Cordless power tools and chargers

Reliable. Handy. Innovative

www.infineon.com/battery-powered-tools
www.infineon.com/batterychargers

Contents

Full range of possibilities offered by Infineon to design efficient, robust and modern power tools supporting any work environment

A challenging application of power tools requires multiple products to address all of its functional blocks. Infineon has it all – from motor control, through BMS, charging, connectivity to sensing. Numerous product variations, packages, and features allow for finding the best fit for almost any power tools design.

Our engineers and marketers work closely with our customers. This enables a better understanding of application needs and allows the creation of new solutions that can shape the way power tools will perform in the future.

We address all types of cordless power tools, whether brushed or brushless, and our product offering covers all voltage classes.

As each of those categories may have different requirements in terms of motor control, thermal management, ergonomics, battery safety or additional features, such as communication or security, it is crucial to have good system understanding that allows using using the right type of electronic components that would optimize final tool performance.

Infineon's solutions and their benefits for emerging trends affecting cordless power tools

Power drive

Infineon offerings can support all power tools system requirements.

Whether it's power density, thermal management or higher voltage, Infineon addresses all these power tools specific challenges. With the wide variety of voltages, all power tools voltages ranging from 3.6 V to 120 V can be addressed. High current rating allows increased current carrying capability and withstanding high surge current during in-rush, locked rotor, and braking. MOSFETs come in a variety of sizes SuperS08, sTOLL, DirectFET, sTOLL or D^2PAK. Best-in-class technology OptiMOS™ series would offer state-of-the-art low $R_{DS(on)}$, optimized charge ratio and industry's best figure of merit for high-performance applications. StrongRFET™ product line, on the other hand, provides an excellent price/performance ratio for a variety of motor drive use cases.

Every switch needs a driver, as the right driver makes a difference. Power electronics applications employ power device switches. And power device switches require optimum gate drive solutions. That's why we offer more than 500 EiceDRIVER™ gate driver IC solutions suitable for any power switch and any application.

Our EiceDRIVER™ gate drivers provide a wide range of typical output current options, from 0.1-A up to 10-A. Robust gate drive protection features, such as integrated bootstrap diode (BSD), over current protection, shutdown, fault reporting, enable input filter, OPAMP, DESAT, programmable dead time, shoot-through protection, active miller clamp, active shutdown, separate sink and source outputs, short circuit clamping, soft shutdown, two level turn off, galvanic isolation (functional, basic and reinforced), etc.

For the motor control, Infineon 32bit M0 XMC™ and PSoC™ microcontrollers offer peripherals like inverter PWM generators (CCU8) or Motor Control Position Interface (POSIF) supporting hall, linear or quadrature rotary encoders. Real-time enhancement and performance are supported by Motor control specific MATH co-processor with 96% Cosine / 84% division cycle savings, Event Request Unit, which enables interconnection between analog, PWM and sensor interface peripherals, high-speed peripherals up to 2x core clock speed or PSMC FOC Motor library.

Charging solutions

Infineon's portfolio of power switches and controllers extends from cost-performance oriented solutions to ultra-high efficiency topologies, allowing designers to select the most appropriate implementation for the charger design.

Flyback topology

The flyback converter is the most common DC-DC topology for chargers due to its simplicity and cost. Infineon's offering includes CoolMOS™ superjunction MOSFETs that are designed to address the needs of this topology. The CoolMOS™ P7 series delivers low switching losses, excellent thermal behavior and best price performance. The OptiMOS™ power MOSFETs offer the industry's lowest $R_{DS(on)}$ and are an ideal candidate for the synchronous rectification FET and load switch in the topology.

The **REF_ICC80QSG_84W1_BPA** is Infineon's 84 W reference design for battery chargers and combines a single 700 V superjunction MOSFET (IPN70R450P7S) with the battery charging IC ICC80QSG in the quasi-resonant (QR) flyback topology. The design offers an optimized BOM and achieves a broad 9 – 21 V output voltage and efficiency of more than 90 percent at full-load condition. The design comes with technical documentation such as PCB layouts, schematics and bill of materials (BOM) and full characterization report in order to accelerate time-to-market and avoid design risk.

Hybrid flyback topology

The digital controller XDP™ XDPS2201 is ideally suited for the hybrid-flyback (HFB) topology, which combines the simplicity of flyback with the performance of resonant converters. This controller offers integrated protection features such as dual-level overcurrent and output overvoltage in order to ensure that the charger keeps both the battery and the end consumer safe during charging.

