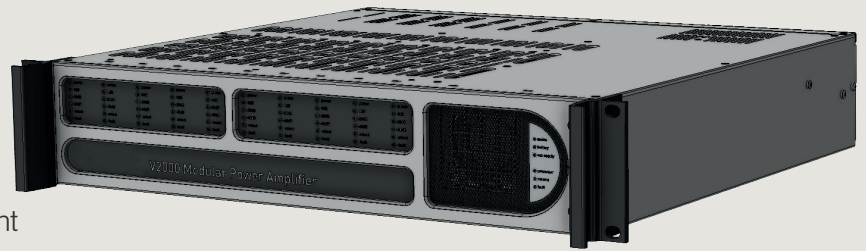


- ✓ High Power density up to 2000W / 100V
- ✓ 10 modular amplifier slots
- ✓ 2U / 19" compact housing
- ✓ Hot-Swappable amplifier cards
- ✓ Standby amplifier options
- ✓ Very high efficiency & Low standby current
- ✓ Combines Amplification and EN 54-4 charger
- ✓ An Integrated part of the Zenitel EN 54-16 Certified PAVA system



V2000 / V2000-R2

PAVA **AMPLIFIER MAINFRAME 2000W**

Zenitel's V2000 is a compact and robust solution for Voice Alarm Amplification. This mainframe is specifically engineered to accommodate Zenitel's modular D-series amplifier and LSZDC interface cards. Controlled by Zenitel's VIPEDIA Audio Router, this 2U 19" rack-mount frame supports up to 2000W distributed across a maximum of 10 individual amplifier cards. Connectivity to the Audio router is facilitated through both ethernet for control/monitoring and copper hard-wired cables for line-level audio, which provides integrated fail-safe redundancy in case of frame processor failure.

For larger installations or those requiring extended availability, multiple V2000 units can be strategically deployed across separate PAVA nodes, offering interleaved circuits. Up to sixty-three V2000 frames can be hosted on a single VIPEDIA audio router, thereby ensuring considerable scalability and efficiency in system design.

Voice Alarm applications

In adherence to industry standards, the V2000 solution is EN 54-16 certified as part of the Zenitel PAVA system, incorporating an integrated battery charger compliant with EN 54-4 standards. This charger, designed for use with multiple 12 V VRLA batteries to provide 24 V DC, can recharge up to 80 Ah in full compliance with the EN 54-4 re-charge requirements, thereby eliminating the need for an external charger which leads to a streamlined installation and minimises the cabinet space requirements. Moreover, the V2000 offers comprehensive monitoring functionality covering processors, power supplies, amplifiers, and circuits. Detected faults are promptly reported back to the host Audio Router and categorized in compliance with the requirements of the EN 54-16 standard.

Ease of diagnostics

The V2000 incorporates LEDs to indicate the mainframe and amplifier status, facilitating quick visual assessment of the amplifier status and the identification of any functional issues. Additionally, unit information and operational status can be accessed via IP-based tools, thereby streamlining troubleshooting and maintenance processes.

Power Supply

A multi-functional power supply, compatible with both 230V and 110V AC operation, combined with a secondary 24V DC battery-backed supply, ensures adaptability to various scenarios.

