) or 4 (Stereo) |
| Signal generator | Pink Noise, White Noise, Sine |
| Accessory ports | 2x RJ45 |
| EMG override inputs | 1 (Euroblock) |

| Balanced Mic/Line inputs | |
|---|---|
| Connector type | 12 Position Terminal Block Plug, Female Sockets 3.50 mm (0.138") pitch, 180° Free Hanging (In-Line) (Dinkle 0159-0312) |
| Color | Black |
| Input gain | 0 dB to +60 dB |
| Phantom power voltage | +48 V / 10 mA, switchable per analog input |
| Unbalanced inputs accepted | Yes |
| Maximum input level | 6.15 Vrms (15.78 dBV/18.0 dBu) with Gain Set to 0 dB |
| Reference level equal to digital input | +18 dBu for 0 dBFS |
| Input impedance, active balanced | 3.3 Ω |
| Maximum cable size | 1.3 $mm^2$ (16 AWG) |
| Minimum cable size | 0.25 $mm^2$ (24 AWG) |
| Stereo capability | 2 inputs can be combined as one stereo channel for processing and routing; allows balanced stereo pairs |

| RCA inputs | |
|---|---|
| Left channel color | White |
| Right channel color | Red |

| RCA inputs | |
|---|---|
| Type | Mono-summed pairs |
| Stereo capability | 2 pairs can be combined as one stereo channel (unbalanced) for processing and routing |
| Sensitivity | -10 dBV (-7.78 dBu) |
| Maximum input | 3.08 Vrms (9.78 dBV/12 dBu) |

| Storage | |
|---|---|
| Internal storage size | 300 MB |
| Included card | MicroSD 32 GB |
| Recording media types supported | microSD, microSDHC, microSDXC |
| Recording media storage formats supported | FAT32, exFAT (2TB maximum) |
| Auto-backup (configuration file) | Via MicroSD card, included |
| Configuration Copy/Paste | Via MicroSD card, included |
| Media Player | Playlists, Play/Pause, Shuffle |
| Message Player | Wall panel controller, Call station or GPIO triggers |

| Audio outputs, General | |
|---|---|
| Total number of processed system zones | 8 |
| Line outputs Euroblock | 8 (Euroblock) |
| Line outputs RJ45 (in parallel with Euroblock) | 2x RJ45 LINE OUT 1 - 4/5 - 8, for use with V-Series Amplifiers (AES72-1E) |

| Balanced Line outputs | |
|---|---|
| Connector type | 12 Position Terminal Block Plug, Female Sockets 3.50 mm (0.138") pitch, 180° Free Hanging (In-Line) (Dinkle 0159-0312) |
| Color | Black |
| Maximum output level | 6.15 Vrms (15.78 dBV/18.0 dBu) |
| Nominal output level | 1.55 Vrms (3.78 dBV/6 dBu) |
| Maximum cable size | 1.3 $mm^2$ (16 AWG) |
| Minimum cable size | 0.25 $mm^2$ (24 AWG) |

| GPIO control port | |
|---|---|
| Connector type | 20 Position Terminal Block Plug, Female Sockets 3.50 mm, (0.138") pitch, 180° Free Hanging (In-Line) (Dinkle 0159-0320) |
| General purpose inputs/outputs | 8x GPIO, freely assignable as inputs or outputs |
| Operating modes | Switchable between Analog In/Digital In/Digital Out |

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| GPIO control port | |
|---|---|
| Analog input range | 0 V to +13 V, 133 kΩ input resistance |
| Digital inputs | ON: <1.5 V<br>OFF: >2.0 V, internal pull-up (10 kΩ) |
| Digital outputs | ON: Output switched to GND, max. 200 mA<br>OFF: Open Collector |
| Reference voltage output | +10 V, max. 200 mA, supervised, short circuit protected |
| READY/FAULT contact | Galvanic isolated relay, max. 30 VDC/500 mA |

| Audio performance | |
|---|---|
| THD+N | <0.003% at 0 dBu Input/Output with -1 dB gain at 1 kHz |
| Frequency response | 20 Hz to 2 kHz (±0.5 dB) |
| S/N: A-weighted, analog input | >115 dB |
| S/N: A-weighted, analog output | >115 dB |
| S/N: A-weighted, analog input to analog output | >110 dB |
| EIN (Equivalent Input Noise)<br>20 Hz to 20 kHz, A-weighted | <-125 dB |
| Crosstalk, 1 dB below max., @1 kHz | <-80 dB (Maximum Mic Gain)<br><-100 dB all other inputs/outputs |
| CMRR, @1 kHz, nominal Level | >55 dB (0 dB Gain),<br>>85 dB (30 dB Gain) |
| Maximum hardware input gain | 60 dB |

