VZX-8 8-zone audio processor

V series

- 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 CSA C22.2 No. 62368-1
EMC	EN55032:2015+A11:2020 EN55035:2017+A11:2020
FCC/ICES	Part 15 (Class B) (US) ICES-003 (Canada)

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
2	CAN-Termination Plug
2	Short rack ears
4	Rubber feet for table-top mounting
1	VZX connection card
1	Quick installation guide
1	Safety and Security Information booklet

Technical specifications

Electrical

Audio inputs, General	
Total processed sources	20
Mic/Line inputs	8
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 kΩ
Maximum cable size	1.3 mm² (16 AWG)
Minimum cable size	0.25 mm² (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
Type	Mono-summed pairs

RCA inputs	
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	Using Settings > Configurations > Import, or MicroSD card during hard reset
Media Player	.M3U playlists, Songs (MP3, WAV, AAC). Play/Pause, Repeat (Default)
Message Player	Triggered via call station, GPIO triggers, Openinterface API

Audio outputs, General	
Total number of processed system zones	8
Line outputs	8
Line outputs RJ45 (in parallel with output connector)	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 mm² (16 AWG)
Minimum cable size	0.25 mm² (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
Analog input range	0 V to +13 V, 133 kΩ input resistance
Digital inputs	ON: <1.5 V OFF: >2.0 V, internal pull-up (10 kΩ)
Digital outputs	ON: Output switched to GND, max. 200 mA OFF: Open Collector

GPIO control port	
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 0 dB gain at 1 kHz
Frequency response	20 Hz to 20 kHz (±0.5 dB)
S/N: A-weighted, analog input	>115 dB
S/N: A-weighted, analog output	>114 dB
S/N: A-weighted, analog input to analog output (Mic/Line, 0 dB gain)	>112 dB
EIN (Equivalent Input Noise) 20 Hz to 20 kHz, A-weighted	<-125 dB
Crosstalk, 1 dB below max., @1 kHz	<-80 dB (Maximum Mic Gain) <-100 dB all other inputs/outputs
CMRR, @1 kHz, nominal Level	>45 dB (0 dB Gain), >75 dB (30 dB Gain)
Latency (analog in to output)	< 0.31 ms
Maximum 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

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

Output processing	
Room EQ	5-band selectable as PEQ, Notch, Hi-Shelf, Lo-Shelf, Hi-ShelfQ, Lo-ShelfQ, HPF, LPF

Output processing	
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
Custom speaker FIR	1 filter, 513 Taps (48 kHz)
Custom speaker Xover	2 bands selectable as Butterworth 6-48 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
Openinterface network protocol	TCP/IP, HTTP(s), JSON RPC, (Secure) Websocket, OCA[1]
Zero-configuration web address	URL: http://VZX-XXXXX.local See each VZX-8 unit for unique address on VZX URL sticker Rescue URL: http://169.254.1.0

[1]Documentation available within Web App and online

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 Any Call or EMG is Active - Yellow 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
Dimensions (WxHxD) with rack ears	483 mm x 44.2 mm x 269.5 mm (19.2" x 1.74" x 10.6")
Dimensions (WxHxD) without rack ears	438 mm x 44.2 mm x 270 mm (17.24" x 1.74" x 10.6")
Shipping dimensions (WxHxD)	578 mm x 92 mm x 381 mm (22.76" x 3.62" x 15")
Net weight	3.58 kg (7.89 lbs)
Shipping weight	4.68 kg (10.31 lbs)

Environmental

Climatic conditions	
Ambient temperature limits	5 °C — 40 °C (40 °F — 105 °F)