Infineon acknowledges the trend of using a USB-C PD port for charging power tool batteries and offers the **DEMO_XDPS2201_65W1**, a 65 W USB-PD charger demo board. It operates from a universal AC input and uses the XDP™ digital power XDPS2201 controller together with two CoolMOS™ superjunction MOSFETs in the HFB topology. The reference design demonstrates both a high power density of 31 W/in³ and high efficiency of 93.8 percent.

LLC or LCC topology

Battery chargers with a power range of a few hundred watts typically employ LLC or LCC resonant converter topologies with a power factor correction (PFC) stage. Such designs can take advantage of the ICL5102 integrated combo IC which is designed to drive and control the boost PFC and resonant HB topology (LLC or LCC) together. By utilizing the coreless transformer technology, the IC can handle a high bus voltage of 650 V and supports a maximum operating frequency of 500 kHz, enabling a size reduction of the transformer. The 600 V CoolMOS™ P7 superjunction MOSFET family is an ideal match for the combo controller.

Why Infineon for power tool chargers?

Advanced power switch technologies	Innovative controller ICs for safe and cost-efficient charging	Extensive support for accelerated time-to-market
› CoolMOS™ P7 is best fit for battery chargers in terms of thermal efficiency, ease-of-use and price / performance	› Broad portfolio covering different topologies	› AC-DC demo boards for power tool battery charger
› OptiMOS™ 5 power MOSFETs with industry leading $R_{DS(on)}$ for synchronous rectification and battery switch	› Integrated features for optimized BOM	› Global network of on-site experts
› CoolGaN™ 600 V GIT HEMTs for high power density designs	› Immune against negative transient voltages	› Online support with community forum, app notes, whitepapers and webinars

Let’s get connected

Connectivity in power tools is becoming ever more important. It opens a new area of possibilities, such as individual tools set up, lost tool location, or remote battery diagnostics. Infineon’s portfolio includes a broad family of secure, robust solutions for bringing great products faster to market.

Our solutions integrate IEEE 802.11a/b/g/n/ac/ax Wi-Fi and Bluetooth® 5.2 in a single-chip solution to enable small-form-factor IoT designs. Combo, standalone Wi-Fi, and Wi-Fi SOCs with embedded MCU and on-chip networking capabilities are also offered in 1x1 SISO and 2x2 MIMO configurations. Wi-Fi and combo solutions can be coupled with external MCUs from Infineon and others for RTOS and Linux on application processors to implement a complete Wi-Fi + Bluetooth®/BLE system.

Secure authentication can work as a protection against the use of unauthorized batteries, which can be a potential safety hazard both to end customers and appliance – non-OEM batteries can cause catastrophic damage and injury.

Counterfeit batteries impair application use case, lifecycles and overall OEMs supply chain. Also, introducing new, high capacity batteries, quick charging and wireless charging pose higher risks for counterfeit battery accidents. OPTIGA™ family solutions alleviate above problems and ensure authorized battery ID and usage. Its features cover, among the others elliptic curve cryptography (131 bit key), unique 96 bit identifier (UID), public key certified by ODC-163 based digital certificate, auto-kill security feature for protected end of life. The OPTIGA™ is an easy to implement, full turnkey solution with SWI interface which can work in various temperature environment.

That makes sense

The modern power tools application requires multiple sensor types. Infineon XENSIV™ sensors are exceptionally precise thanks to industry-leading technologies. Our benchmark and innovative magnetic sensor portfolio is the perfect fit for various customer applications, including cordless power tools.

We offer all magnetic sensor technologies with in-house production. Infineon's XENSIV™ magnetic sensors combine the highest accuracy with proven quality and more than 40 years of experience in sensing solutions. Generally, magnetic sensors are able to detect magnetic fields and process this information. The outcome on the position, angle and strength (Hall-effect) or the direction (Magneto Resistive) of an applied magnetic field can be converted into specific output signals.

