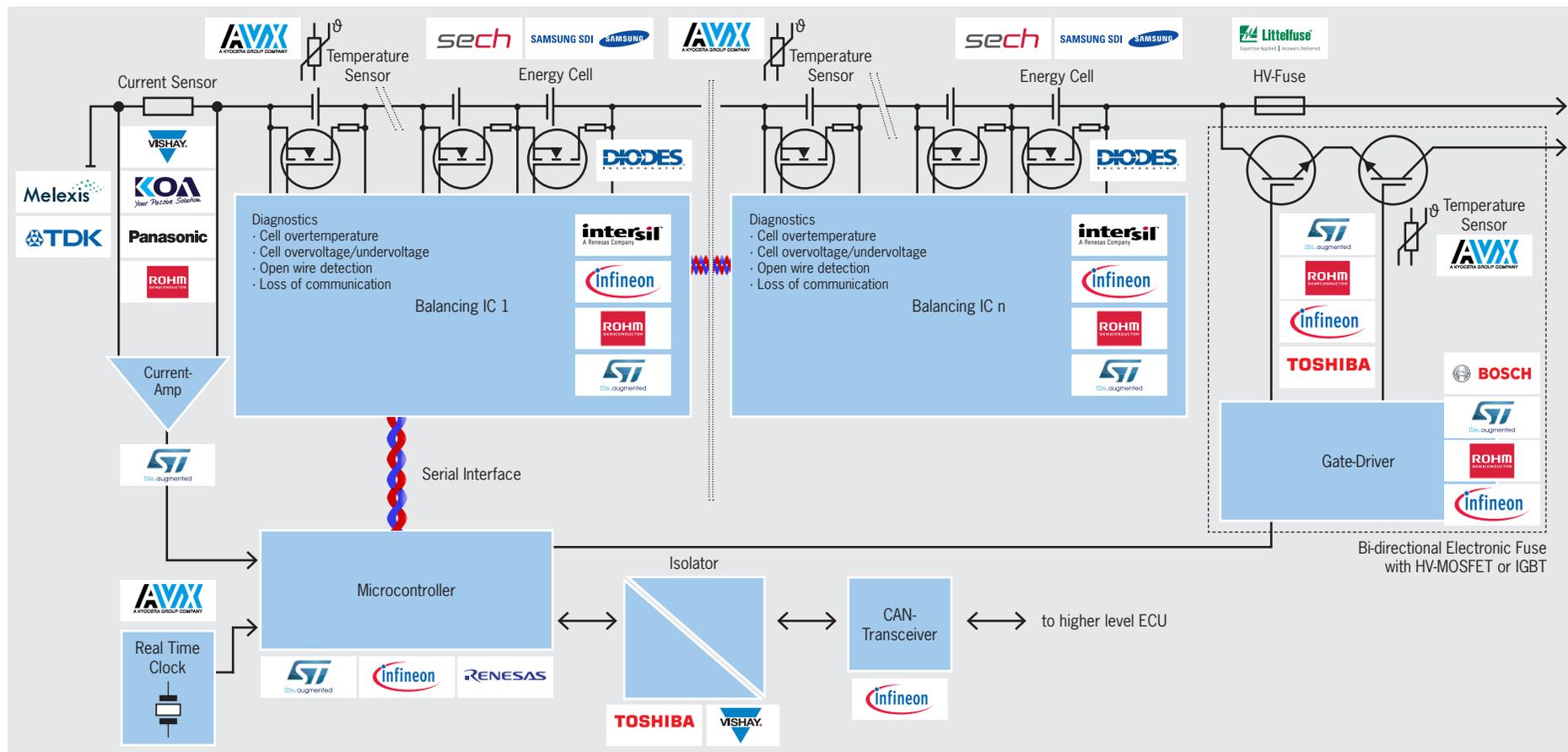




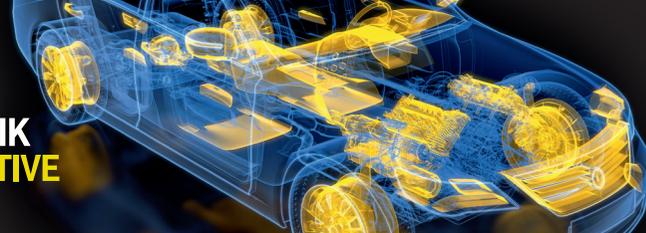
Discover Innovation in Motion

# AUTOMOTIVE Products

## Battery Cell Management



**APPLICATIONS:** Battery packs for electric vehicles, on-board chargers  
**FEATURES:** Supervision of individual cell, Functional Safety up to ASIL-D  
**BENEFITS:** Charging to 100% capacity, more mileage, longer lifetime


