



SmartPower Stacks™

100kW DC-AC Inverter/ DC-DC Converter

PRODUCT DESCRIPTION

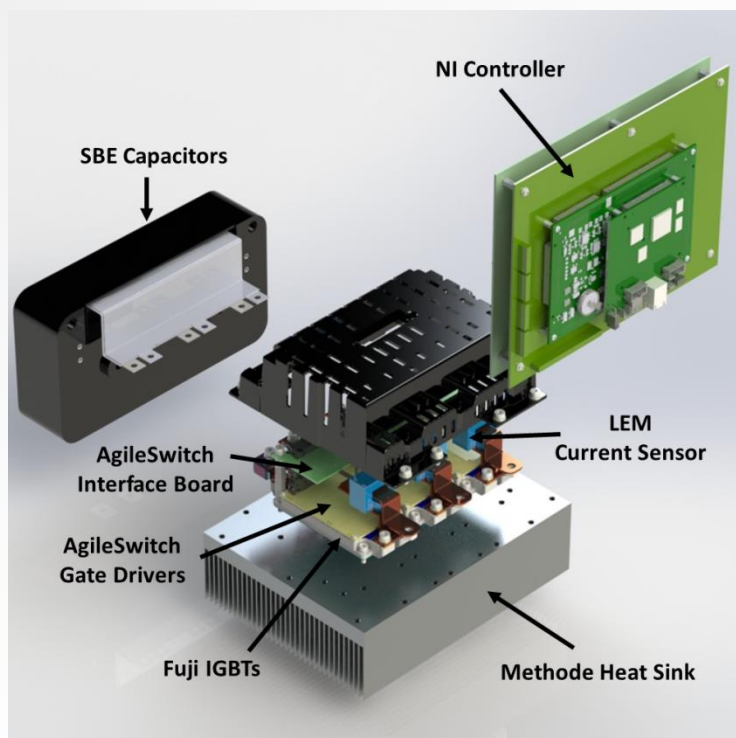
SmartPower Stacks provide the following type of power conversion - DC-AC, DC-DC, AC-AC, AC-DC - and are rated in the 50kW to 125kW Range.

The SmartPower Stack offering consists of 3 dual IGBT modules, separate gate drive boards for each module, current sensors, and interface board which monitor and control the behaviour of the SmartPower Stack. The assembly comes complete with and bus bars integrated heat sink. Additional levels are offered to include DC Link capacitors and a controller board.

KEY BENEFITS

- Double expected lifetime
- Reduce development time by ½
- Reduced switching losses
- Reduced size and weight
- Advanced failure analysis
- Enables multiple sources of IGBT switch supply
- Reduced lead times