Our magnetic sensor portfolio comprises:

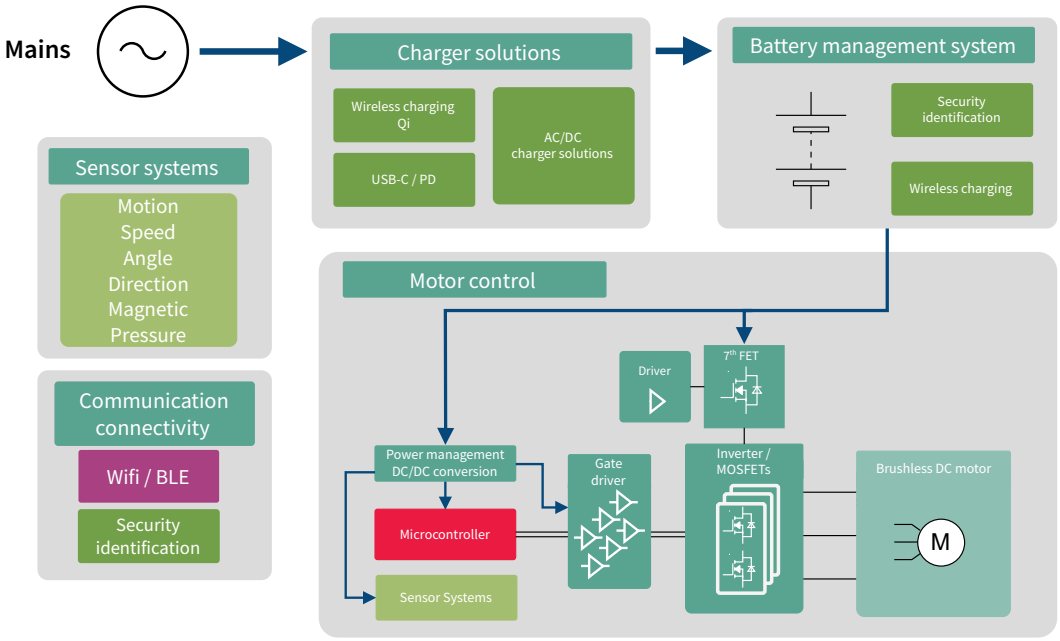
- Hall switches
- Linear Hall sensors
- Angle sensors
- 3D Hall sensors
- Magnetic speed sensors with different field of application

Furthermore, our portfolio comprises XENSIV™ current sensors which are high precision coreless sensors dedicated for any kind of industrial applications, such as industrial inverters and drives or battery management. Our well-established and robust monolithic Hall technology enables accurate and highly linear measurement of currents with a full scale up to 120 A. Negative effects, like saturation and hysteresis, commonly known from core-based sensor techniques, are not present in the Infineon open loop, coreless sensors principle.

Infineon – your one-stop-shop for broad service cordless power tools portfolio

We at Infineon always welcome innovative ideas and challenging projects. Refer to the following portfolio table and convince yourself of our broad offering. Listed are our key enabling parts for reliable chargers, efficient power/battery management, compact motor control, indispensable sensors, security and more.

Cordless power tool system diagram



Charger and SMPS		Motor control				
Switches	Gate drivers and controller ICs	Microcontroller	Sensors	Gate driver	MOSFETs	Others
› CoolMOS™ › OptiMOS™ › CoolSiC™ › CoolGaN™	› EiceDRIVER™ › Battery charging ICs	› XMC1000 › XMC4000 › PSoC™ 4 › PSoC™ 6 › AURIX › iMotion	› Hall switches › Angle Sensor › Pressure Sensor › 3D magnetic Sensor	› EiceDRIVER™	› OptiMOS™ › StrongIRFET™ › CoolMOS™ › CoolSiC™ › CoolGaN™ › Small Signal	› Voltage Regulator › DCDC Converter
Wireless charging	USB-C solutions					
	› USB-C ICs					

Battery management (BMS)			Connectivity		Security	Sensors
Monitoring + Balancing IC and MCU	MOSFETs	Gate driver ICs	Wi-Fi	Bluetooth®	Authentications ICs	Environmental sensing
› TLE9012 › TLE9015 › XMC™ › PSoC™	› OptiMOS™ › StrongIRFET™ › Small Signal	› EiceDRIVER™	› CYW4373 (1x1 dual-band Wi-Fi 5) › CYW43439 (1x1 2.4GHz Wi-Fi 4)		› OPTIGA™ Trust B › OPTIGA™ Trust M	› Pressure Sensor › 3D Sensing

