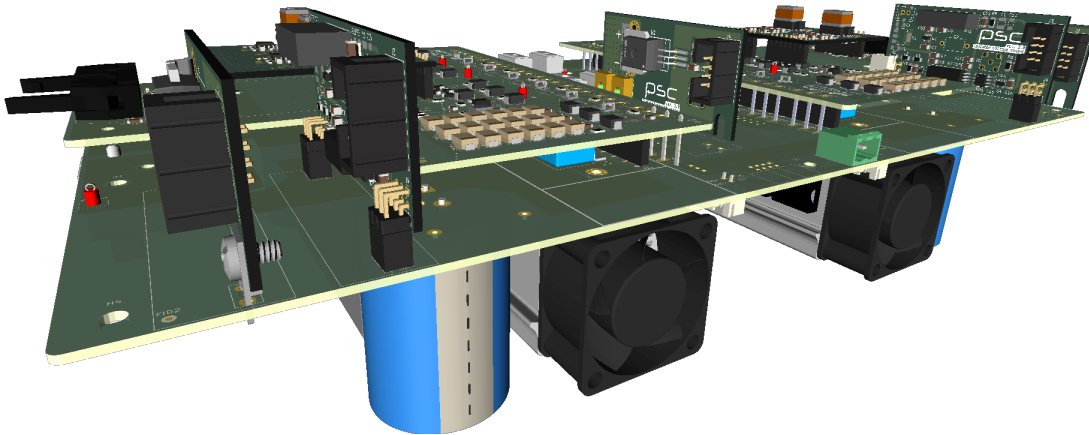
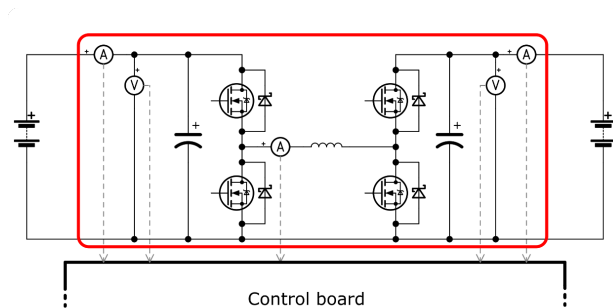


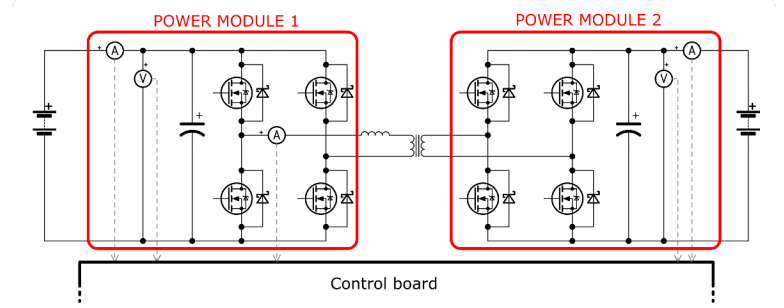
Versatile and Flexible Power Converter for rapid HW prototyping and validation



