

DC Rider

The Onboard Multi-Channel Amplifier



DC Rider is a compact, DC-powered amplifier specifically designed for high-demand audio applications in extreme conditions, and ideal for the theme park industry.

Tailored for use in the most demanding conditions in terms of mechanical stress and temperature ranges like roller coasters, dark rides, and parade floats, it is built to deliver high sound quality, relevant sound pressure levels, and dependable performance.

The DC Rider product lineup consists of two models featuring 8 or 16 channels and advanced power-sharing capabilities, allowing it to drive both subwoofers and haptic transducers, like Mover,

adding a tactile layer to immersive experiences.

Its efficient heat dissipation and vibration resistance make it a natural fit for installations in confined spaces with mechanical or thermal constraints, ensuring comfort even when placed behind the seats.

The amplifier's integrated DSP eliminates the need for external processors, providing complete audio signal processing in a single device. DC Rider's compatibility with AES67 ensures flexible connectivity across systems, giving integrators and designers the freedom to incorporate it seamlessly into complex audio setups.

Targeted at system integrators,

specifiers, and attraction designers working with major theme park brands, DC Rider supports high-level creative and technical flexibility.

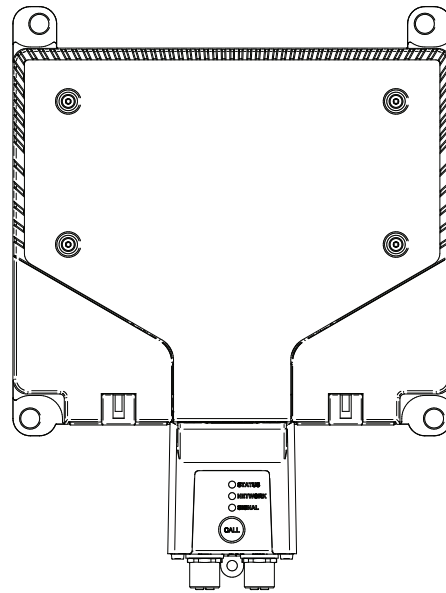
DC Rider offers a reliable, professional-grade solution that simplifies intricate integration projects, making it easier to deliver immersive audio experiences in theme parks worldwide.

- ▶ Class-D design
- ▶ High power density
- ▶ High reliability
- ▶ Modular design
- ▶ Power Sharing
- ▶ Integrated DSP
- ▶ Lightweight and compact design



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Specifications

Audio parameters		
Maximum Number of Channels	8/16	
Commercial rated power @ 4 Ω	400/800 W	
Max output power	per channel @ 8 Ω (symmetrical)*	50 W
	per channel @ 4 Ω (symmetrical)*	50 W
	per channel @ 2 Ω (symmetrical)*	50 W
	per channel @ 8 Ω (asymmetrical)**	110 W
	per channel @ 4 Ω (asymmetrical)**	180 W
	per channel @ 2 Ω (asymmetrical)**	90 W
Frequency Response	10Hz – 22KHz	
THD+N	0.03% (8 Ω, 1 W, 1 KHz)	
SNR	-115 dB(A)	
MCU	32bit 1.600 MIPS	

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

** : Maximum power-sharing capacity per channel

Protections	
Battery crank management	
Load dump protection	
Environment	
Operating temperature	-20°C ÷ +65°C
Humidity	90% not condensing
IP Class	5K2
Vibration Class	V2

DSP	
AD Converters	24 Bit @ 48 kHz 125 dB-A Dynamic Range
DA Converters	24 Bit @ 48 kHz 115 dB-A Dynamic Range
Internal precision	32 bit floating point
Wake up time	1.1 s
Latency AES67 to output	<10 ms
EQ	Peaking/BandPass/Band-Stop/Low-Shelving/High-Shelving/ Low-pass/High-pass/All-pass 2nd order/All-pass 1st order
Crossover	Bessel/Butterworth/Linkwitz-Riley 24dB/oct, 1kHz cut-off
Limiters	RMS voltage, Peak limiter
Input Delay	0-100 ms
Output Delay	0-10 ms

Power Supply	
Nominal Voltage	12-24 V
Operating Voltage	9-28 V
Max continuous current drawn per connector	30 A
Efficiency	≥85%

Mechanical parameters	
Nominal Size (D x W x H)	190 x 247 x 32.4 (WxDxH) mm 7.5 x 9.7 x 1.3 (WxDxH) in
Weight	1350 g 2.97 lb

