

# Unica™

## 8-Channel Fixed Installation Amplifier Platform



The Unica™ Series is a compact, 1RU amplifier platform developed primarily for installed applications. The 8-channel version includes 1kW, 2kW, 4kW, and 8kW total power models, making Unica™ one of the most power-dense solutions available.

The output channels can drive Lo-Z and 70/100V lines seamlessly, delivering up to twice the rated power when asymmetrically loaded, resulting in 2000W @4Ω for the 8kW model. The power supply allows worldwide operation (100-240VAC), and it is equipped with the latest generation of single-stage power factor correction (PFC). The proprietary Smart Rails Management (SRM) allows the supply rails to adapt in real time

to the required output voltage to maximize efficiency and reduce idle losses.

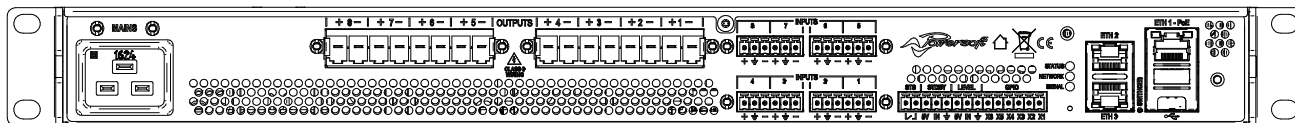
Unica™ platform features Powersoft's next-generation DSP for state-of-the-art processing and audio performance. The three 1Gb Ethernet ports, along with the native Dante™ and AES67 support allow for different network topologies including daisy-chain and Dante™ redundant.

The front panel display allows quick access to the amplifier operating status information for local monitoring. The PoE (Power over Ethernet) input allows for short recovery time in case of mains loss, as well as testing and monitoring loudspeakers 24/7 without the need for mains power.

Lastly, Unica™ Series amplifiers natively support cloud connectivity for remote monitoring and control from any device anywhere in the world via the Powersoft Cloud.

- ▶ Medium to large-scale venues
- ▶ Main systems, central or distributed, subwoofers, hi-Z/lo-Z
- ▶ Mission critical applications
- ▶ Theatres, performance venues
- ▶ Houses of worship
- ▶ Convention centres
- ▶ Business centres
- ▶ Cruise ships





