Infineon's industrial microcontrollers, power and sensor components complement each other

Power MOSFETs
Microcontroller
Driver ICs
Sensors

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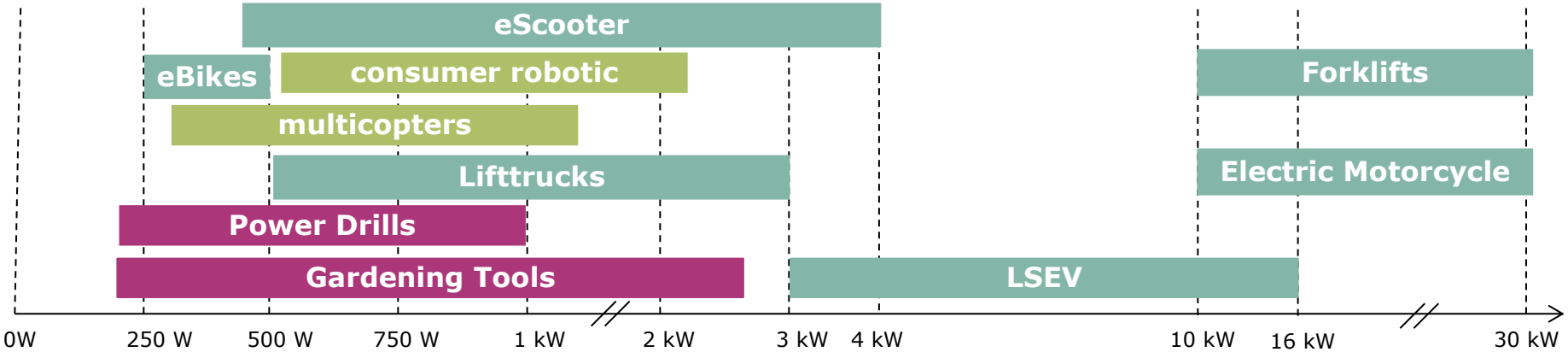
Scope
Battery powered applications

Low Power		High Power
Home & Professional	**Consumer Robotics**	**Light Electric Vehicle**
power tools, gardening tools, commercial multicopters, cordless home appliance, cordless vacuum cleaners, healthcare equipment	Consumer multicopters, vacuum robots, RC toys, service robotics, household robotics and other consumer robots	eScooter, eBike, electric wheelchair, electric forklift, low speed cars (LSEV), electric motorcycle, other battery vehicles