Four Switch Buck-Boost



Dual Active Bridge



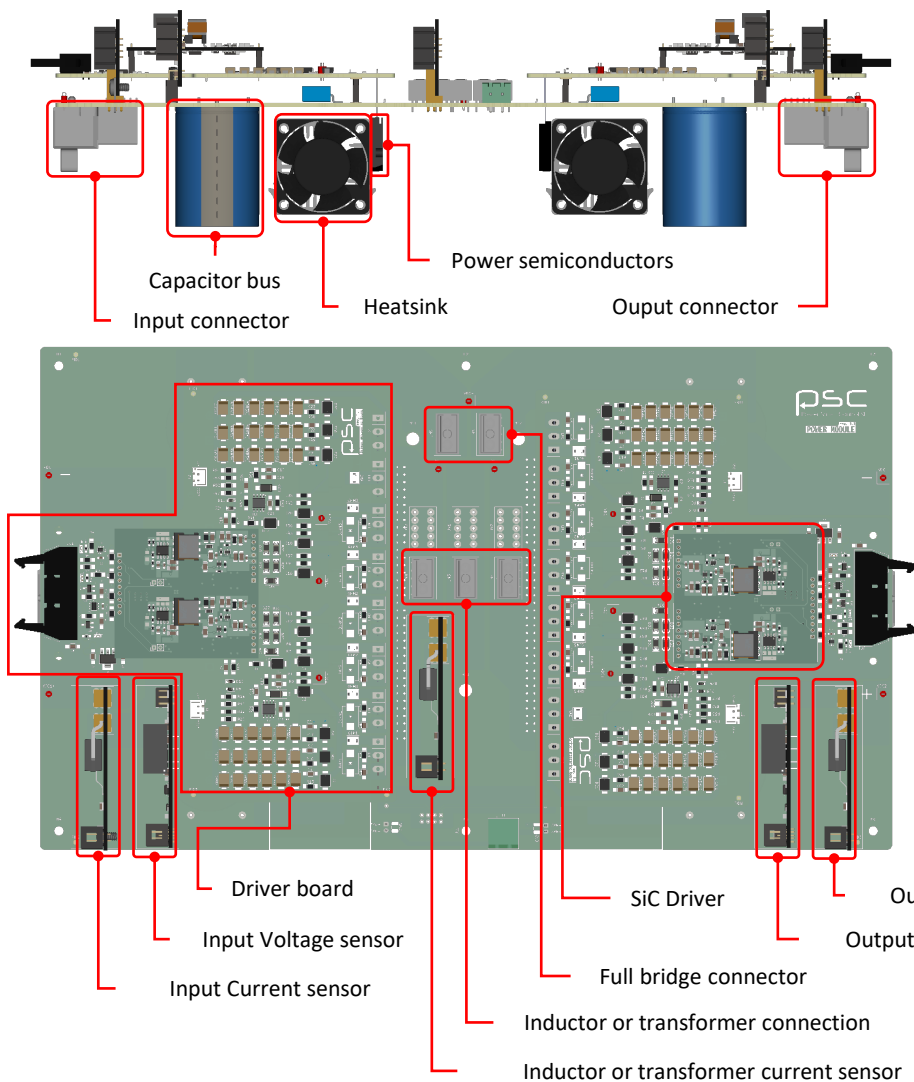
Main Features

- ✓ Configurable: can be used as two half-bridges or one full bridge.
- ✓ Up to **20 kW** output power.
- ✓ Switching frequency up to **500 kHz**.
- ✓ **Multiple topologies implementation**: Buck, Boost, Four Switch Buck-Boost, Dual Active Bridge, Resonant topologies, etc.
- ✓ Can achieve 0% or 100% duty cycle in both half bridges.
- ✓ Based on **SiC MOSFET** technology.
- ✓ Forced convection cooled.
- ✓ Simplified interface between Rapid HW Prototyping and control board



Main components in the Versatile and Flexible Power Converter

The **Versatile and Flexible Power Converter** is based on a modular system, consisting of a main frame including the power stage, two driver boards and several isolated voltage and current sensors.



Parameter	Value
POWER MODULE	
Maximum DC voltage	500 V
Maximum leg current	80 A
Maximum switching frequency	500 kHz
Maximum Output Power	20 kW
DRIVER BOARD	
Peak current	32 A
ISOLATED VOLTAGE SENSOR	
Sensitivity	3.388 mV/V
Rating	0 - 600 V
Bandwidth	275 kHz
ISOLATED CURRENT SENSOR	
Sensitivity	13.2 mV/A
Rating	±100 A
Bandwidth	200 kHz

Additional functionalities

- Voltage and current **isolated sensor boards**.
- 500 kHz, 6 W and 32 A peak current **isolated half-bridge driver** per bridge, with full range duty cycle capability.
- **3 power MOSFETs in parallel** for each switching element.
- With **integrated anti-parallel power diodes**.

Ready to use

It allows a wide range of half-bridge or full-bridge based topologies to be easily implemented, without the need to design drivers, sensors, etc.

Easy Access for measuring

Many test-points are provided along the system, to easily probe the main converter waveforms, making it easy to validate converter performance.



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