## Specifications

| Channel Handling                        |  |                                                                                                                                                          |                          |
|-----------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| Number of output channels               |  | 8 Hi-Z or Lo-Z<br>(bridgeable per ch. pair)                                                                                                              | Phoenix PC 5/8-STF1-7,62 |
| Number of input channels                |  |                                                                                                                                                          |                          |
| Analog                                  |  | 8                                                                                                                                                        | Phoenix MC 1,5/6-ST-3,81 |
| Dante™/AES67                            |  | 8                                                                                                                                                        | 3 x RJ45                 |
| Audio                                   |  |                                                                                                                                                          |                          |
| Default gain                            |  | 32 dB                                                                                                                                                    |                          |
| Input sensitivity                       |  | 2.84 Vrms / 11.3 dBu                                                                                                                                     |                          |
| Output noise floor (Analog Input)       |  | -72 dBV(A) typical                                                                                                                                       |                          |
| SNR (Analog Input)                      |  | 112 dB(A)                                                                                                                                                |                          |
| Output noise floor (Dante™/AES67 Input) |  | -76 dBV(A) typical                                                                                                                                       |                          |
| SNR (Dante™/AES67 Input)                |  | 116 dB(A)                                                                                                                                                |                          |
| Max input level                         |  | >+24 dBu                                                                                                                                                 |                          |
| Frequency Response                      |  | 20 Hz - 20 kHz +0.0 dB/-1.0 dB, @ 8 Ω                                                                                                                    |                          |
| Crosstalk                               |  | <-80dB typical, 20Hz to 1 kHz range<br><-60dB @20kHz typical                                                                                             |                          |
| Input impedance                         |  | 20 kΩ balanced                                                                                                                                           |                          |
| THD+N (from 0.1 W to Half Power)        |  | < 0.05%                                                                                                                                                  |                          |
| SMPTE IMD (from 0.1 W to Half Power)    |  | < 0.01%                                                                                                                                                  |                          |
| Damping factor                          |  | >2500 20Hz to 500 Hz                                                                                                                                     |                          |
| DSP                                     |  |                                                                                                                                                          |                          |
| AD converters                           |  | 24 Bit Tandem™ @ 48 kHz<br>130 dB(A) Dynamic Range - 0.00005 % THD+N                                                                                     |                          |
| DA converters                           |  | 24 Bit Tandem™ @ 48 kHz<br>132 dB(A) Dynamic Range - 0.00003 % THD+N                                                                                     |                          |
| Latency                                 |  | 2.6 ms analog Input to amplifier Output                                                                                                                  |                          |
| Onboard memory                          |  | Store and recall up to 50 amplifier snapshot                                                                                                             |                          |
| Delay                                   |  | 2 s (input) + 100 ms (output) for time alignment                                                                                                         |                          |
| Equalizer                               |  | Raised-cosine, custom FIR, parametric IIR:<br>peaking, hi/lo-shelving, all-pass,<br>band-pass, band-stop, hi/lo-pass<br>linear phase (FIR), Butterworth, |                          |
| Crossover                               |  | Linkwitz-Riley, Bessel: 6 dB/oct to 48 dB/oct (IIR)                                                                                                      |                          |
| Limiters                                |  | RMS voltage, RMS current, Peak limiter, TruePower™, Dynamic EQ                                                                                           |                          |
| Damping control                         |  | Active DampingControl™                                                                                                                                   |                          |
| Loudspeaker diagnostic                  |  | Pilot tone monitoring, average impedance monitoring,<br>load impedance measurement<br><10 s                                                              |                          |
| Startup time                            |  | <0.5 s (with PoE backup power)                                                                                                                           |                          |
| Construction                            |  |                                                                                                                                                          |                          |
| Dimensions                              |  | 489 x 400 x 44.3 (WxDxH) mm<br>19.3 x 15.8 x 1.7 (WxDxH) in                                                                                              |                          |
| Weight                                  |  | 7.9 Kg (17.4 lb)                                                                                                                                         |                          |
| IP Class                                |  | IP 20                                                                                                                                                    |                          |
| Environmental                           |  |                                                                                                                                                          |                          |
| Operating temperature range             |  | 0°C to +50°C (derating above 35°C)                                                                                                                       |                          |
| Storage relative humidity range         |  | 10% to 85% humidity (non condensing)                                                                                                                     |                          |

| Output Stage                     |                                       | 1K8  | 2K8  | 4K8  | 8K8  |                   |
|----------------------------------|---------------------------------------|------|------|------|------|-------------------|
| Commercial total rated power     |                                       | 1000 | 2000 | 4000 | 8000 | W                 |
| Maximum output power             | per channel @ 100 V (symmetrical)*    | 125  | 250  | 500  | 800  | W                 |
|                                  | per channel @ 70 V (symmetrical)*     | 125  | 250  | 500  | 1000 | W                 |
|                                  | per channel @ 16 Ω (symmetrical)*     | 125  | 250  | 500  | 650  | W                 |
|                                  | per channel @ 8 Ω (symmetrical)*      | 125  | 250  | 500  | 1000 | W                 |
|                                  | per channel @ 4 Ω (symmetrical)*      | 125  | 250  | 500  | 1000 | W                 |
|                                  | per channel @ 2 Ω (symmetrical)*      | 125  | 250  | 500  | 1000 | W                 |
|                                  | per bridged pair @ 8 Ω (symmetrical)* | 250  | 500  | 1000 | 2000 | W                 |
|                                  | per bridged pair @ 4 Ω (symmetrical)* | 250  | 500  | 1000 | 2000 | W                 |
|                                  | per channel @ 100 V (asymmetrical)**  | 250  | 500  | 1000 | 2000 | W                 |
|                                  | per channel @ 70 V (asymmetrical)**   | 250  | 500  | 1000 | 1500 | W                 |
|                                  | per channel @ 16 Ω (asymmetrical)**   | 250  | 500  | 500  | 750  | W                 |
|                                  | per channel @ 8 Ω (asymmetrical)**    | 250  | 500  | 1000 | 1500 | W                 |
|                                  | per channel @ 4 Ω (asymmetrical)**    | 250  | 500  | 1000 | 2000 | W                 |
|                                  | per channel @ 2 Ω (asymmetrical)**    | 250  | 500  | 1000 | 1000 | W                 |
| Maximum unclipped output voltage |                                       | 140  | 160  | 160  | 160  | V <sub>peak</sub> |
| Maximum output current           |                                       | 25   | 30   | 40   | 48   | A <sub>peak</sub> |

