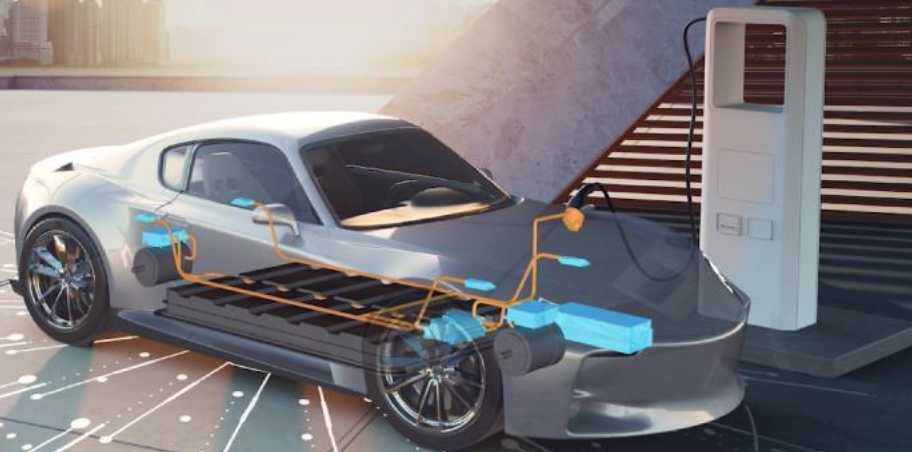


Flex HV Combo Unit (DC/DC + OBC)

Next-generation
mobility is **here**

flex



Flex next-gen
mobility



Gen1 overview



Gen2 overview



ST reference
design



Your partner of choice to power next-generation mobility

Flex's products are aligned with the latest trends

Power electronics

Award-winning solutions designed to accelerate the transition from internal combustion engines to electric vehicles.

Compute platforms

Scalable platforms for software-defined vehicles grounded in 20+ years of data center, networking, and automotive expertise.

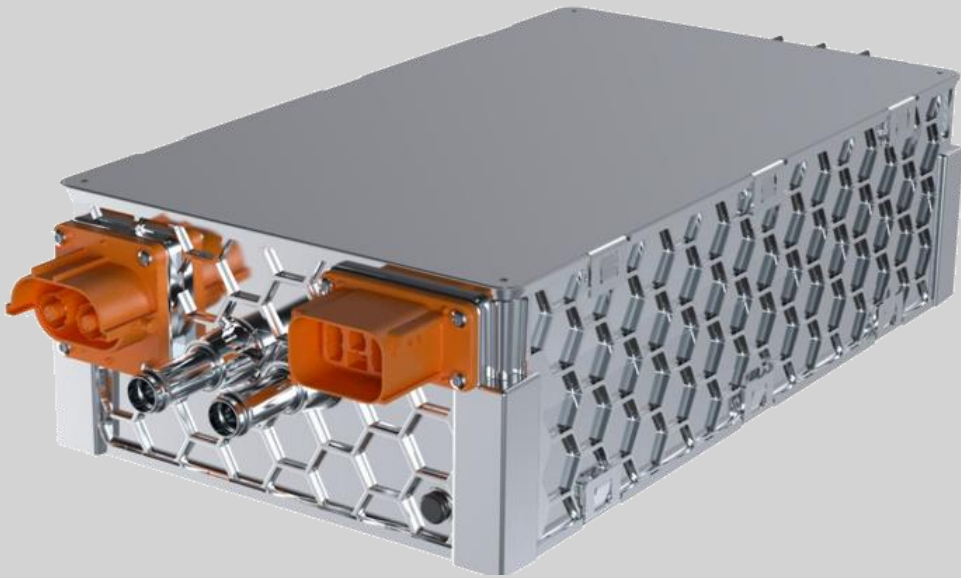
Motion and interfaces

Solutions that allow vehicle power and data architectures to connect with users, vehicles, and the world around them.



HV Combo Unit (Gen1)

DC/DC converter + Onboard charger



Readiness: A-Sample

>15 years of power electronics design experience

High power density of >1.6 kW/L and **high efficiency** of 96% at peak, all in a small package of 18 kg and 14 L

Supports 400 V & 800 V systems and is fully bi-directional with V2L / V2G and HV Pre-Charge

Reliable design for high volume production with ≤ 2 PCBA, no cables, standard component packaging



HV Combo Unit (Gen2)

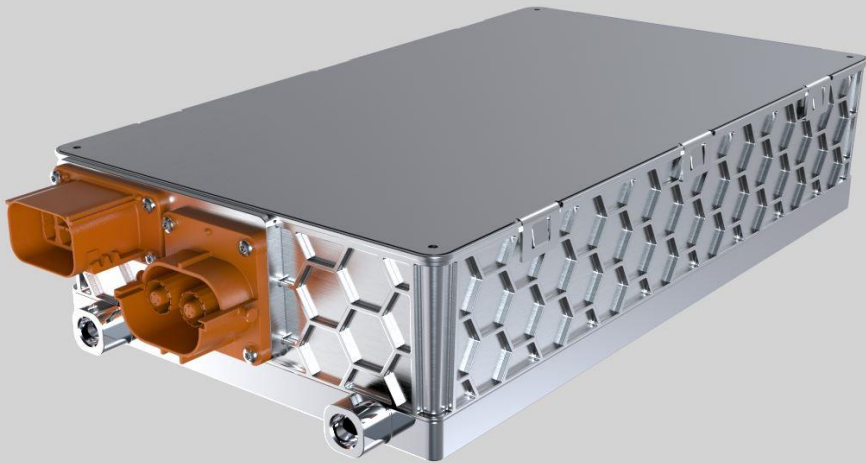
DC/DC Converter + Onboard Charger

>30% improved power density over Gen1

High power density of >2.3 kW/L and **high efficiency** of 97% at peak, all in a small package of 14 kg and 11 L

Supports 400 V & 800 V systems and is fully bi-directional with V2L / V2G and HV Pre-Charge

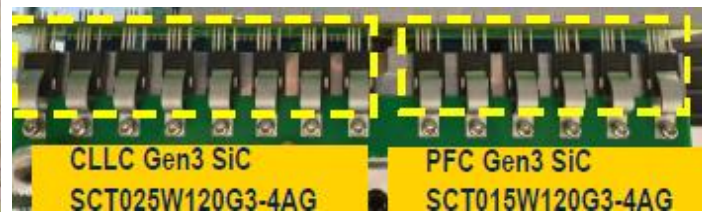
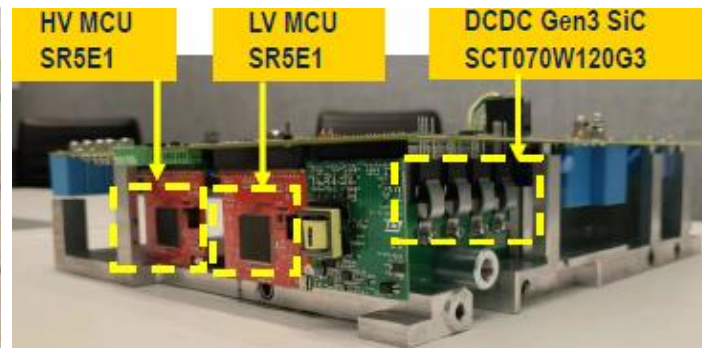
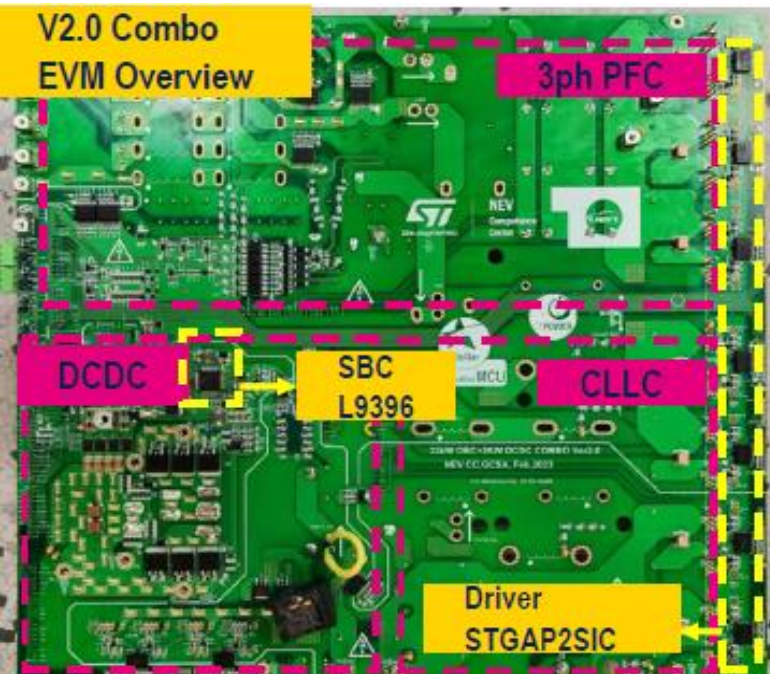
Reliable design for high volume production with ≤ 2 PCBA, no cables, standard component packaging



Readiness: Concept Phase



ST reference design 22 kW combo (OBC + DC/DC)



ARM 32-bit MCU	StellarE SR5E1E7
SiC MOSFET Gen3	SCTxxxW120G3
HVFET DM6/9 & K5	STxxxx
LV MOSFET F8	STHxxx, STLxxx
LV GAN 100 V	SGT2D2R
PMIC	L9396
PMIC GAN	STI ² GAN
Gate driver	STGAP2SIC
Analog amplifier	TSVxxx, TSCxxx
HV SiC diode	STPSC2H12B2Y
Rectification diode	STPSxxx, STTHxxx
Protection TVS diode	SMxTxx
E-fuse	STI ² Fuse

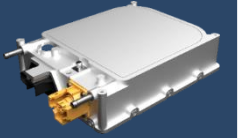


Power electronics designed to accelerate the transition from ICE to BEV



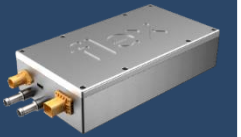
DC/DC converters

Building on several generations of designs to deliver high-power bi-directional converters with maximum efficiency and value.



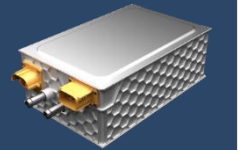
On-board chargers

Global designs with regional specific variants including bi-directional operation without cabling.



Combo units

Scalable platform design (400-800V, 11-22kW) of bi-directional combined DC/DC and OBC optimized for packaging.



Inverters and battery management

Manufacturing with design-to-cost, laser welding, flexible PCBA, testing & validation, and supply chain risk mitigation capabilities.





Supporting both on-vehicle and grid charging needs

**Flex
Automotive**

**Flex
Industrial**