**Battery Cell Management**

Manufacturer	Series/Type	Type	Features
<b>Balancing IC</b>			
Renesas/Intersil	ISL78600/ISL78610	ISL78600/ISL78610	For up to 12 Li-Ion cells, daisy chaining for up to 168 cells
ROHM	BD14000	BD14000EFV	For up to 6 EDLC (Ultracapacitors)
Infineon	TLE800x, TLE901x	TLE800x, TLE901x	For up to 12 cells
ST	L9963	L9963	For up to 14 cells

**Energy Cell**

Samsung SDI	Li-Ion Chemistry	Shape 18650	World leading manufacturer, capacities up to 3.5 Ah per cell
Sech	Ultracapacitor	Cylindric, pouch	Up to 3 VDC, up to 3200 F

**Current Sensor**

Vishay	Power Metal Strip®	Series WSBS, WSMS, WSBM	Up to 36 W, R down to 50 µΩ
KOA	HSAN2P4015		Up to 36 W, R down to 100 µΩ, Kelvin connections
Infineon	TLE4998C		Hall-Sensor for bidirectional high current measurement
TDK-Micronas	CUR4xxx		Hall-Sensor for bidirectional high current measurement
Melexis	MLX912xx	MLX912xx	Hall-Sensor for bidirectional high current measurement

**Current Amp**

ST	High Precision OpAmp	TSZ12x	RRIO, chopper stabilized, low offset 5 µV
ST	Precision OpAmp	TSX71x	RRIO, precision, 200 µV offset
ST	bi-directional, high-side	TSC201	

**Balancing MOSFET**

DIODES	Single N-Channel	DMN1019USNQ, DMN2014L-HABQ	Small Package, SC59, DFN1616
DIODES	Dual N-Channel	DMN2014LHABQ	Small Package, DFN2030
DIODES	Single P-Channel	DMP21D0UFBQ	Small Package, DFN1006
DIODES	Dual P-Channel	DMG1023UVQ	Small Package, SCT563

**HV-Fuse**

Littelfuse	LC-OHEV / Low Current HEV	OHEVxxx.ZX	Cartridge, Bolt Down or Blade, 10-50 A, 425/450/475 VDC
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Manufacturer	Series/Type	Type	Features
<b>HV-Fuse</b>			
Littelfuse	HC-SHEV / High Current HEV	SHEVxxx.ZXBD	M6 Bolt Down, 60-125 A, 450 VDC

**Isolator/Coupler**

Toshiba	Opto coupler, TLX93xx		IC-Output, 1 Mbps bis 20 Mbps, 125 °C
Toshiba	Opto coupler, TLX92xx		Transistor-Ausgang, 3750 Vrms, 80 V VCE, 125 °C
Vishay	Inductive coupler	VOMA617A	Transistor-Ausgang, 3750 Vrms, 80 V VCE, SOP-4

**Microcontroller**

Renesas	32-Bit RH850	RH850/F1x, P1x	Safety up to ASIL-D, AUTOSAR available, 40 nm technology
ST	32-Bit PowerArchitecture™ SPC5	SPC57, SPC58	Safety up to ASIL-D, AUTOSAR available, 55/40 nm technology
Infineon	32-Bit AURIX™	SAK-TC2xx	Safety up to ASIL-D, AUTOSAR available

**Real Time Clock, RTC**

AVX		KR3225Y	I <sup>2</sup> C-Interface, integrated crystal
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**HV Gate Driver**

ST	STGAP1AS	STGAP1AS	Single channel galvanically isolated gate driver with diagnosis
ROHM	BM6xxx	BM60014, BM60016	Single channel galvanically isolated gate driver with diagnosis
Infineon	EiceDRIVER™	1EDxxx, 2EDxxx	Single & dual channel isolated gate drivers with diagnosis

**HV IGBT**

Infineon	TRENCHSTOP™ 5 AUTO	IKx, AUIRGx	600 V ... 1200 V
ST	PowerMESH	STGxx	300 V ... 650 V

**HV-MOSFET**

Infineon	OptiMOS™, CoolMOS™	IPx65Rxxx	comprehensive 20 V to 650 V portfolio
ST	STripFET™, MDmesh™ DM2		
ROHM		e. g. R6020PNJFRA	up to 600 V