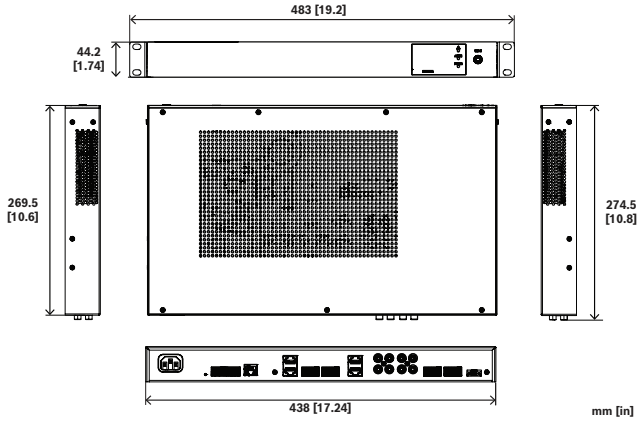

Fig. 1: Dimensions

Fig. 2: DSP inputs

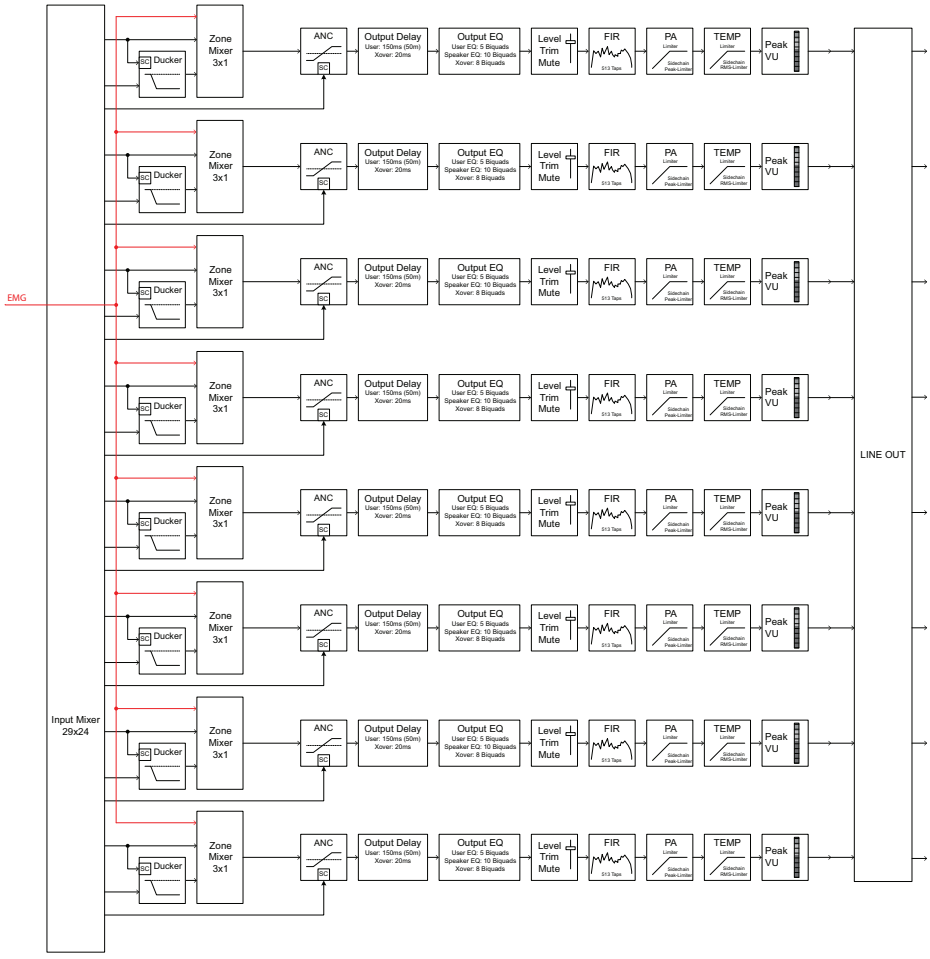

Fig. 3: DSP outputs

Ordering information

VZX-8 8-zone audio processor
V Series 8-Zone Audio Processor with advanced DSP capabilities, virtual mixer, and extensive I/O connectivity options.
Order number **VZX-8 | F.01U.426.620**

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**

https://www.dynacord.com

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