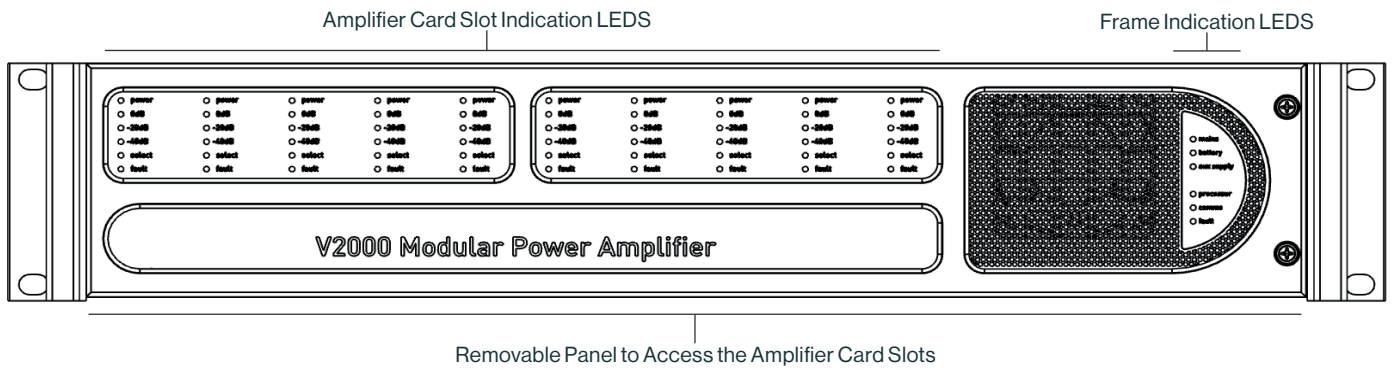
Modular Design

The V2000 mainframe supports Zenitel's D-Series amplifier, which are available in two variants; D500 (max power rating 500W) and D150 (max power rating 150W). These lightweight transformerless modules are hot-swappable and software configurable, allowing for flexible allocation of amplifier power within the mainframe's 2000W total capability, optimizing both space and power efficiency.

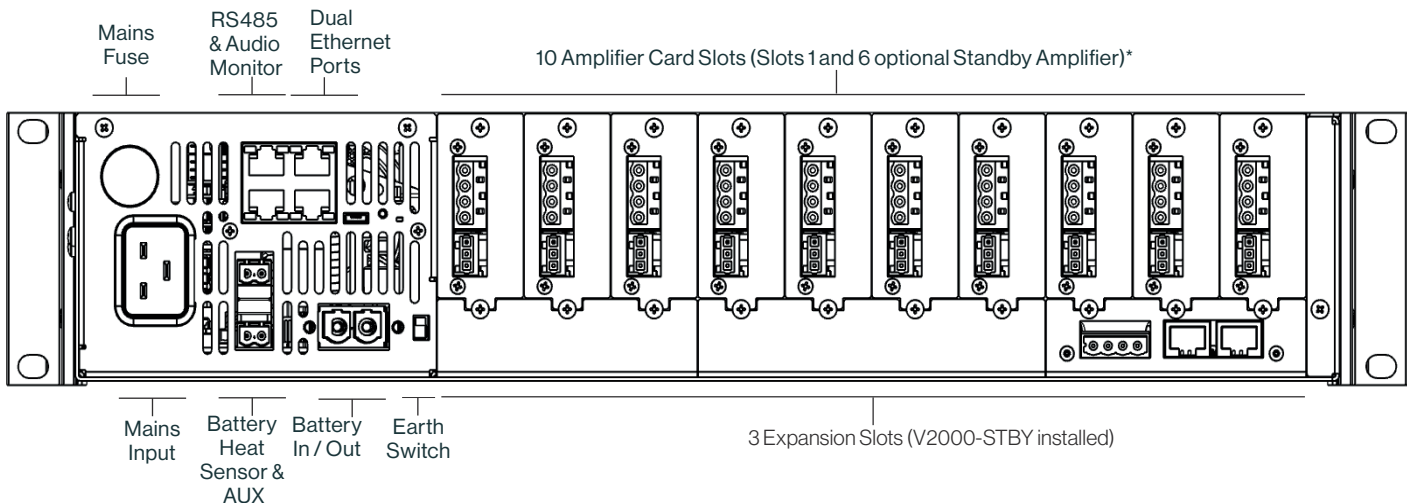
The amplifier inputs and outputs, are connected via the LSZDC interface modules, with options for single or isolatable A/B dual circuit output feeds. Additionally, the LSZDC modules may be configured to monitor the following system parameters: Input signal (0dBu nom), amplifier functionality, loudspeaker line integrity (using DC, Impedance or Loop-Back surveillance techniques). Standby amplification can either be configured as self-contained within each individual V2000 mainframe or housed in a separate V2000 mainframe within the rack, in which case the optional V2000-STBY module will be required.