Infineon's offering for cordless power tools

Charger

Product family	Voltage class [V_{DS} max]	Package	Part number	$R_{DS(on),max.}$ @V_{GS}=10 V [mΩ]
CoolMOS™ SJ MOSFET P7	600	DPAK	IPD60R600P7S	600
			IPD60R360P7S	360
			IPD60R280P7S	280
			IPD60R180P7S	180
		SOT-223	IPN60R600P7S	600
			IPN60R360P7S	360
		TO-220FP	IPA60R280P7S	280
			IPA60R180P7S	180
	700	DPAK	IPD70R360P7S	360
			IPD70R600P7S	600
		SOT-223	IPN70R600P7S	600
			IPN70R360P7S	360
		TO-220FP	IPA70R600P7S	600
			IPA70R360P7S	360
	800	DPAK	IPD80R600P7	600
			IPD80R360P7	360
		TO-220FP	IPA80R600P7	600
			IPA80R360P7	360
OptiMOS™	100	TO-220	IPP045N10N3 G	4.5
	150	D2PAK	IPB048N15N5	4.8
		TO-220	IPP051N15N5	5.1
StrongIRFET™	100	TO-220	IRFB4110PBF	4.5
	150	TO-247	IRFP4568	5.9
CoolSET™	800	DSO-12	ICE5QR0680AG	800
			ICE5AR0680AG	800
CoolGaN™	600	PG-HSOF-8-3	IGT60R070D1	70
CoolGaN™ IPS	600	QFN 8x8	IGI60F1414A1L	190
PWM flyback controllers	ICC80QSG, XDPS2201			
LLC / LCC combo-controller	ICL5102			
USB-C PD charger	EZ-PD™ PAG1P, PAG1S			
Gate Driver ICs	EiceDRIVER™: 2EDS8265H, 2EDN852x			
USB-C PD charging	Find more USB-C power delivery solutions at: www.infineon.com/USB-PD			
Wireless charging	Find wireless charging portfolios for inductive and resonant solutions at: www.infineon.com/wirelesscharging			

Battery Management

Product family	Voltage class [V_{DS} max]	Package	Part number	$R_{DS(on),max.}$ @V_{GS}=10 V [mΩ]
OptiMOS™	40	SuperSO8	BSC026N04LS	2.6
	60	TD-SON-8	BSC028N06NS	2.8
		HSOF-8-1	IPT007N06N	0.75
	100	TO-220-3	IPP045N10N3 G	4.5
		D^2PAK 7pin	IPB017N10N5LF	1.7
		D^2PAK	IPB020N10N5LF	2.0
			IPB033N10N5LF	3.3
StrongIRFET™	30	DPAK	IRLR8726	5.8
		PQFN	IRFH8311	2.1
	40	DirectFET	IRL7472L1	0.45
		PQFN	IRFH7440	2.4
		TO-220	IRF1404Z	3.7
			IRFB7437	2.0
			IRFB7434	1.6
		DirectFET2	IRF7739L1	0.7
		TO-220	IRFB7440	2.5
	75	TO-220	IRFB7730	2.2
Small Signal MOSFETs	20	SOT-23	IRLML6244	21
		TSOP-6	BSL202SN	22
		SC59	BSR802N	23
	60	SOT-89	BSS606N	60
	100	SOT-223	BSP373N	240
	-20	TSOP-6	BSL207SP	41
		SOT-23	IRLML2244	54
	-30	SOT-23	BSS308PE	80
	-60	SOT-223	BSP612P	130
Gate Driver ICs	EiceDRIVER™: 2EDN752x, 1EDN751x			
	High voltage gate drivers 200 V - 600 V: 6ED003L02-F2, 6ED003L06-F2, 6EDL04N02PR, 6EDL04N06PT, 2EDL05N06PF, 2ED2304S06F, IRS2005S, IRS2005M, IRS2007S, IRS2008S, IRS2011S			
Microcontroller XMC1000 family	XMC1100			
Voltage regulators: LDO and DCDC switching regulators	IFX1763, IFX54441, IFX54211, IFX30081, IFX90121, IFX91041			