| Input processing | |
|---|---|
| EQ | Dedicated HPF (BW 6-24, dB/oct), 4-band (selectable PEQ, Notch, Hi-Shelf, Lo-Shelf, Hi-ShelfQ, Lo-ShelfQ, HPF, LPF) |
| Input dynamics | Noise Gate, Compressor, Automatic Gain Control (AGC), Trim, VOX Ducker |
| Input presets | Commonly needed combinations of input gain, EQ, dynamics |
| Zone Mixer FX | Selection (Reverb, Echo, Delay, Chorus, Combinations) with level per input |

| Mixing | |
|---|---|
| Capabilities | Full Matrix DSP: any input to any zone output, Ducking, Source Selector |
| **Zone mixing** | |
| Zone mixes | 8 available - multiple active inputs with configured levels |
| **Live mixing** | |

| Mixing | |
|---|---|
| Virtual Mixer | Full mixing capability with Automixer (AMM) for all Mic/Line inputs |
| Virtual Mixer FX | 1x FX selection (Reverb, Echo, Delay, Chorus, Combinations) with level per input |
| Virtual Mixers | 1 per VZX-8, can be assigned to multiple zones |

| Output processing | |
|---|---|
| Room EQ | 5-band selectable as PEQ, Notch, HI-Shelf, Lo-Shelf, Hi-ShelfQ, Lo-ShelfQ, HPF, LPF |
| Speaker EQ presets | Select from entire EV, Dynacord and Generic Loudspeaker databases or import additional SONICUE Speaker Databases for instant settings |
| Custom speaker EQ | 10-band Selectable as PEQ, Lo-Shelf, Hi-Shelf, HPF, LPF, Allpass and FIR |
| Custom speaker FIR | 1 filter, 513 Taps |
| Custom speaker Xover | 2 bands selectable as BW 12-48 dB/oct, Bessel 12-48 dB/oct or Linkwitz-Riley 12-48 dB/oct |
| Output dynamics | Ambient Noise Compensation (ANC), Limiter Peak (PA), Limiter RMS/Temp, Trim |
| Output delay | 150 ms, Crossover delay of up to 20 ms |

| Accessory port | |
|---|---|
| Maximum accessories per port | 8 |
| Maximum accessories per VZX-8 | 16 |
| Maximum VCS-8 Call Stations per VZX-8 | 8 |
| Maximum bus length | Up to 1640 feet (500 m) cable length per port |
| CAN termination plugs | 1 per accessory line (A, B), place in unused port on last accessory connected to VZX-8 processor |
| Type | RJ45 termination with a 120 Ω resistor |

| Network | |
|---|---|
| Control port | 1x RJ45 (100/1000 Mbit) |
| Standard | 1000base-T/100base-TX |
| Network protocol | TCP/IP, HTTP(s), JSON RPC, (Secure) Websocket, OCA |

| Network | |
|---|---|
| ZeroConf web address | http://vzx-xxxxxx.local/<br>See each VZX-8 unit for precise address.<br>Rescue IP address also available. |

| Digital audio | |
|---|---|
| Sample rate | 48 kHz |

| General | |
|---|---|
| Power requirements | 100 - 240 VAC, 50 - 60 Hz (IEC appliance inlet) |
| Power consumption | 55 W max |
| **Front status LEDs** | |
| Status LED (3x) | Any Hardware/Software Fault - Red<br>Any Call or EMG is Active - Yellow<br>Power - Green |
| Multi-function button | Green, Blue |

## Mechanical

| Enclosure | |
|---|---|
| IEC protection class | Class I (grounded) |
| Electromagnetic environment | E1, E2, E3 |
| Color in RAL | RAL 9017 Traffic black |

| Enclosure | |
|---|---|
| Dimensions (HxWxD) with rack ears | 483 mm x 44.2 mm x 269.5 mm<br>(19.2" x 1.74" x 10.6") |
| Dimensions (HxWxD) without rack ears | 438 mm x 44.2 mm x 270 mm<br>(17.24" x 1.74" x 10.6") |
| Net weight | 3.58 kg<br>(7.89 lbs) |

## Environmental

| Climatic conditions | |
|---|---|
| Ambient temperature limits | 5 °C – 40 °C<br>(40 °F – 105 °F) |