\*: Available by driving and loading all the channels symmetrically.

\*\*: Maximum power-sharing capacity per channel

| Power & Thermal      |                    |              | 1K8                                                             | 2K8   | 4K8   | 8K8   |                  |
|----------------------|--------------------|--------------|-----------------------------------------------------------------|-------|-------|-------|------------------|
| @ 115 V              | Idle               | Input Power  | 65                                                              | 65    | 65    | 65    | W                |
|                      |                    | Current Draw | 0.707                                                           | 0.707 | 0.707 | 0.707 | A <sub>rms</sub> |
|                      |                    | Thermal Loss | 222                                                             | 222   | 222   | 222   | BTU/h            |
|                      | 1/8 Max Power @ 4Ω | Input Power  | 253                                                             | 406   | 729   | 1380  | W                |
|                      |                    | Current Draw | 2.31                                                            | 3.61  | 6.44  | 12    | A <sub>rms</sub> |
|                      |                    | Thermal Loss | 437                                                             | 532   | 781   | 1297  | BTU/h            |
| @ 230 V              | Idle               | Input Power  | 73                                                              | 73    | 73    | 73    | W                |
|                      |                    | Current Draw | 0.605                                                           | 0.605 | 0.605 | 0.605 | A <sub>rms</sub> |
|                      |                    | Thermal Loss | 249                                                             | 249   | 249   | 249   | BTU/h            |
|                      | 1/8 Max Power @ 4Ω | Input Power  | 251                                                             | 412   | 724   | 1360  | W                |
|                      |                    | Current Draw | 1.45                                                            | 2.24  | 3.51  | 6.1   | A <sub>rms</sub> |
|                      |                    | Thermal Loss | 431                                                             | 553   | 764   | 1228  | BTU/h            |
| Power supply         |                    |              | Universal regulated switch mode with PFC and SRM                |       |       |       |                  |
| Nominal Voltage      |                    |              | 100-240 VAC @ 50/60 Hz (400 VAC surge)                          |       |       |       |                  |
| Operating Voltage    |                    |              | 80-265 VAC @ 50/60 Hz                                           |       |       |       |                  |
| Supply tolerance     |                    |              | +10%-10%                                                        |       |       |       |                  |
| Power system         |                    |              | TT/TN                                                           |       |       |       |                  |
| Overvoltage category |                    |              | II                                                              |       |       |       |                  |
| Class of equipment   |                    |              | I                                                               |       |       |       |                  |
| AC Mains connector   |                    |              | IEC C20 inlet (20 A max)<br>region-specific power cord provided |       |       |       |                  |
| Eco Mode consumption |                    |              | 43 W                                                            |       |       |       |                  |
| Standby consumption  |                    |              | 20 W Typical, CPU fully functional                              |       |       |       |                  |
| PoE Input            |                    |              | Class 4 or higher                                               |       |       |       |                  |

Data subject to change without notice.