Motor control

Product family	Voltage class [V_{DS} max]	Package	Part number	$R_{DS(on),max.}$ @V_{GS}=10 V [mΩ]
OptiMOS™	25	PQFN 3.3x3.3 Source-Down	BSC010N04LSI	0.65
	30	PQFN 3.3x3.3	ISZ040N03L5IS	4.0
		SuperSO8	ISC019N03L5S	1.9
			ISC045N03L5S	4.5
	40	SuperSO8	ISC015N04NM5	1.5
			ISC019N04NM5	1.9
			ISC028N04NM5	2.8
			ISC036N04NM5	3.6
		PQFN 3.3x3.3	BSZ025N04LS	2.5
		PQFN 3.3x3.3 Source-Down	IQE013N04LM6	1.35
		sTOLL	IST007N04NM6	0.7
	60	SuperSO8	BSC014N06NS	1.45
			BSC027N06LS5	2.7
	80	PQFN 3.3x3.3	BSZ110N08NS5	11
		Super SO8	IPB017N08N5	2.6
		D^2PAK	IPT012N08N5	1.7
		TOLL	IPB017N08N5	1.2
	100	TOLL	IPT015N10N5	1.5
		D^2PAK	IPB020N10N5	2
	120	SuperSO8	BSC080N12LS G	8.0
	150	SuperSO8	BSC074N15NS5	7.4
		PQFN 3.3x3.3	BSZ300N15NS5	30
	200	TOLL	IPT111N20NFD	11.1
	-30	DPAK	IPD042P03L3 G	4.2
		SO8	BSO200P03S H	20
	-60	D^2PAK	IPB110P06LM	11
		DPAK	IPD380P06NM	38
StrongIRFET™	30	PQFN 3.3x3.3	IRLHM630	3.2
	40	PQFN 3.3x3.3	BSZ063N04LS6	6.3
		DPAK	IRFR7446PbF	3.9
		DirectFET ME	IRF7480M	1.2
		DirectFET MF	IRF7483M	2.3
		SuperSO8	IRFH7084	1.25
			IRFH7004	1.4
			IRFH7440	2.4
	60	SuperSO8	IRFH7085	3.2
	-30	PQFN 2x2	IRFHS9301	37
		SO8	IRF9321	7.2
		SuperSO8	IRFH9310	4.6
	40/40	SuperSO8	IRF40H210	1.7
	30/-30	SO8	IRF9389	N27, P64
	-30/-30	SO8	IRF9362	P21, P21

Product family	Voltage class [V_{DS} max]	Package	Part number	$R_{DS(on),max.}$ @V_{GS}=10 V [mΩ]
Small Signal MOSFETs	20	SOT-23	IRLML6244	21
		TSOP-6	BSL202SN	22
		SC59	BSR802N	23
	30	SOT-23	IRLML00130	27
		SOT-23	BSS306N	57
	40	SOT-23	IRLML0040	56
	60	SOT-89	BSS606N	60
		SOT-23	IRLML0060	92
	100	SOT-23	IRLML0010	220
		SOT-223	BSP373N	240
	-20	TSOP-6	BSL207SP	41
		SOT-23	IRLML2244	54
	-30	SOT-23	IRLML9301	64
		SOT-23	BSS308PE	80
Gate Driver ICs	EiceDRIVER™ 1EDN7550, 2EDL811x			
	High voltage gate drivers 200 V - 600 V: 6ED003L02-F2, 6ED003L06-F2, 6EDL04N02PR, 6EDL04N06PT, 2EDL05N06PF, IRS2005S, IRS2005M, IRS2007S, IRS2008S, IRS2011S			
	Integrated gate drivers ICs: IFX9201/2, NovalithIC™ BTN8982TA, Trilith IC BTM7752G			
	Automotive Embedded Power ICs: TLE986x family, TLE987x family			
Microcontroller XMC1000/4000 families	XMC1100, XMC1200, XMC1300, XMC1400, XMC4200, XMC4400, XMC4500, XMC4700, XMC4300, XMC4800			
iMOTION™	IRMCK099M, IMC101T-T038, IMC101T-Q048, IMC101T-F064			
Hall switches	TLE496x: TLI4961-1M, TLI4963-1M			
Angle sensor	TLI5012B, TLE5501			
Current sensor	TLI4971			

