



## New Product Introduction

August 2023

[MOTIX™ MCU embedded power IC-families TLE988x and TLE989x](#)

[Discrete 650 V TRENCHSTOP™ IGBT7 H7](#)

[EiceDRIVER™ 2EDL803X 120 V boot, 3 A / 4 A, junction-isolated high-side and low-side gate driver ICs](#)

[OptiMOS™ power MOSFETs 25 V - 150 V in PQFN 5 x 6 mm<sup>2</sup> Source-Down Center-Gate](#)

[600 V CoolMOS™ CFD7 superjunction MOSFET in QDPAK](#)

[650 V CoolMOS™ CFD7 superjunction MOSFET in QDPAK](#)

[TLE9371VSJ - CAN FD SIC](#)

[EZ-PD™ CMG2 – USB-C EMCA Controller](#)

[AIROC™ CYW5557x tri-band Wi-Fi 6/6E + Bluetooth® 5.3 Combo](#)

[AIROC™ IFW56810 Wi-Fi 4 Cloud Connectivity Manager Module](#)

[DEV KIT NGC1081](#)

[EVAL-2ED1324S12PM1](#)

[EVAL HB 2EDL803x G3C](#)

[EVAL HB 2EDL803x G4B](#)

[EVAL HB 2EDL803X G4C](#)

[EVAL TOLL 72VDC 2KW](#)

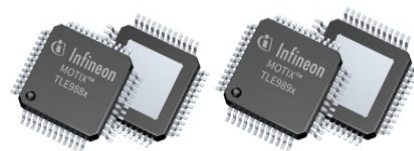
[KIT LGMB BOM004 - Kit master motherboard for low voltage drives scalable power demo board](#)

[KIT LGCAP BOM006 - Kit assembled capacitor board for low voltage drives scalable power demo board](#)

[KIT LGMB BOM504 - Kit master motherboard for low voltage drives scalable power demo board](#)

## MOTIX™ MCU embedded power IC-families TLE988x and TLE989x

The MOTIX™ MCU TLE988x and TLE989x devices utilize a B4 or B6 bridge N-channel MOSFET driver, respectively, an Arm® Cortex®-M microcontroller, and a CAN (FD) controller and transceiver (2 Mbps). Customers benefit not only from fast and robust communication but also from the highest computing performance thanks to the high system frequency (60 MHz) and its dual flash supporting read-while-write operation. Most of the MOTIX™ MCU TLE988x and TLE989x products are ISO 26262 (ASIL B) compliant and some variants have built-in cybersecurity. All of these features are offered in a 7 mm x 7 mm QFP package with a market-leading footprint. Two variants in LQFP package with 64 pins will follow in December 2023. MOTIX™ software, tools and services complete the product offering.



### Features

- > 32-bit Arm® Cortex® -M core at up to 60 MHz
- > Up to 256 kB FLASH, up to 32 kB RAM
- > 1x CAN FD protocol handler and transceiver
- > ISO26262 compliance (ASIL B)
- > Security: layered access right management, secured boot and key storage
- > Single power supply from 5.5 V to 28 V
- > 5 V voltage supply for external loads (e.g. hall sensor)
- > 2- and 3-phase bridge driver with charge pump and PWM generator for motors up to 1 kW
- > Adaptive MOSFET Control (AMC)
- > 1 current sense amplifier for motor current sensing via shunt
- > 1x 12-bit ADC with 19 inputs and 1x 10-bit ADC with 14 inputs
- > 14-bit sigma-delta ADC
- > Temperature range: Tj: -40°C up to 175°C

### Benefits

- > High performance (60 MHz clock frequency)
- > Optimized BOM and system control
- > Fast and robust communication
- > Functional safety (ASIL B) & cybersecurity features
- > Decreased switching losses and better EMC performance
- > Easy design-in-software & comprehensive ecosystem available

### Target applications

- > Fuel pump, oil pump, electric coolant pump
- > Power sliding door
- > eBike (with companion chip MOTIX™ TLE9140EQW)
- > Any other low voltage motor control applications that require MOTIX™ MCU embedded power SoC with CAN

### Product collaterals / Online support

[Product page TLE988x](#)

[Product page TLE989x](#)

### Product overview incl. data sheet links

OPN	SP Number	Package
<a href="#">TLE98912QTW60XUMA1</a>	SP004783930	PG-TQFP-48
<a href="#">TLE98912QTW61XUMA1</a>	SP004783934	PG-TQFP-48
<a href="#">TLE9891QTA61XUMA1</a>	SP005060528	PG-TQFP-48
<a href="#">TLE98932QTA62XUMA1</a>	SP004783980	PG-TQFP-48
<a href="#">TLE98932QTA62SXUMA1</a>	SP004783950	PG-TQFP-48
<a href="#">TLE98932QTW62SXUMA1</a>	SP004783954	PG-TQFP-48
<a href="#">TLE98812QTW60XUMA1</a>	SP004783916	PG-TQFP-48
<a href="#">TLE98832QTW62SXUMA1</a>	SP004783926	PG-TQFP-48
<a href="#">TLE9883QTA62XUMA1</a>	SP004783920	PG-TQFP-48
<a href="#">TLE9893-2QK EVALKIT</a>	SP005909991	
<a href="#">REF_COOLANTPUMP150W</a>	SP005926027	
<a href="#">TLE989X EVALB_LQFP</a>	SP005557434	
<a href="#">TLE989X EVALB_TQFP</a>	SP005557432	
<a href="#">UIO STICK V2</a>	SP005745951	

## Discrete 650 V TRENCHSTOP™ IGBT7 H7

The TRENCHSTOP™ IGBT7 H7 is a high-power semiconductor for industrial applications. With advanced design and 650 V voltage rating, it offers exceptional performance and reliability. Ideal for solar, energy storage systems, UPS, power supplies and EV charging applications. Supports decarbonization and Industrial 4.0, enabling sustainable energy transition and enhancing industrial processes.



### Features

- > Excellent VCE(sat) behavior thanks to the famous TRENCHSTOP™ technology
- > Very soft, fast recovery antiparallel diode
- > Offering Tj (max) of 175°C
- > Optimized for hard switching, two and three level topologies

### Benefits

- > Technology with the high-power density with up to 150 A rating
- > Optimized performance in application conditions
- > Lowest conduction losses
- > Lowest switching losses
- > Humidity robustness under harsh environment
- > Improved EMI performance

### Competitive advantage

- > Highest power density with 150 A rating
- > Lowest conduction losses - lowest VCE(sat)
- > Lowest switching losses (specially using IKZA and IQY – 4pin packages)
- > Humidity robustness under harsh environment pass by Jedec standard
- > Improved EMI performance with new EC7 smooth diode

### Target applications

- > EV charging
- > Uninterruptible Power Supplies (UPS)
- > String Inverter
- > Welding

### Product collaterals / Online support

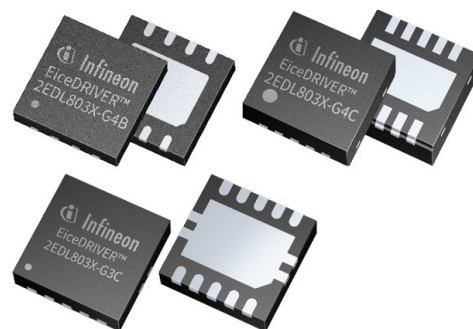
[Product family page](#)

### Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">IKWH40N65EH7XKSA1</a>	SP005582511	PG-TO247-3
<a href="#">IKWH50N65EH7XKSA1</a>	SP005588820	PG-TO247-3
<a href="#">IKWH75N65EH7XKSA1</a>	SP005588822	PG-TO247-3
<a href="#">IKWH100N65EH7XKSA1</a>	SP005588824	PG-TO247-3
<a href="#">IKZA40N65EH7XKSA1</a>	SP005588829	PG-TO247-4
<a href="#">IKZA50N65EH7XKSA1</a>	SP005588832	PG-TO247-4
<a href="#">IKZA75N65EH7XKSA1</a>	SP005588835	PG-TO247-4
<a href="#">IKZA100N65EH7XKSA1</a>	SP005588837	PG-TO247-4
<a href="#">IKQ120N65EH7XKSA1</a>	SP005588839	PG-TO247-3
<a href="#">IKQ150N65EH7XKSA1</a>	SP005588845	PG-TO247-3
<a href="#">IKY120N65EH7XKSA1</a>	SP005588849	PG-TO247-4
<a href="#">IKY150N65EH7XKSA1</a>	SP005588854	PG-TO247-4

## EiceDRIVER™ 2EDL803X 120 V boot, 3 A / 4 A, junction-isolated high-side and low-side gate driver ICs

The 2EDL803x is designed to drive both high-side and low-side MOSFETs in a half-bridge configuration. The floating high-side driver is capable of driving a high-side MOSFET operating up to 120 V bootstrap voltage. Version 4 provides full 4 A current capability, while version 3 provides 3 A. The high-side bias voltage is generated using a bootstrap technique using an integrated bootstrap diode. The inputs of the driver are TTL logic compatible and can withstand input common mode swing from -10 V up to 20 V. Independent inputs allow controlling high- and low-side domains independently. Undervoltage lockout (UVLO) on both high- and low-side supplies forces the corresponding outputs low in case of insufficient supply. The 2EDL803x is available in SON-8 pins 4 x 4 mm, SON-10 pins 4 x 4 mm and SON-10 pins 3 x 3 mm packages.



### Features

- > 3 A & 4 A source / 6 A sink output current capability
- > 120 V absolute maximum boot voltage
- > Integrated bootstrap diode
- > -10 V to 20 V input pin capability for increased robustness
- > -5 A output pin reverse current capability
- > -12 V absolute maximum negative voltage on HS
- > 8 V to 17 V supply voltage operating range
- > UVLO for both high-side and low-side drivers
- > Fast propagation delay (< 35 ns)
- > 2 ns typical delay matching
- > Enable / disable functionality in SON10 (3 x 3) package
- > Offered in SON-8 (4 x 4 mm), SON-10 (4 x 4 mm) and SON-10 (3 x 3 mm) packages
- > Specified from -40°C to 125°C operating junction temperature range

### Competitive advantage

- > Helps in achieving better efficiency due to its strong source/ sink capability
- > Tight propagation delay matching reduces dead time losses
- > Integrated bootstrap diode reduces BOM cost and increases power density

### Benefits

- > Best-in-class driving capability with 3 A & 4 A source / 6 A sink output current capability
- > Strong 6 A pull down for avoiding induced turn on
- > Offered in small 4 x 4 mm and 3 x 3 mm leadless packages with industry standard pin-out

### Target applications

- > Telecom / Datacom half- and full-bridge power converters
- > Current-fed push-pull converters
- > Buck converters
- > Two-switch forward converters
- > Active clamp forward converters
- > Class D amplifiers
- > DC motor drives

### Product collaterals / Online support

[Product family page](#)

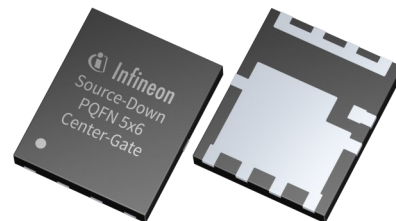
### Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">2EDL8033G3CXTMA1</a>	SP005595954	PG-VSON-10
<a href="#">2EDL8033G4BXTMA1</a>	SP005612420	PG-VDSON-8
<a href="#">2EDL8033G4CXTMA1</a>	SP005612548	PG-VDSON-10
<a href="#">2EDL8034G3CXTMA1</a>	SP005612552	PG-VSON-10
<a href="#">2EDL8034G4BXTMA1</a>	SP005612556	PG-VDSON-8
<a href="#">2EDL8034G4CXTMA1</a>	SP005612544	PG-VDSON-10

## OptiMOS™ power MOSFETs 25 V - 150 V in PQFN 5 x 6 mm<sup>2</sup> Source-Down Center-Gate

Infineon's OptiMOS™ low- and medium-voltage power MOSFETs in an innovative and improved PQFN 5x6 mm<sup>2</sup> Source-Down package are presented to the market. The key feature of the Source-Down package concept is the orientation of the active side of the silicon chip toward the bottom side of the component. In combination with the reinforced clip on the drain side on top of the silicon chip, package parasitics are significantly reduced and thermal performance is pushed to the next level of improvement.

The OptiMOS™ power MOSFETs 25 V - 150 V in PQFN 5 x 6 mm<sup>2</sup> Source-Down package in BSC (bottom-side cooling) with Center-Gate version is specifically optimized for parallelization.



### Features

- > Cutting edge silicon technology OptiMOS™ with outstanding FOMs
- > Source-Down package with improved thermal performance and ultra-low parasitics
- > Source-Down package with maximized chip / package ratio
- > Source-Down package in Center-Gate footprint

### Target applications

- > Telecom
- > Server
- > Drones
- > Robotics
- > Solar
- > Low voltage drives
- > Light electric vehicles
- > Power tools
- > Battery management system
- > Class D audio applications

### Benefits

- > Minimized conduction losses
- > Reduced voltage overshoot
- > Increased maximum current capability
- > Fast switching
- > Less device paralleling required
- > Improved thermal performance for easy thermal management
- > Industry standard package

### Competitive advantage

- > Lowest possible  $R_{DS(on)}$  on 5 x 6 mm<sup>2</sup> PCB real-estate
- > Improved thermal performance
- > Lowest package parasitics for best switching performance
- > Center-Gate footprint with large creepage distance.

### Product collaterals / Online support

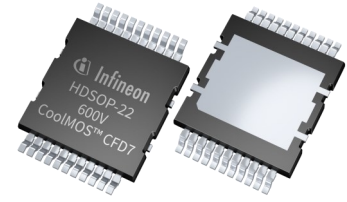
[Product family page](#)

### Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">IQDH29NE2LM5CGATMA1</a>	SP005408851	PG-TTFN-9
<a href="#">IQDH35N03LM5CGATMA1</a>	SP005588818	PG-TTFN-9
<a href="#">IQDH45N04LM6CGATMA1</a>	SP005588804	PG-TTFN-9
<a href="#">IQD005N04NM6CGATMA1</a>	SP005588800	PG-TTFN-9
<a href="#">IQD009N06NM5CGATMA1</a>	SP005588813	PG-TTFN-9
<a href="#">IQDH88N06LM5CGATMA1</a>	SP005588830	PG-TTFN-9
<a href="#">IQD016N08NM5CGATMA1</a>	SP005588852	PG-TTFN-9
<a href="#">IQD020N10NM5CGATMA1</a>	SP005588861	PG-TTFN-9
<a href="#">IQD063N15NM5CGATMA1</a>	SP005588872	PG-TTFN-9

## 600 V CoolMOS™ CFD7 superjunction MOSFET in QDPAK

The 600 V CoolMOS™ CFD7 SJ MOSFET is Infineon's latest high-voltage superjunction MOSFET technology. It comes with reduced gate charge ( $Q_g$ ), improved turn-off behavior and a reverse recovery charge ( $Q_{rr}$ ) of up to 69% lower compared to the competition, as well as the lowest reverse recovery time ( $t_{rr}$ ) in the market. Due to these features the devices offer highest efficiency and best-in-class reliability in soft-switching topologies such as LLC and ZVS phase-shift full-bridge.



### Features

- > Ultra - fast body diode
- > Best-in-class reverse recovery charge ( $Q_{rr}$ )
- > Improved reverse diode  $dv / dt$  and  $dif / dt$  ruggedness
- > Lowest FOM  $R_{DS(on)} \times Q_g$  and  $E_{oss}$
- > Best - in - class  $R_{DS(on)} /$  package combinations

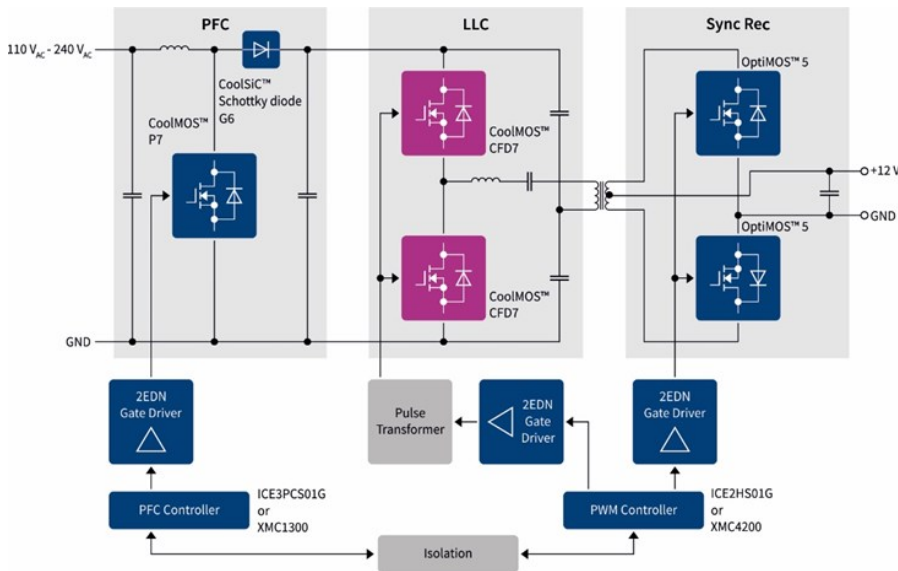
### Benefits

- > Best-in-class hard commutation ruggedness
- > Highest reliability for resonant topologies
- > Highest efficiency with outstanding ease-of-use / performance trade-off
- > Enabling increased power density solutions

### Target applications

- > Server
- > Telecom
- > EV charging
- > SMPS
- > PC power

### Block diagram



Product collaterals / Online support

[Product family page](#)

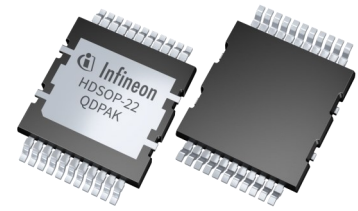
### Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">IPDQ60R015CFD7XTMA1</a>	SP005419690	PG-HDSOP-22
<a href="#">IPDQ60R020CFD7XTMA1</a>	SP005419685	PG-HDSOP-22
<a href="#">IPDQ60R025CFD7XTMA1</a>	SP005419681	PG-HDSOP-22
<a href="#">IPDQ60R035CFD7XTMA1</a>	SP005419752	PG-HDSOP-22
<a href="#">IPDQ60R045CFD7XTMA1</a>	SP005419749	PG-HDSOP-22

## 650 V CoolMOS™ CFD7 superjunction MOSFET in QDPAK

The 650V CoolMOS™ CFD7 superjunction MOSFET technology is now also available in the QDPAK with 80 mOhm  $R_{DS(on)}$ .

It comes with an integrated fast body diode and is ideally suited for resonant topologies in industrial applications, such as server, telecom, solar, and EV-charging stations, in which it enables significant efficiency improvements compared to competition.



### Features

- > Ultra - fast body diode and very low  $Q_{rr}$
- > 650 V breakdown voltage
- > Significantly reduced switching losses compared to competition
- > Lowest  $R_{DS(on)}$  dependency over temperature

### Benefits

- > Excellent hard - commutation ruggedness
- > Extra safety margin for designs with increased bus voltage
- > Enabling increased power density
- > Outstanding light - load efficiency in industrial SMPS applications
- > Improved full-load efficiency in industrial SMPS applications
- > Price competitiveness compared to alternative offerings in the market

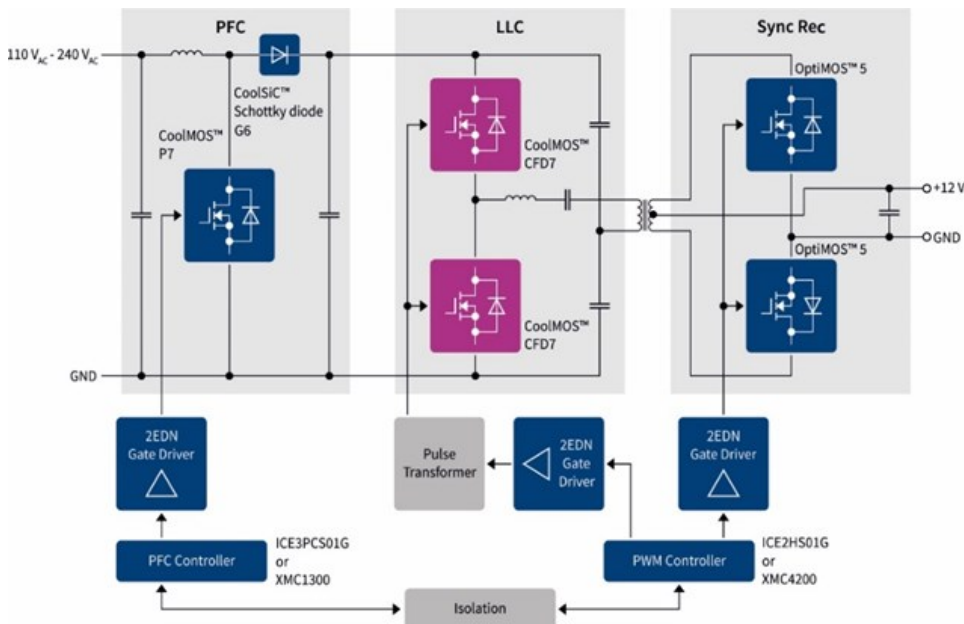
### Target applications

- > Fast EV charging
- > Server power supply
- > Solutions for solar energy systems
- > Telecom infrastructure

### Product collaterals / Online support

[Product page](#)

### Block diagram



Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">IPDQ65R080CFD7XTMA1</a>	SP005537603	PG-HDSOP-22

## TLE9371VSJ - CAN FD SIC

CAN signal enhancement transceivers actively improve signal integrity in a network, reduce signal ringing effects and help to operate in larger topologies with significantly faster bit rates than before. The CAN FD SIC parts can replace existing CAN (FD) transceivers, making the adoption of this technology straight-forward and without significant changes in the application. Even more, they are backward compatible to existing CAN transceiver solutions.



### Features

- > Highly accurate transmitter allowing precise control of CANH and CANL signals, active drive of recessive edge and active signal improvement
- > Ringing in CAN networks significantly reduced, star-based typologies with higher data rates possible
- > Increases maximum achievable CAN speed to 8 MB / s
- > Increased EMC performance
- > Guaranteed CAN FD protocol operations under all conditions incl. error handling and arbitration scenarios
- > Fully interoperable with CAN XL protocol

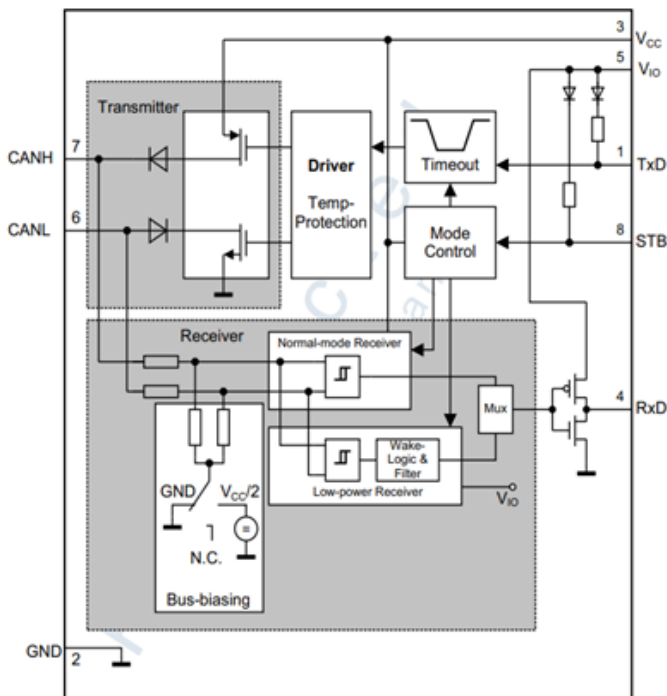
### Benefits

- > Connection of more nodes with more functions possible
- > Entry for more complex applications e.g. autonomous driving with security requirements, new comfort features in-body applications
- > Less cable with decreased weight & costs; more positive CO2 balance, no cable variants for optional nodes, decreased no. of connectors

### Target applications

- > ADAS
- > xEV / HEV
- > Body & Chassis

### Block diagram



Product collaterals / Online support

[Product page](#)

Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">TLE9371SJXTMA1</a>	SP005350816	PG-DSO-8



## EZ-PD™ CMG2 – USB-C EMCA Controller

EZ-PD™ CMG2 is an EMCA controller targeting passive non-Thunderbolt and Thunderbolt Type-C cables. It offers integrated VBUS-CC short protection up to 54 V, VBUS-VCONN short protection up to 54 V, power delivery 3.1, Type-C 2.1, and ESD protection, all these in a compact 9-ball WLCSP package. It comes with a 47-byte storage space for vendor- and cable-specific configuration data and is designed to operate from a 2.7 to 5.5 V VCONN supply range.



### Features

- > Industry's first USB-C EMCA controller with integrated 48 V short protection
- > IEC ESD protection on VCONN and VCC
- > 47 bytes for storing vendor- and cable-specific configuration data
- > Up to 54 V protection on CC, VCONN1, and VCONN2 pins
- > Termination resistor RA
- > Supports RA weakening to reduce power consumption

### Competitive advantage

- > Single chip solution
- > Reduced BOM cost
- > No programming required
- > Ease of use
- > Shorter development time

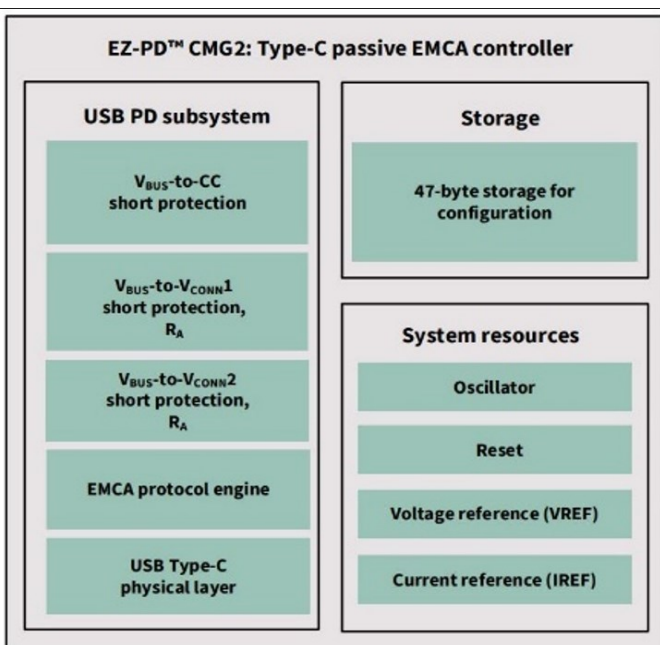
### Benefits

- > Single-chip solution
- > No programming required
- > Ease of use
- > Shorter development cycle

### Target applications

- > EPR USB-C passive cables
- > USB4 and Thunderbolt USB-C passive cables
- > EMCA

### Block diagram



Product collaterals / Online support

[Product page](#)

Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">CYPD2803A109FNXITXTMA1</a>	SP005908185	SG-XFWLB-9

# AIROC™ CYW5557x tri-band Wi-Fi 6 / 6E + Bluetooth® 5.3 Combo

The CYW5557x product family consists of Wi-Fi 6 / 6E + Bluetooth® 5.3 combo devices including variants supporting SISO (1 x 1) or MIMO (2 x 2), dual-band 2.4 / 5 GHz or tri-band 2.4 / 5 / 6 GHz in the same form factor to enable multiple end products in a single board design. This product family supports a host of differentiated feature sets including best-in-class range, smart co-existence, ultra-low power consumption, advanced security architecture to enhance user experience in congestive network environments.



## Features

- > Wi-Fi 6 / 6E release 1 and release 2 compliant
- > Dual-band or tri-band capable (2.4 / 5 / 6 GHz)
  - > 5 / 6 GHz: 20 / 40 / 80-MHz, 1024 QAM, 2 x 2 MIMO, up to 1.2 Gbps data rate
  - > 2.4 GHz: 20 / 40-MHz, 1024 QAM, 2 x 2 MIMO, up to 287 Mbps data rate
- > Advanced power saving features and offload features to conserve battery life
- > Encryption / decryption and authentication firmware, anti-roll back protection and life-cycle management
- > Bluetooth® 5.3 certification (Classic + LE) and LE Audio with Auracast™ broadcast

## Benefits

- > Extreme low latency from greenfield 6 GHz bands and virtual simultaneous dual band feature for seamless audio and video streaming
- > Advanced power saving features to maximize battery life
- > Multi-layer security for protection of individual subsystems through whole product life-cycle
- > Best-in-class Bluetooth receive sensitivity and multiple optimized transmission options of 0 dbm, 13 dbm, and 20 dbm of output power for various applications
- > AIROC™ Bluetooth® Stack and example code to shorten BT development cycle
- > Shorten time-to-market with globally certified module partners

## Competitive advantage

- > Enhanced features (range, network robustness, power saving on chip and system)
- > Best-in-class RF performance
- > Multi-layer security architecture
- > Network intelligent
- > Easily design, fully validated with various platforms (Nvidia, Rockchip, Ambarella, STM)
- > Strong design expertise to make customized/flexible FW / SW
- > Open source SW and tool support (FMAC)
- > Support BT AIROC stack + example code
- > Ready for Linux, Android, and capable of RTOS OS
- > Industrial operating temperature -40°C to 85°C

## Target applications

- > Video and Audio: Wireless speakers, voice assistant, surveillance camera, home entertainment, video streaming adapter, drones, digital cameras, conference bridge
- > Commercial / Industrial: Indoor / Warehouse asset tracking hubs, Industrial gateways for Wi-Fi and Bluetooth® enabled lights / sensors, base stations for wireless cameras, mobile POS, AI-enabled edge devices, medical image machine, security system, smart city, robots, mobile gateway

## Product collaterals / Online support

[Product family page](#)

Product overview incl. product page link

Infineon OPN	Module Partner OPN	Infineon SP Number	Module Partner
<a href="#">CYW55573MIFFBG</a>	LBEE5XV2EA-802	SP005636617	Murata Manufacturing Co., Ltd.
<a href="#">CYW55573MIFFBG</a>	453-00117	SP005636617	Laird Connectivity
<a href="#">CYW55571MIWBG1</a>	AW-XH325	SP005649779	Azurewave
<a href="#">CYW55572MIWBG1</a>	AW-XM612	SP005656061	Azurewave
<a href="#">CYW55573MIFFBG</a>	AW-XH323	SP005636617	Azurewave

# AIROC™ IFW56810 Wi-Fi 4 Cloud Connectivity Manager Module

The AIROC™ Cloud Connectivity Manager module provides a simple, secure Wi-Fi networking subsystem to connect products to the cloud without extensive firmware development, testing, or maintenance. No customer programming or development with an SDK is required. With Infineon, the leader in Wi-Fi for IoT, provides out of the box connectivity, cloud networking, and security, customers get to market quickly.

AIROC™ Cloud Connectivity Manager assembles wireless, networking, cloud, and security know-how into a turnkey certified hardware and firmware solution. The hardware leverages Infineon's recognized leadership in the security industry to pair a pre-provisioned, secured PSoC™ 64 MCU with the IoT industry's most reliable and widely shipped Wi-Fi technology. The module arrives pre-programmed with tested and signed, secure Infineon firmware, eliminating the IoT learning curve, and reducing development costs. Infineon's simple command set is provided for easy integration into your product. The module comes with AWS IoT ExpressLink pre-integrated and leverages CIRRENT™ Cloud ID for provisioning the device to the cloud. Enabling seamless cloud connection without the Wi-Fi and cloud know-how needed for typical Wi-Fi modules.



## Features

- > Turnkey hardware and firmware solution: powered by AWS IoT ExpressLink with OTA support, Module fully certified for production in US, EU and Canada
- > Networking Features: Full network stack offload from host: TCP / IP, TLS, DNS, HTTP, and MQTT, fully documented command set for simple configuration from host processor
- > Wireless Features: built on industry - leading Infineon Wi-Fi for long range, robust connectivity, Wi-Fi 4 (802.11 n), up to 96 Mbps PHY data rate, integrated antenna, soft AP or BLE onboarding to Wi-Fi Access Point
- > Security: WPA3 security, TLS 1.2, Arm® platform security architecture level 2 certified, secure enclave and secure boot, only operates with Infineon signed firmware, CIRRENT™ Cloud ID unique device ID for safe, convenient provisioning, ongoing security updates via over-the-air firmware updates

## Competitive advantage

- > A PSA level 2 certified secure MCU offers secure boot plus a secure enclave for storage of sensitive key data and certificates. Only Infineon signed firmware will run on the module
- > With support for over-the-air firmware updates, the module can be kept up to date with future connectivity and security optimizations
- > CIRRENT™ Cloud ID, a unique, secured, cryptographic device identity, simplifies cloud provisioning of your product

## Benefits

- > Speeds time to market
- > Reduces development costs
- > Pre-certified module
- > Simplifies set-up and connectivity process for users not as familiar with Wi-Fi
- > Reduce support calls for Wi-Fi and networking set-up
- > Secure pre-provisioned solution
- > Reduces manufacturing complexity
- > Reduce lifetime maintenance after product release
- > Long range and robust connectivity
- > Best-in-class access point interoperability

## Target applications

- > Industrial automation: factory automation, industrial robotics
- > Smart building: HVAC, occupancy management
- > Smart medical / healthcare: blood pressure monitors, connected patient room equipment
- > Smart appliance: coffee maker, white goods

## Product collaterals / Online support

[Product page](#)

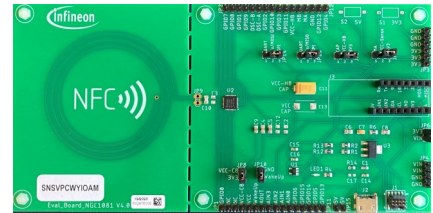
[Board page](#)

## Product overview incl. data sheet link

OPN	SP Number	Package
<a href="#">IFW56810-00</a>	SP005926543	LG-MLGA-145
<a href="#">IFW956810</a>	SP005726056	

## DEV\_KIT\_NGC1081

This development kit is a tool for engineers who want to use NGC1081 as a solution for sensing the world via NFC and energy harvesting. NGC1081 is an NFC tag-side controller, which combines in one device the functions of energy harvesting, NFC, sensing unit and motor control.



### Features

- > Evaluation board with temperature demo firmware pre-installed
- > 5 V USB power supply
- > Integrated debugger interface
- > Temperature sensing mobile application for download
- > SDK packages for both firmware and mobile application development

### Benefits

- > A quick demo of battery-free sensing applications
- > Compatible with Sensor 2Go shields (various sensors from Infineon that can easily be plugged in to the board)
- > Easy access to all pins and availability of an antenna specifically designed for testing NFC applications

### Target applications

- > Battery-free sensing nodes, sensor inlays
- > NFC data, temperature loggers
- > Vital NFC sensing (e.g. health care/medical patches)
- > Smart NFC thermostats
- > Galvanically isolated sensor frontends
- > NFC programming interface of electronic devices

Product collaterals / Online support

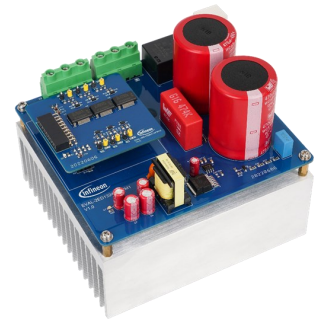
[Board page](#)

Product overview incl. user manual link

OPN	SP Number
<a href="#">DEVKITNGC1081TOBO1</a>	SP005862890

## EVAL-2ED1324S12PM1

EVAL-2ED1324S12PM1 is a power evaluation board that includes an M1 connector, an EasyPIM™ 1B 1200 V, 25 A three-phase input rectifier power integrated module (PIM) with TRENCHSTOP™ IGBT7, and 1200 V three phase Silicon-On-Insulator (SOI) gate drivers for motor drive applications. In combination with either EVAL-M1-101T or another control board with compatible M1 connectors, the EVAL-2ED1324S12PM1 features and demonstrates Infineon's IGBT module and SOI gate driver technology for motor drives.



### Features

- > Negative VS transient voltage immunity of -100 V with repetitive 700 ns pulses
- > 2.3 A / 2.3 A peak output source / sink current capability
- > Integrated ultra-fast Over-Current Protection (OCP)
- >  $\pm 5\%$  high accuracy reference threshold
- > Less than 1  $\mu$ s over-current sense to output shutdown
- > Integrated Active Miller Clamp (AMC) with 2 A sink current capability
- > Integrated Short Circuit Clamp (SCC)

### Benefits

- > Nominal DC input voltage 510 V, max. 780 V
- > Design for max. 5 kW motor power output
- > Single shunt for current sensing
- > Sensing of DC-link voltage
- > Internal NTC-thermistor for over temperature protection
- > +18 V and +3.3 V auxiliary power supplies on the board

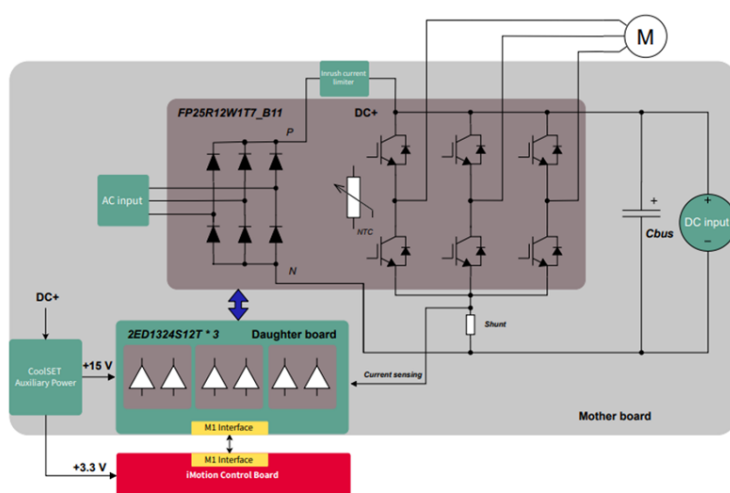
### Competitive advantage

- > The EVAL-2ED1324S12PM1 enables easy testing of a 1200 V motor system including the controller, gate driver, power module, and auxiliary circuit
- > It specifically supports features like Active Miller Clamp and Short Circuit Clamp, eliminating the need for additional effort

### Target applications

- > HVAC Blower (Fan)
- > Commercial HVAC
- > Servo motor drive and control
- > Heat pumps
- > Industrial robot

### Block diagram



Product collaterals / Online support

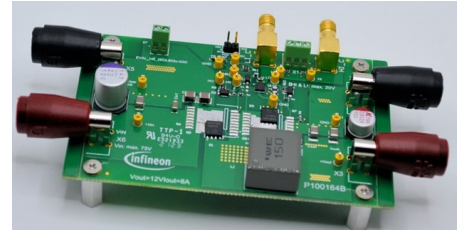
[Board page](#)

Product overview incl. user manual link

OPN	SP Number
<a href="#">EVAL-2ED1324S12PM1</a>	SP005915244

## EVAL\_HB\_2EDL803x\_G3C

This board features the EiceDRIVER™ 2EDL803x-G3C, a junction isolated high-side and low side gate driver IC. The board has easy access to every pin of the driver via test pins for probing various characteristics of the IC like propagation delay, rise time, fall time, boot diode characteristics etc. The open loop buck topology showcases the half-bridge driving capability of the IC with flexibility to have user defined gate drive waveforms along with the option to evaluate wide variety of MOSFETs available across Infineon portfolio in various footprints, thus helping to reduce the design and validation time.



### Features

- > Evaluation board for EiceDRIVER™ gate driver IC 2EDL8033-G3C and 2EDL8034-G3C
- > Independent low-side and high-side gate drives
- > Wide input voltage range from 36 V to 75 V
- > Supports evaluation of basic buck topology

### Benefits

- > SMA connectors for easy connection to waveform generator
- > Large buck inductor to evaluate wide range of frequencies and duty cycle
- > Various MOSFET packages selection
- > Easy access to each pins of the driver

### Target applications

- > Telecom / datacom half- and full-bridge converters
- > DC motor drives
- > Class D amplifiers

Product collaterals / Online support

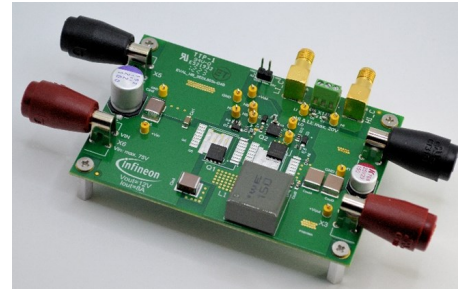
[Board page](#)

Product overview incl. user manual link

OPN	SP Number
<a href="#">EVALHB2EDL803XG3CTOBO1</a>	SP005956081

## EVAL\_HB\_2EDL803x\_G4B

This board features the EiceDRIVER™ 2EDL8034-G4B, a junction isolated high-side and low side gate driver IC. The board has easy access to pin of the driver via test pins for probing various characteristics of the IC like propagation delay, rise time, fall time, boot diode characteristics etc. The open loop buck topology showcases the half-bridge driving capability of the IC with flexibility to have user defined gate drive waveforms along with the option to evaluate wide variety of MOSFETs available across Infineon portfolio in various footprints, thus helping to reduce the design and validation time.



### Features

- > Evaluation board for EiceDRIVER™ gate driver IC 2EDL8033-G4B and 2EDL8034-G4B
- > Independent low-side and high-side gate drives
- > Wide input voltage range from 36 V to 75 V
- > Supports evaluation of basic buck topology

### Benefits

- > SMA connectors for easy connection to waveform generator
- > Large buck inductor to evaluate wide range of frequencies and duty cycle
- > Various MOSFET packages selection
- > Easy access to each pins of the driver

### Target applications

- > Telecom / datacom half- and full-bridge converters
- > DC motor drives
- > Class D amplifiers

Product collaterals / Online support

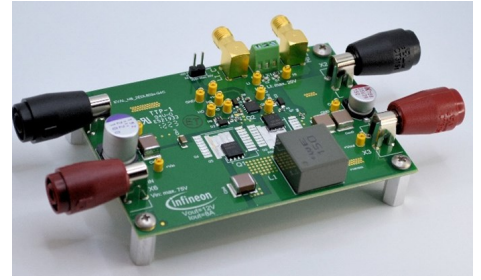
[Board page](#)

Product overview incl. user manual link

OPN	SP Number
<a href="#">EVALHB2EDL803XG4BTOBO1</a>	SP005956085

## EVAL\_HB\_2EDL803X\_G4C

This board features the EiceDRIVER™ 2EDL803x-G4C, a junction isolated high-side and low side gate driver IC. The board has easy access to the pin of the driver via test pins for probing various characteristics of the IC like propagation delay, rise time, fall time, boot diode characteristics etc. The open loop buck topology showcases the half-bridge driving capability of the IC with flexibility to have user defined gate drive waveforms along with the option to evaluate wide variety of MOSFETs available across Infineon portfolio in various footprints, thus helping to reduce the design and validation time.



### Features

- > Evaluation board for EiceDRIVER™ gate driver IC 2EDL8033-G4C and 2EDL8034-G4C
- > Independent low-side and high-side gate drives
- > Wide input voltage range from 36 V to 75 V
- > Supports evaluation of basic buck topology

### Benefits

- > SMA connectors for easy connection to waveform generator
- > Large buck inductor to evaluate wide range of frequencies and duty cycle
- > Various MOSFET packages selection
- > Easy access to each pins of the driver

### Target applications

- > Telecom / datacom half- and full-bridge converters
- > DC motor drives
- > Class D amplifiers

Product collaterals / Online support

[Board page](#)

Product overview incl. user manual link

OPN	SP Number
<a href="#">EVALHB2EDL803XG4CTOBO1</a>	SP005956083



## EVAL\_TOLL\_72VDC\_2KW

The EVAL\_TOLL\_72VDC\_2kW evaluation power board uses new OptiMOS™ 6 120 V power MOSFET technology devices for battery-powered 60 V - 84 V BLDC motor drives application suitable for high-power power tools.

This evaluation board is designed to be driven by the Infineon XMC1300 drive card KIT\_XMC1300\_DC\_V1 (or higher) loaded with the correct firmware. Both, power board and drive card, are needed for this application. A 32-pin male - female connector (MAB32B2-FAB32Q2) is needed to connect the power board and drive card.



### Features

- > Single MOSFET at each leg of the inverter
- > Standard 32-pin male - female connector to interface power board and XMC1300 drive card
- > 72 V nominal input voltage
- > Capable of both block commutation control and FOC control
- > 12.0 V and 5.0 V on-board power supplies for gate driver ICs and microcontroller, respective

### Benefits

- > High efficiency
- > Excellent thermal management
- > Modular design – power board and controller card

### Target applications

- > Gardening tools
- > Motor control and drives

### Product collaterals / Online support

[Board page](#)

Product overview incl. application note link

OPN	SP Number
<a href="#">EVALTOLL72VDC2KWTOBO1</a>	SP005952588

## KIT\_LGMB\_BOM004 - Kit master motherboard for low voltage drives scalable power demo board

The evaluation board features a motor drive inverter power stage using The master motherboard serves a supporting board for the LVD scalable power demoboard platform. It provides the system with the gate drivers of the corresponding phase for driving the MOSFETs of the power boards. The board also provides the interconnection and power supply to the XMC™ drive card control board (KIT\_XMC4400\_DC\_V1).



### Features

- > Board supports the LVD scalable power demo board platform
- > Provides system with gate drivers of corresponding phase for driving MOSFETs of power boards.
- > Provides interconnection and power supply to the XMC™ drive card control board (KIT\_XMC4400\_DC\_V1)
- > Gate resistors on FR4 for ease of rework
- > Additional ceramic capacitor connected to the DC bus
- > Optional branch out connection for paralleling of MOSFETs

### Benefits

- > Easy - to - use platform intended for initial evaluation of power MOSFETs in set - ups ranging from single half - bridge to three-phase inverter (motor drive topology)
- > Provides an easy approach to power MOSFET paralleling, without need for soldering processes on Insulated Metal Substrate (IMS) boards
- > All necessary connections established through onboard connectors
- > Fast method of hardware requirement verification - the platform can be used instead of various preliminary test designs, thus shortening the initial design phase

### Target applications

- > Prototyping forklifts and LEVs (low speed cars, e - scooters, 3 - wheelers, golf cars)
- > Cordless power tools
- > BLDC motor drives

### Product collaterals / Online support

[Board page](#)

### Product overview incl. user manual link

OPN	SP Number
<a href="#">KITLGMBBOM004TOBO1</a>	SP005952569

## KIT\_LGCAP\_BOM006 - Kit assembled capacitor board for low voltage drives scalable power demo board

The capacitor board is a supporting design for the LVD scalable power demo board platform. It provides the system with an interconnection platform for leaded capacitors for the DC bus supplying the power half-bridges. This board can also be used in other lab setups requiring a DC capacitor bank in the range of up to 250 V.



### Features

- > Capacitor board supporting design for the LVD scalable power demo board platform
- > Provides system with interconnection platform for leaded capacitors for the DC bus supplying the power half - bridges
- > Can also be used in other lab setups requiring a DC capacitor bank in the range of up to 250 V
- > Provided without the capacitors so the appropriate devices can be selected by the user

### Benefits

- > Easy - to - use platform intended for initial evaluation of power MOSFETs in set - ups ranging from single half - bridge to three - phase inverter (motor drive topology)
- > Provides an easy approach to power MOSFET paralleling, without need for soldering processes on Insulated Metal Substrate (IMS) boards
- > All necessary connections established through onboard connectors
- > Fast method of hardware requirement verification - the platform can be used instead of various preliminary test designs, thus shortening the initial design phase

### Target applications

- > Prototyping forklifts and LEVs (low speed cars, e - scooters, 3 - wheelers, golf cars)
- > Cordless power tools
- > BLDC motor drives

### Product collaterals / Online support

[Board page](#)

### Product overview incl. user manual link

OPN	SP Number
<a href="#">KITLGCAPBOM006TOBO1</a>	SP005952579

## KIT\_LGMB\_BOM504 - Kit master motherboard for low voltage drives scalable power demo board

The kit mother boards serve as supporting boards for the LVD scalable power demo board platform. They provide the system with the gate drivers for driving the MOSFETs of the power boards. The mother board connects to the control through the master mother board and does not connect to an individual control board.



### Features

- > Board supports the LVD scalable power demo board platform
- > Provides system with gate drivers of corresponding phase for driving MOSFETs of power boards.
- > Provides interconnection and power supply to the XMC™ drive card control board (KIT\_XMC4400\_DC\_V1)
- > Gate resistors on FR4 for ease of rework
- > