

Your benefit are our partners

Associated partner guide

www.infineon.com/energy-storage-systems

STABL



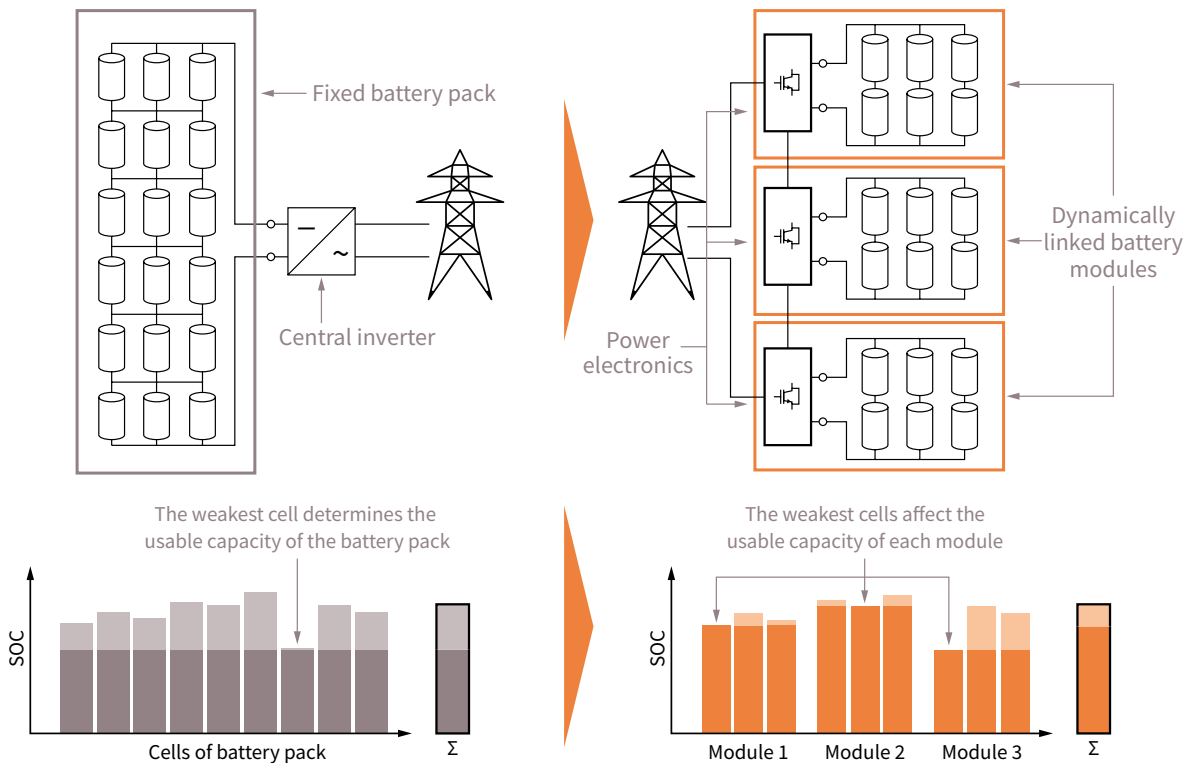
Trust in Infineon and our partner



Reduce your time-to-market and boost your company's success with Infineon's partner solutions around the globe.

Modular multi-level topology is the solution for 2nd life of battery

Battery utilization – IGBT based systems vs. multi-modular approach



Modular multi-level topology solution to 2nd life of battery

- > Maximize the useable battery capacity
- > Increase the life time of overall system
- > Maximize system availability
- > Reduce operating cost with lower voltage maintenance
- > Increase efficiency
- > Active battery management at module level will be achieved
- > Re-use of discarded EV batteries independent of State-of-Charge (SOC)

Usage of low voltage OptiMOS™ FETs for highest efficiency compared to traditional central inverter systems

Increased reliability and usable capacity plus fail-safe system due to no one-point of failure

Power density of system, e.g. less space due to less magnetics and lower BOM

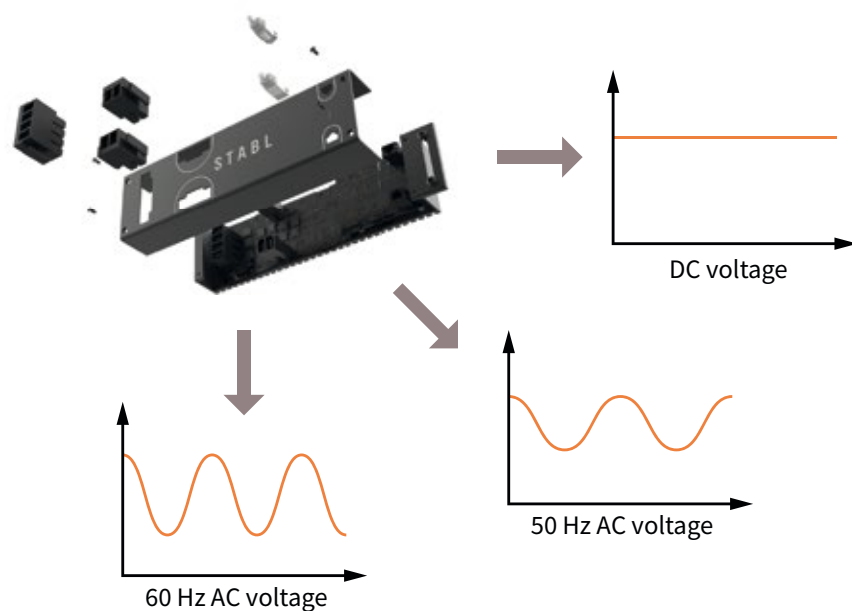
Active battery management (BMS) at module level will be achieved "for free"

Infineon's trusted partner: STABL

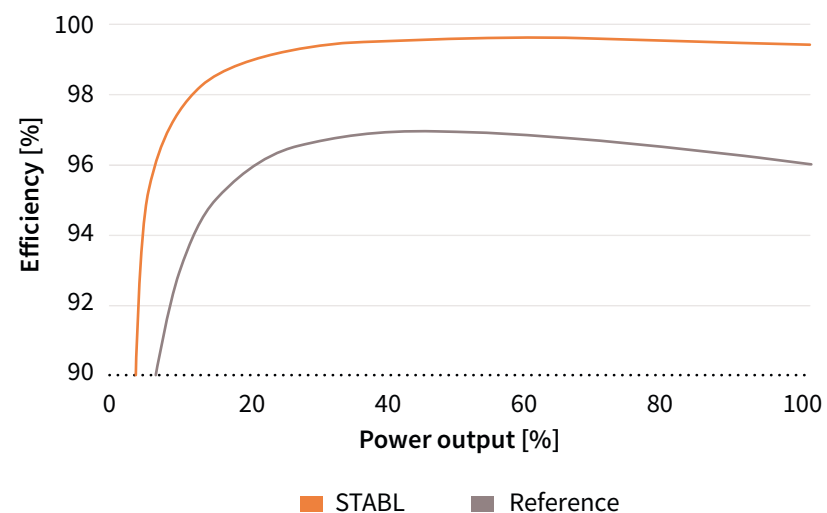
The STABL converter is capable of any output voltage, enabling a variety of new applications



One product - endless applications



Highest efficiency with OptiMOS™



The STABL conversion method with lower switching-voltage and switching-frequency is responsible for the higher inverter efficiency.

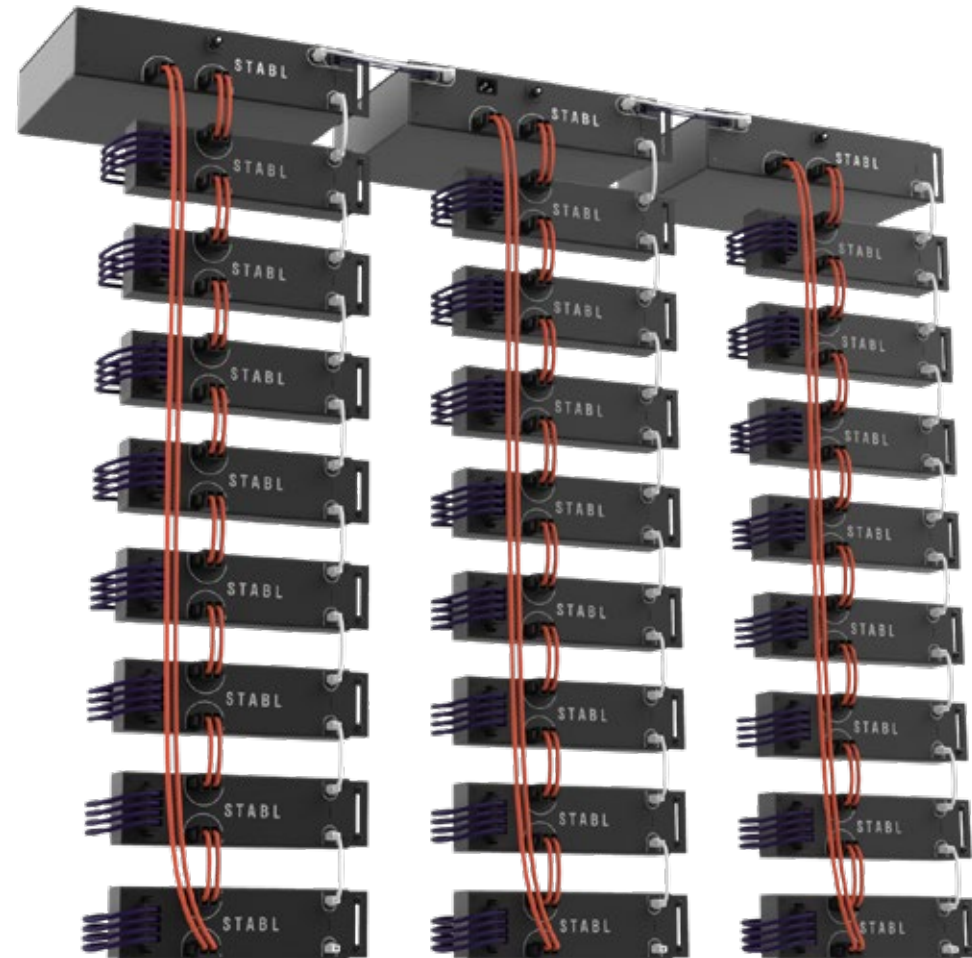
STABL inverter with OptiMOS™ MOSFET

Software-defined output voltage

- › One STABL module per battery module
- › Sum of battery module must be above $1.1 \times \sqrt{2} \times 230 \text{ V} = 357 \text{ V}$
- › STABL master controller coordinates the STABL modules

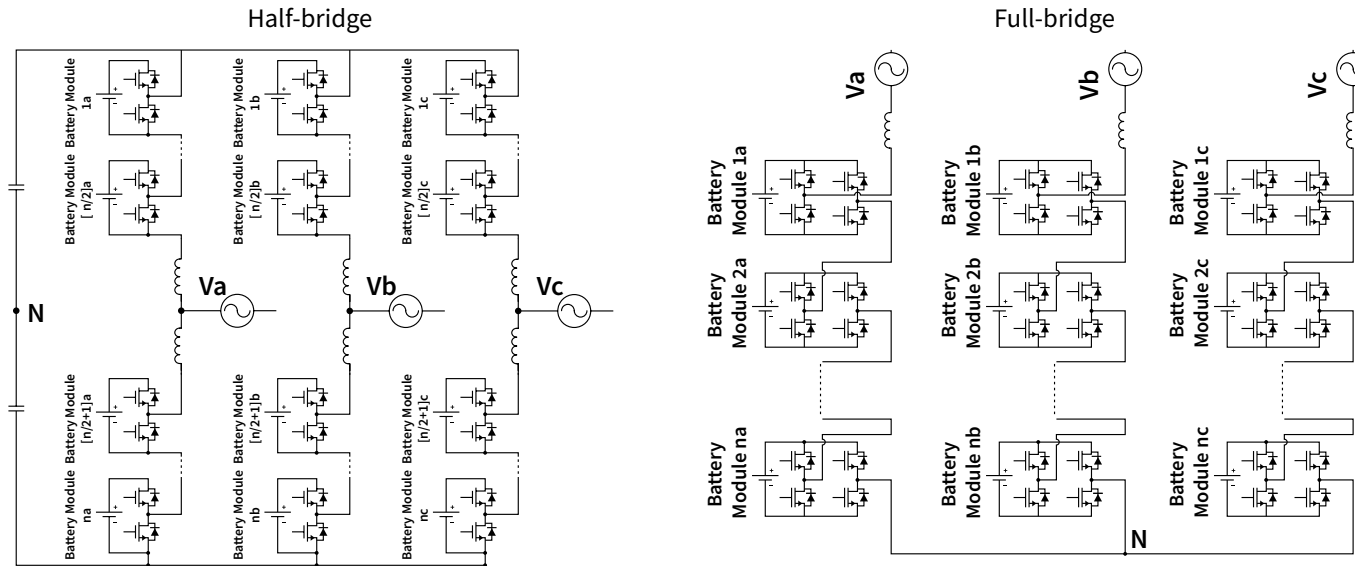
Parameter	Value*
Power rating	67.5 kVA (22.5 kVA per phase)
Rated current	100 A RMS
Grid voltage	230 V / 400 V 3ph
Grid frequency	50 Hz/60 Hz
Operating mode	On-grid / grid forming
THD	<1.5%
Mech. Rating	IP 20
Communication	Modbus TCP
Grid codes	VDE AR 4105 and VDE AR 4110

*intended for final product/preliminary and subject to change

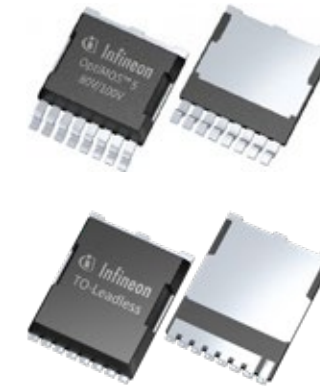


Product solutions for multi modular multilevel systems

Cascaded, modular, multi-level three-phase inverter (100-250 kW)



- Infineon OptiMOS™ MOSFET is the fundamental component of the inverter system due to its
- > Superior performance with **market lowest** $R_{DS(on)}$
 - > Greatest thermal performance due to **outstanding cooling properties**
 - > **Highest product reliability**



Product type	Battery module voltage [V]	MOSFET break-down voltage [V]	$R_{DS(on)}$ max. [mΩ]	Product name	Packaging	Recommended part number
MOSFET	48	80	0.7	OptiMOS™ 5	TOLL	IPT012N08N5
	60	100	1.5	OptiMOS™ 5	TOLL	IPT015N10N5
	> 60	150	4.8	OptiMOS™ 5	D ² PAK	IPB048N15N5
Driver IC	n/a	n/a	n/a	EiceDRIVER™ dual-channel, functional, isolated	Various available	2EDF7275F

Find more relevant products on www.infineon.com/optimos

www.infineon.com

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