Sensors and peripherals

Product family	Part number
Hall switches	TLE496x: TLE4964-1M, TLI4965-5M
Angle sensor	TLI5012B, TLE5501
Interface	Industrial CAN transceiver IFX1050, IFX1051
ISOFACE™ industrial interface ICs	ISO1H81xG family, ISO2H823V, ISO1I81xT family
PROFET™ Smart high side switches	BTT6200-4EMA, BTT6200-1EJA, BTT6100-2EKA, BTT6050-1EKA, BTT6050-2EKA, BTT6030-2EKA, BTT6030-1EKA, BTT6030-2EKB, BTT6020-1EKA, BTT6010-1EKA, BTT6010-1EKB
XENSIV™ Pressure sensor	DPS310, DPS422
XENSIV™ 24GHz radar	BGT24M/L family
XENSIV™ MEMS microphone	IM69D130
Class D Audio Amplifier	IR43x1M, IR43x2M
Security device authentication, data and IP protection	OPTIGA™ family: OPTIGA™ Trust X SLS32AIA..X4, OPTIGA™ Trust B SLE 95250, OPTIGA™ TPM
LNAs	BFP842ESD, BFR840L3RHESD, BFR843EL3
LED drivers	Linear driver ICs: BCR3xx family, BCR4xx family
	DCDC switch mode: ILD4xxx family, ILD6xxx family

Connectivity and HMI

Product family	Part number
PSoC™ 6 Microcontrollers	PSoC™ 61: Programmable line (single Cortex®-M4)
	PSoC™ 62: Performance line (dual-core Cortex®-M4/M0+)
	PSoC™ 63: Connectivity line (integrated BLE 5 radio)
	PSoC™ 64: Security line (integrated application security)
PSoC™ 4 Microcontrollers	PSoC™ 4000: Entry-level (CapSense MCU)
	PSoC™ 4100: Intelligent analog (+programmable analog blocks)
	PSoC™ 4200: Programmable digital (+programmable digital blocks))
	PSoC™ 4700: Sense anything (+inductive-sensing)
Wi-Fi + Bluetooth® Radios	CYW4373E: 1X1 DB 802.11ac + dual-mode Bluetooth®
	CYW4343W: 1X1 802.11n + dual-mode Bluetooth®
Wi-Fi MCU Platform	Explore PSoC™ 6 Wi-Fi Host MCU + CYW43x Solutions
Dual-Mode Bluetooth® SoCS	CYW20819: Ultralow-power Cortex®-M4. Bluetooth®-Mesh-compliant
	CYW20735: Cortex®-M4 with internal PA. Bluetooth®-Mesh-compliant
	CYW20706: Cost-optimized Cortex®-M3. Bluetooth®-Mesh-compliant
Bluetooth® LE only SoCs	PSoC™ 63 BLE: Dual-core Cortex®-M4/M0+ with rich peripherals
	PSoC™ 4 BLE: Cortex®-M0 with rich peripherals
	CYW20736: Cost-optimized Cortex®-M3
OPTIGA™	OPTIGA™ Trust M SLS32AIA: secured communication to the cloud or other devices
3D Magnetic sensor	TLx493D, TLI493D-A2B6, TLE493D-A2B6, TLE493D-W2B6 A0

[1] Note that only key enabling products are listed here. For complete portfolio, please visit www.infineon.com/battery-powered-tools.
Through this page, you will be linked to different product pages offering the full portfolio of the specific products you are interested in.

The right MCUs for your application

Cordless Power Tools	Battery Pack	Battery Charger
		
Microcontroller family		
XMC1400, PSoC™ 4, PSoC™ 6	PSoC™ 4	XMC1000, PSoC™ 4
Benefits and key functions		
› XMC1400 – Arm® Cortex®-M0 – MATH co-processor – Programmable ADC gain › PSoC™ 4500S – Arm® Cortex®-M0 – Cordic and SQRT co-processor – Programmable gain amplifier › Low power PSoC™ 6 – Arm® Cortex®-M4 – Op-amp/CMPs – Low power Wi-Fi/BLE	› PSoC™ 4 series – Arm® Cortex®-M0 – Programmable gain amplifier – Low power	› XMC1400 – Arm® Cortex®-M0 – MATH co-processor – programmable ADC gain › PSoC™ 4500S – Arm® Cortex®sw-M0 – Cordic and SQRT co-processor – Programmable gain amplifier – Low power

