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# GaN Boost Converter Product Brief

350W Audio Boost Converter - **GS-EVB-AUD-BOOST2-GS**

Automotive/Marine Boost Power Supply w/Remote

## Complete Audio Boost Converter Solution

- Wide-Range DC Supply Voltage Input
  - 9VDC to 16VDC Operation
  - Load Dump Compatible
- GaN Systems GS61008T GaN Power Devices
- Differential-Primary-Drive Transformer Topology
- Current-Mode Boost Converter Design
- Easy Integration w/ Companion GaN Amplifier Solution

## High-Performance Audio Reference

- 350W Continuous Duty
- 450W Peak Power
- +/-32VDC Dual-Rail Output

## Graceful Protection and Auto Recovery

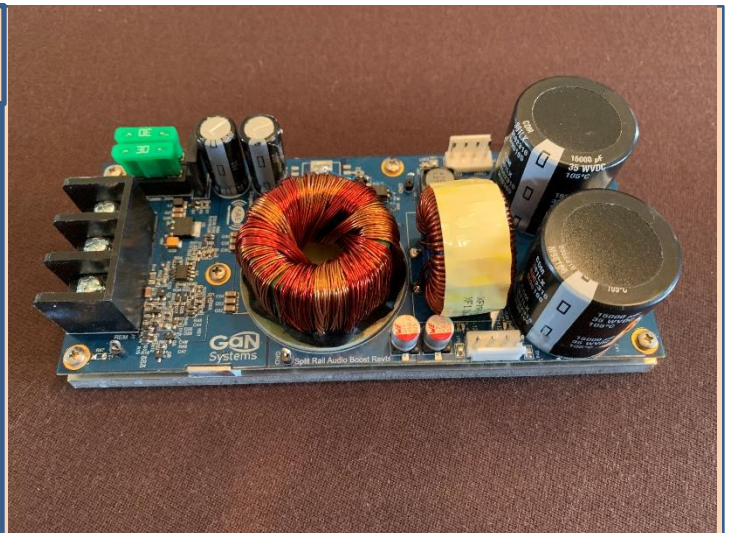
- Complete Non-Intrusive Short-Circuit, Thermal and Over-Current Protection
- Over-Voltage and Under-Voltage Protection
- External Sync Capability
- Graceful Handling of Complex and Lower Impedance Loads