MECHANICAL

Front Panel

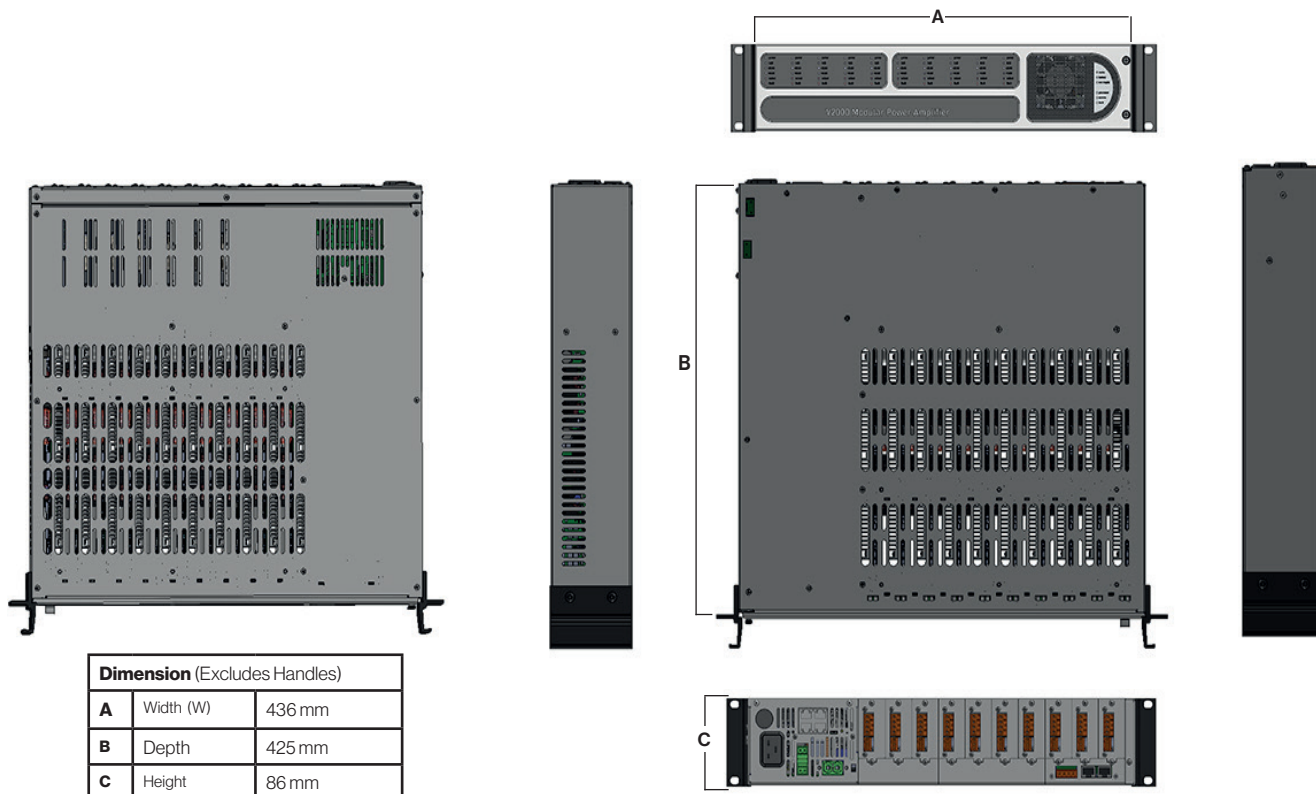


Rear Panel



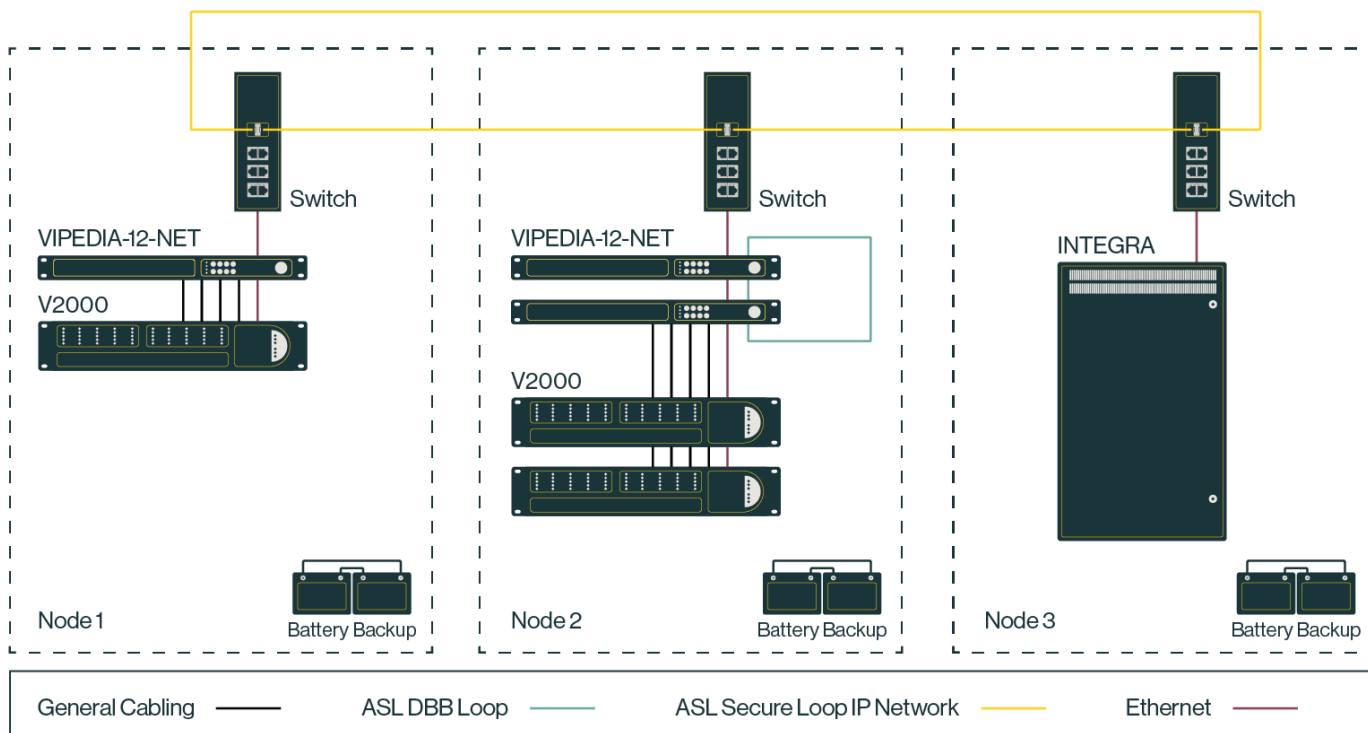
* The LSZDC and V200-STBY interface are shown for reference only and not included as part of the V2000.

Views & Dimensions



TYPICAL ARCHITECTURE

The example below shows a distributed multi-node system with various V2000 mainframes hosted locally on the VIPEDIA Audio Router. The diagram also show interoperability with Zenitel's INTEGRA range of wall-mount products. Please refer to System Design guide for details on cooling and cabinet allocation.



SPECIFICATIONS

Supply Voltage

AC Supply	230 V (+25% / -16%)
	110 V (+10% / -15%)
AC Supply Frequency	50-60 Hz
Inrush Current (max)	21 A
Maximum AC VA Rating (50% Full Power Sinewave)	2200 VA (230 V AC Supply)
	900 VA (110 V AC Supply)
Maximum AC VA Rating (100% Full Power Sinewave)	3800 VA (230 V AC Supply)
	1650 VA (110 V AC Supply)
DC Supply	21-28 V Nominal 24 V lead acid battery pack
Quiescent DC Current No Amplifiers	80 mA @ 24 V DC
Maximum DC Current per D500 Amplifier	28 A @ 24 V DC