Choosing iMotion™, XMC™, AURIX™ or PSoC™ for motor control

	iMOTION™	XMC™	PSoC™ 4	PSoC™ 6	AURIX™
	› Turnkey solution (MCE 2.0) › IRMCK099 › IRMCK1xx/F1xx › IMC100/300 › Ready2use motor control › Integration with controller and drivers › Customer need a “ready-to-go” solution	› Arm® Cortex®-M based MCU › XMC1000 – Cortex M0 MCU (48MHz-) › XMC4000 – Cortex® M4F MCU (144MHz-) › Customer have the knowledge of motor control SW › DAVE 4.0 Apps available for Motor Control FOC, BLDC, PMSM and more › SW security libraries protection	› CM0+ 48MHz › Up to 384k Flash, 32k SRAM › Customer have the knowledge of motor control SW	› Dual Core - CM4F 150MHz, CM0+ 100MHz › Up to 2M Flash, 1M SRAM › Enhanced TCPWM (P6-256k) › Customer have the knowledge of motor control SW	› TriCore™ based MCU › AURIX™ – up to 3x multicore (300MHz-) › AURIX™ – up to 6x multicore (300MHz-) › Customer have the knowledge of motor control SW › SW security libraries protection › Functional Safety ASIL-x
					
Does the customer write their own motor control SW?	–	✓	✓	✓	✓
Does the customer want standalone driver and controller?	–	✓	✓	✓	✓
Does the customer need SW update and security features?	–	✓	✓ / –	✓ / ✓	✓
Is functional safety required (e.g. SIL-x) for the application?	IEC60730 Class B	IEC60730 Class B	IEC60730 Class B	IEC60730 Class B	✓ (up to ASIL-D)
Low power consumption	Low power	Low power	Low power	Ultra low power	–
CPU performance	Medium	Medium to High	Medium	High to very high	Highest
Especial Features	PFC option Integrated with gate drivers and power switches	Robustness Peripherals tailored for motor control	IoT features	IoT features	Automotive qualified

Demoboards and evaluation kits

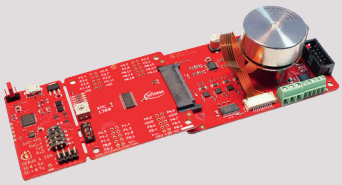
Find the right board or evaluation kit for the development, prototyping and testing of your future battery powered tools applications.

Battery charger

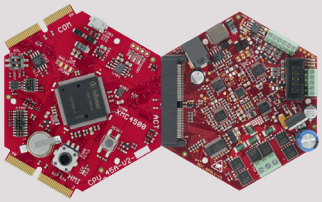
84 W power tool charger

65 W USB-C adapter

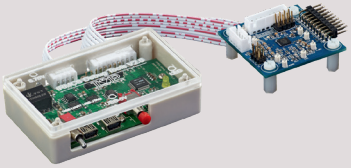
Microcontrollers



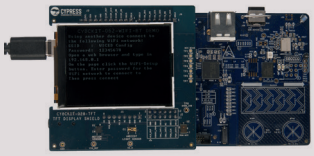
XMC1000 motor control application Kit



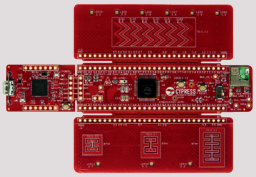
XMC4400 motor control application Kit



iMOTION™ modular application design kit (EVAL-M1-099M)