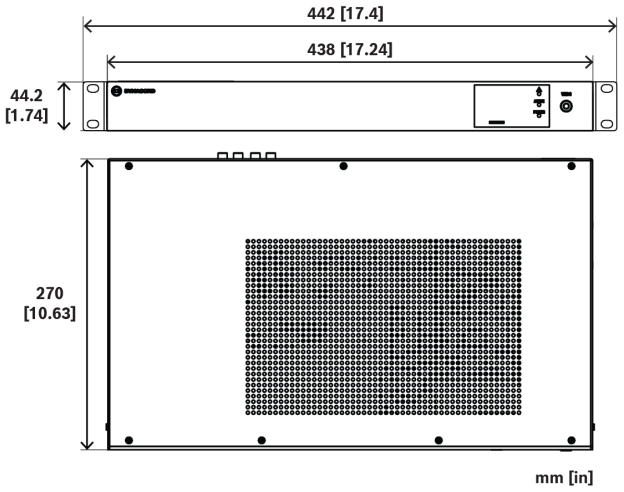


*Fig. 1:* Dimensions

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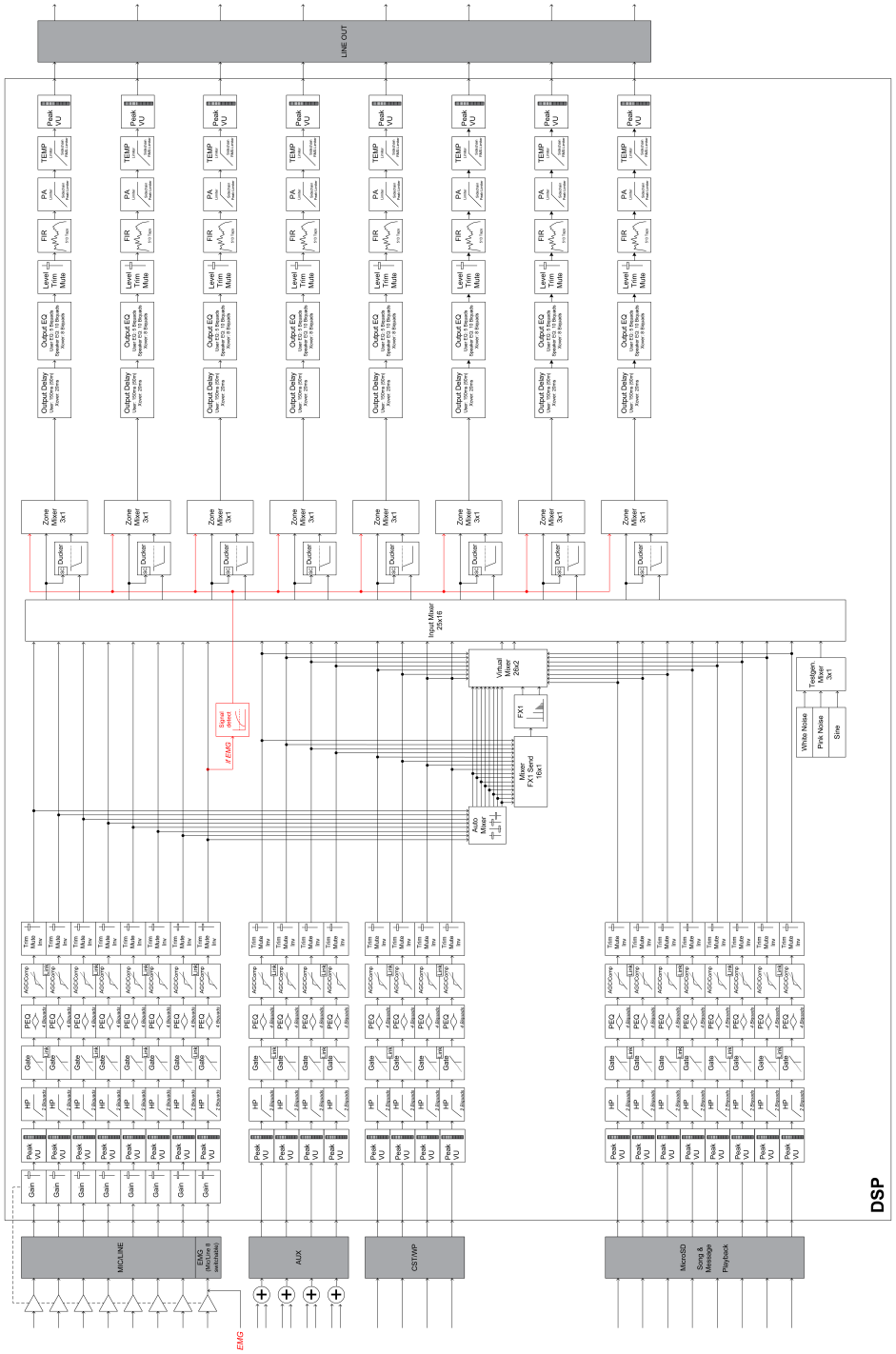


*Fig. 2:* Block diagram

## Ordering information

**VZX-8-US 8-Zone audio processor, US**
V-Series 8-Zone Audio Processor with advanced DSP capabilities, virtual mixer, and extensive I/O connectivity options.
Order number **VZX-8-US | F.01U.426.621**

**Accessories**

**VCS-8 8-Zone call station, V series**
V-Series Call station with high-quality gooseneck microphone, 9 programmable buttons, daisy-chain support, and durable cast aluminum base.
Order number **VCS-8 | F.01U.426.622**

**VWP-EU Wall panel controller,V series, EU**
V-Series Wall panel controller with color display and encoder, ships with white and black front covers and decora wall plates.
Order number **VWP-EU | F.01U.426.623**

**VWP-US Wall panel controller, V series, US**
V-Series Wall panel controller with color display and encoder, ships with white and black front covers. 1-gang decora plates not included.
Order number **VWP-US | F.01U.426.625**

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https://www.dynacord.com


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