## Complete Boost Converter System Design

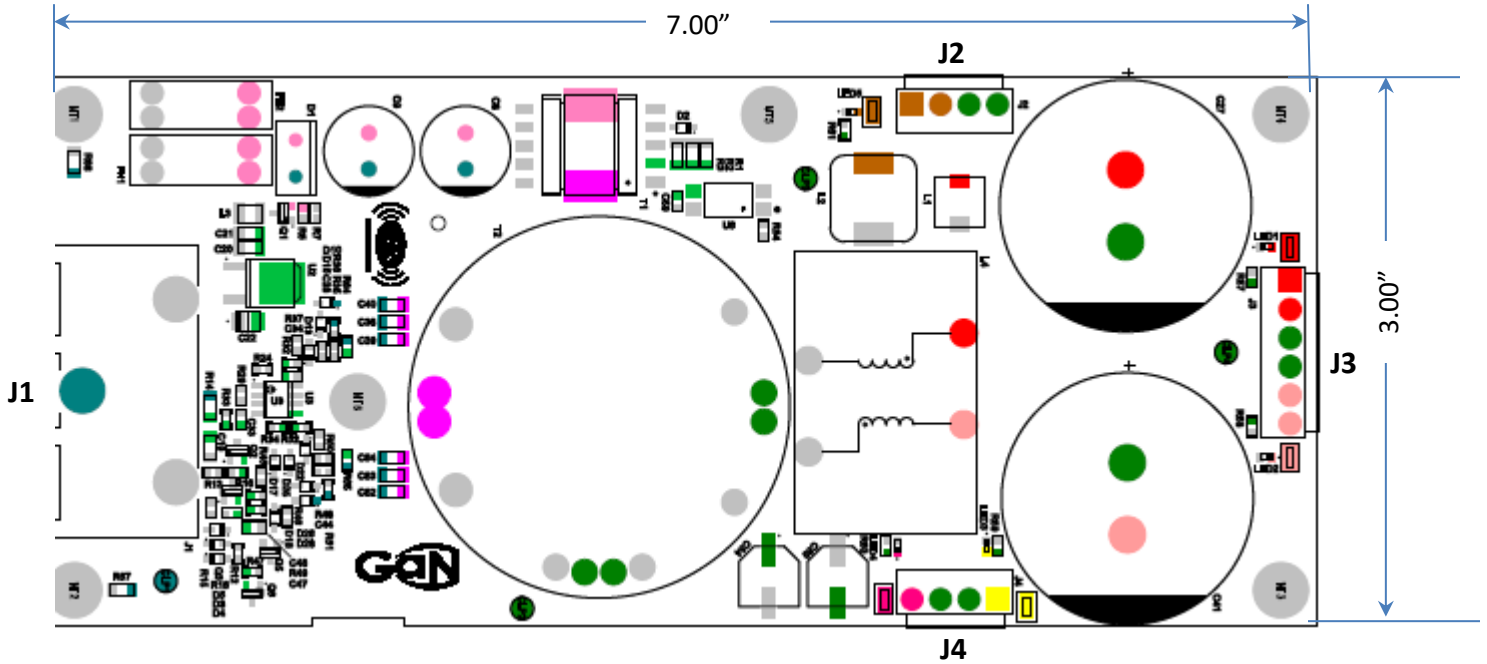
The GaN Systems High-Voltage Boost Converter Reference Design is a 300-watt continuous/500-watt peak power source for manufacturers of stand-alone Mono, Stereo and Multi-Channel Automotive or Marine Amplifiers. The 300W SMPS is developed around the next-generation EZDrive technology and the latest GaN Power Device technology. This next-generation technology is combined with ample 'bulk' capacitance for uncompromised audio quality and sound.

## GaN Systems 350W 'Boost' Power Supply

- Complete Stand-alone Dual-Rail Boost Converter
- +/- 32VDC Dual-Rail Output
- 350W Continuous Duty (@14.4VDC Input)
- 450W Peak Power
- Auxiliary +5V and +/-12V DC Outputs
- Wide Range DC Supply Voltage Input
  - 9VDC to 16VDC Operation
  - Load Dump Compatible
- Integrated Remote Power-On 'Enable'
- Modified EZDrive Gate Drive Design
- Dual-GaN Transformer-Coupled Current-Mode Topology



## 1. CONNECTIVITY



Connector: J3 (Mating JST Connector: VHR-6N; Pin: SVH-41T-P1.1)

Pin	Type	Description
1	Output	+HVDC Supply Rail
2	Output	+HVDC Supply Rail
3	Output	HVDC Ground
4	Output	HDCC Ground
5	Output	-HVDC Supply Rail
6	Output	-HVDC Supply Rail

Connector: J2 (Mating JST Connector: VHR-4N; Pin: SVH-41T-P1.1)

Pin	Type	Description
1	Output	+5VDC Aux Power Output
2	Output	+5VDC Aux Power Output

3	Output	Aux Power Supply Ground
4	Output	Aux Power Supply Ground

**Connector: J4 (Mating JST Connector: VHR-4N; Pin: SVH-41T-P1.1)**

Pin	Type	Description
1	Output	+12VDC Aux Power Output
2	Output	Aux Power Supply Ground
3	Output	Aux Power Supply Ground
4	Output	-12VDC Aux Power Output

**Connector: J1**

Pin	Type	Description
1	Input	Power Supply Ground
2	Input	Remote "Enable"
3	Input	+12VDC Power Supply Input

**ELECTRICAL PERFORMANCE DATA**
**General Performance Data**

Parameter	Min	Typical	Max	Units	Comments
Output Voltage		2 x 32		VDC	Connector J3
Output Short-Circuit Current	-	12		A	