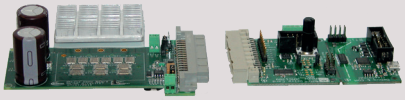


PSoC™ 6 WiFi-BT Pioneer Kit

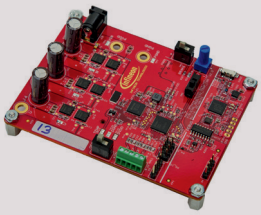


PSoC™ 4100S Plus Prototyping Kit

Motor drive

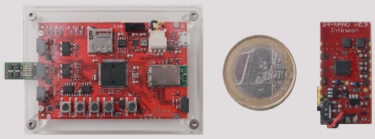


40 V Medium Can ME/MF DirectFET™ three-phase BLDC board

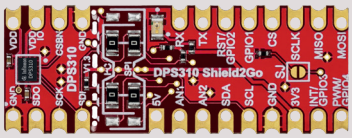


EVAL_6EDL7141_TRAP_1SH

XENSIV™ pressure sensors

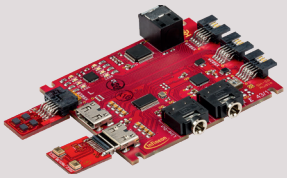


EVAL SHNBV01 Sensor hub nano

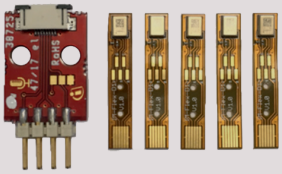


S2GO PRESSURE DPS310

XENSIV™ MEMS microphones

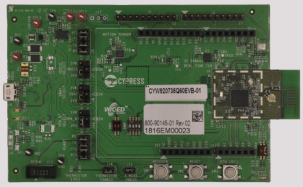


EVAL AUDIOHUBV01



EVAL_IM69D130_FLEXKIT

Wi-Fi/Bluetooth® Connectivity

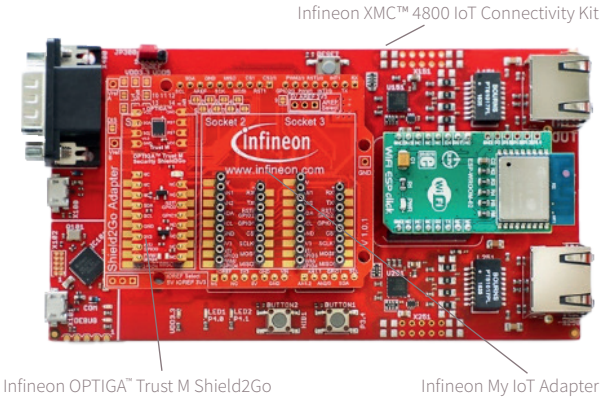


CYW20735 Bluetooth® Evaluation Kit

CYW4373E 802.11ac +
Dual-mode BT 5 Partner Module Kit

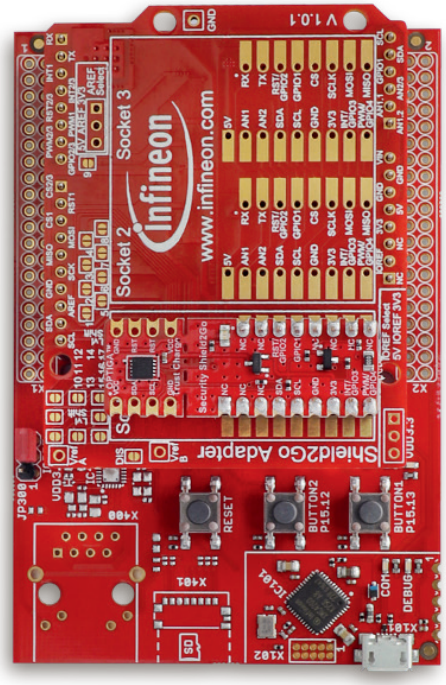
OPTIGA™ Trust M Evaluation Kit

Find the right board or evaluation kit for the development, prototyping, and testing of your future service robotics and AGV applications.



Evaluation Kit

- Showcasing application of OPTIGA™ Trust M
- Based on Infineon XMC™ 4800, My IoT adapter and OPTIGA™ Trust M Shield2Go
- Wi-Fi connectivity
- Software framework and application notes on GitHub



- The OPTIGA™ Trust Charge evaluation kit serves to **demonstrate the OPTIGA™ Trust Charge functionalities** and typical applications such as power transmitter authentication for wireless charging
- The evaluation kit allows users to **connect and explore** the OPTIGA™ Trust Charge through the I2C interface
- Customers can use the evaluation kit for **design-in or to evaluate** the features of the OPTIGA™ Trust Charge and receive a reference system for their own wireless charging application
- The evaluation kit combines our turnkey authentication solution with a powerful microcontroller:
  the evaluation kit is **based on the XMC4700 Relax kit with extension board** (My Iot adapter)
- **OPTIGA™ Trust Charge chip is included**
- Open source code makes integration easy and user friendly. Open source code and Getting Started Guide are **hosted on GitHub:**
  - https://github.com/Infineon/optiga-trust-charge
  - Includes an application note which shows a reference integration into a wireless charging system using Qi 1.3 protocol messages preparation
- **Ordering part number:** TRUSTCHARGEEVALKITTOBO1
- Website with more information:
  www.infineon.com/OPTIGA-Trust-Charge-kit

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Infineon distribution partners and sales offices:
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Infineon offers its toll-free 0800/4001 service hotline as one central number, available 24/7 in English, Mandarin and German.

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- India ..... 000 800 4402 951 (English)
- USA ..... 1-866 951 9519 (English/German)
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