Auxiliary DC Supply Output

DC Voltage	20 V to 29 V depending on AC or DC supply
Rated Continuous Maximum Output Current (I _{max})	2 A
Minimum Loading (I _{min})	0 A

DC Supply Input/Output (Charger)

Input/Output Voltage	21 to 28 V (Nominal 24 V Battery)
Maximum Battery Charging Current	3 A
Maximum value of internal battery resistance for which unit functionality can be maintained (R _i max)	60 mΩ
Charging Time ¹	<24 hours to charge to 80% capacity
	<72 hours to charge to 100% capacity

1. Charging Time and Temperature Compensation for two serially connected YUASA NPL65-12IFR or Power Sonic PS-12750 FR, PG-12V75T FR, PG-12V65 FR or PG-12V80 FR batteries.

Amplification

Amplifier Cards (D-Series)	Sold Separately
Interface Cards (LSZDC)	Sold separately
Maximum Output Power	2000W (230 V AC Supply)
	1000W (110 V AC Supply)
Number of Amplifier Card Slots	10
Number of Standby Card Slots	2 out of the 10
Amplifier Outputs	100 / 70 / 50 V RMS output

Mechanical

Dimensions (H x W x D)	86mm x 436mm x 425mm (Excludes Handles)
Mounting	19-inch rack mounting (2U)
Finish	Low Smoke / Zero Halogen
Colour	Silver & Black
Weight (Frame only)	7.7 kg
Weight (Frame fitted with 10 Amplifiers / Interfaces)	15 kg

Environmental

Operating	-10°C to +55°C
Storage	-20°C to +55°C
Humidity Range	0% to 93% non-condensing
Ingress Protection	IP20

Software, Tools and Management

Configuration Tools	IP based SCT
---------------------	--------------

Software Compatibility

V2000	Software Bundle ≥V1 LTS
V2000-r2	Software Bundle ≥V4 LTS

Approvals & Standard Compliance

Fire	EN 54-16 & EN 54-4
Rail	EN 50121-4
Electromagnetic Compatibility Directive (Emissions & Immunity) ...	EN 61000 series / EN50130-4
Low Voltage Directive (Safety)	EN / UL / IEC 62368-1
Conformity	CE / CPR / UKCA
Environmental	RoHS / REACH

Part Codes

V2000	PAVA Amplifier Mainframe up to 2000W /1000W /10 Channel (0 amplifiers)
V2000-r2	PAVA Amplifier Mainframe up to 2000W /1000W /10 Channel (0 amplifiers) Revision 2 Hardware

Compatible Hardware

D150	PAVA Amplifier Card for the V2000 up to 150W
D500	PAVA Amplifier Card for the V2000 up to 500W
LSZDC	PAVA Amplifier Interface Card for the V2000
V2000-STBY	PAVA Standby Linking Interface Card for the V2000
RAK-FAN01	Fan tray for the V2000
RAK-DUCT01	Ducting for the V2000 Fan Tray
V2000-BDIST	Battery Breaker for the V2000
V2000-POK	V2000 Power Output Card Kit

Manufactured by Zenitel GB Limited

Unit 17, Cliffe Industrial Estate, Lewes, East Sussex, BN8 6JL, UK

Zenitel and its subsidiaries assume no responsibility for any errors that may appear in this publication, or for damages arising from the information therein. Zenitel, Vingtor-Stentofon and Phontech products are developed and marketed by Zenitel. The company's Quality Assurance System is certified to meet the requirements in NS-EN ISO 9001. Zenitel reserves the right to modify designs and alter specifications without notice. ZENITEL PROPRIETARY. This document and its supplementing elements, contain Zenitel or third party information which is proprietary and confidential. Any disclosure, copying, distribution or use is prohibited, if not otherwise explicitly agreed in writing with Zenitel. Any authorized reproduction, in part or in whole, must include this legend. Zenitel – All rights reserved.