Continuous power

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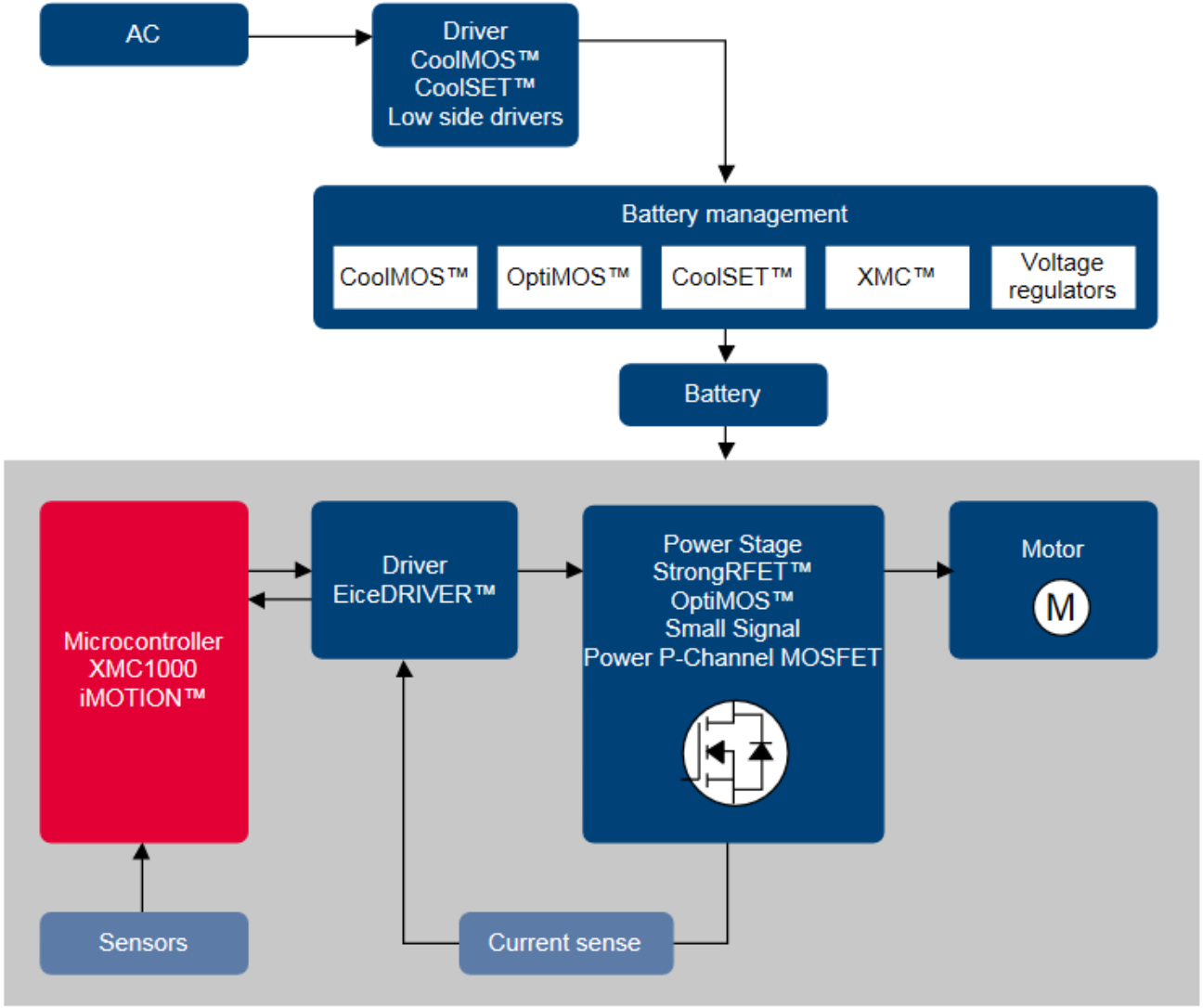
Typical system solution for service robotics



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Infineon´s product solutions for robotic vacuum cleaners and lawn mowers

Infineon Product Offering		Robotic Vacuum Cleaners	Robotic Lawn Mowers
Supply Voltage		7.2 V - 24 V	18 V – 36 V
MOSFET OptiMOS™ StrongIRFET™	**Voltage**	25 V - 40 V	30 V – 60 V
	Package	PQFN 3x3 SuperSO8 5x6 DPAK DirectFET™ S/M-Can	SuperSO8 DPAK DirectFET™ S/M/L-Can D2PAK
CoolMOS™ CE / P6	**Voltage**	500 V – 650 V	500 V – 650 V
	Package	TO220, TO220FP	TO220, TO22FP
Driver ICs EiceDRIVER™C		6EDL04N02PR, 2EDL05N06*, 2EDL23N06, IRS200x, IRS2187, IRS2301, IR2136x	6EDL04N02PR, 2EDL05N06*, 2EDL23N06, IRS200x, IRS2187, IRS2301, IR2136x
Microcontroller XMC iMotion		XMC 1000 IRMCK099M	XMC 1000 XMC 4000
Sensors		TLI496x, TLV4961, TLE5009, TLI5012B	TLI496x, TLV4961 TLE5009, TLI5012B
Battery charger (primary side)		CoolSET .dp	CoolSET .dp
Voltage regulators		IFX1763, IFX54211	IFX1763, IFX54211
Small Signal MOSFET (Both P & N channels)	**Voltage**	20 V,30 V & 60 V	30 V & 60 V
	Packages	TSOP6, SC59/SOT23, SOT363	SOT223,TSOP6,SC59/SOT23
Power P-channel	**Voltage**	20 V, 30 V & 60 V	30 V & 60 V
	Packages	PQFN 3x3, SuperSO8, DPAK	PQFN 3x3, SuperSO8, DPAK

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DirectFET™
The optimum power MOSFET package

Strong	More power with OptiMOS™ and StrongIRFET™
Easy	Control method enabled by microcontrollers (XMC™) & GUI quick software implementation through DAVE™ apps
Quiet	Motor control by powerful microcontrollers (XMC™) and sensors
Light	Lowest $R_{DS(on)}$ allows for the highest power density and reduces weight of cooling elements. Small Signal & PowerFETs
Design	Low overshoot, high current capabilities, compact packaging enabled by Small Signal & PowerFETs

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