SMARTPOWER STACK COMPONENTS

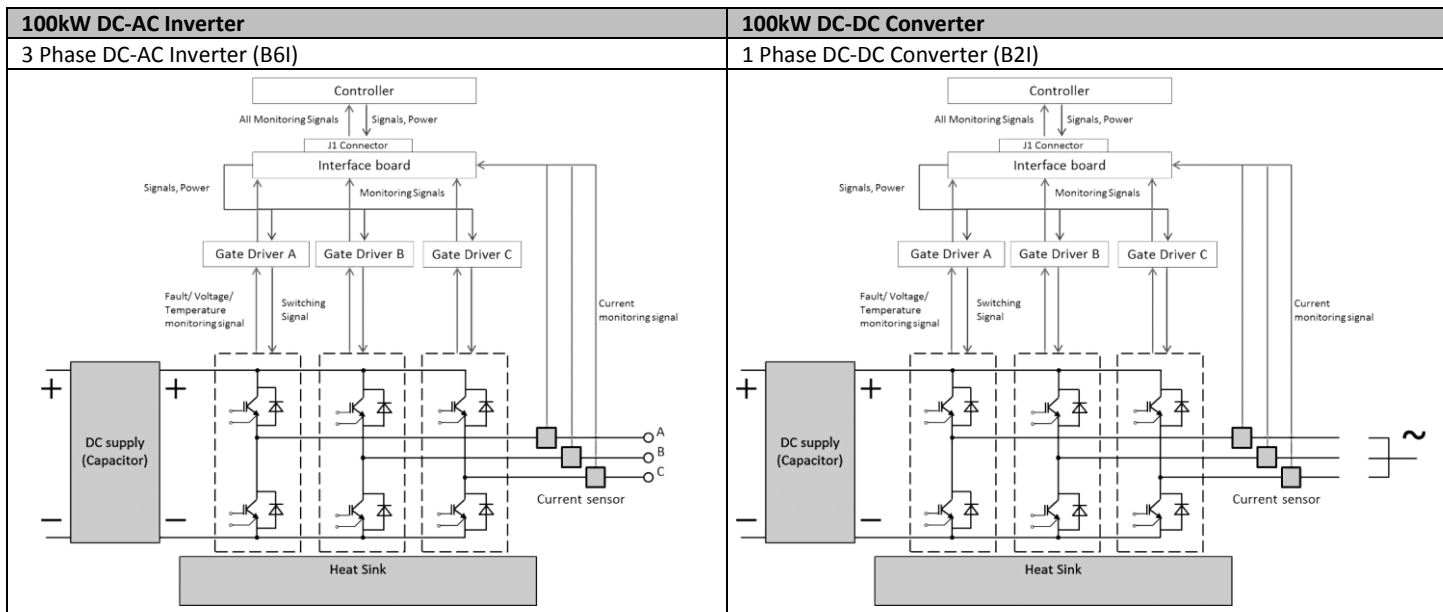


CONSORTIUM

The SmartPower Stack Consortium consists of global leaders in controllers, IGBTs, gate drives, capacitors, bus bar architectures and cooling solutions that have joined to create the industry's first fully integrated, deployment-ready commercial embedded system for high-volume solar, photovoltaic, wind, hybrid electric and electric vehicles, as well as high capacity uninterruptible power supplies and efficient motor drives.



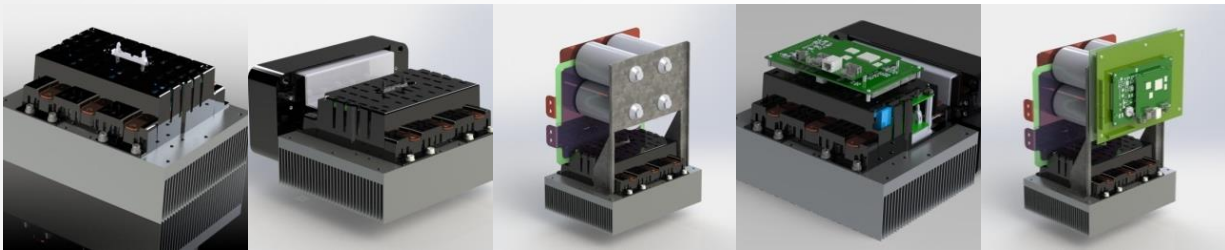
TOPOLOGY



KEY DATA OVERVIEW

Collector-Emitter Voltage	1200V
Max Current	400A
Current Sensors	LEM – HASS 400-S
IGBT Modules	FUJI Electric – DualXT – 2MBI450VN-120-50
Gate Drive Boards	AgileSwitch – AS2-20D1ANPU-FE450VN12
Interface Board	AgileSwitch – ASI-PS
Heat Sink	Methode – High Performance Extruded
DC Link Capacitors (Optional Level 2&3)	SBE – Power Ring Film Capacitors™ or Methode – Capacitor Bank
Controller (Optional Level 3)	National Instruments – Single-Board RIO General Purpose Inverter Controller (GPIC)

PRODUCT OFFERING



Product	Level 1	Level 2S	Level 2M	Level 3S	Level 3M
Dimension (mm) LxWxH	280x215x165	280x285x165	280x215x432	280x285x185	280x245x432
DC Link Capacitors	N/A	SBE – Power Ring Film Capacitors™	Methode – Capacitor Bank	SBE – Power Ring Film Capacitors™	Methode – Capacitor Bank
Controller	N/A	N/A	N/A	National Instruments – (GPIC)	National Instruments – (GPIC)

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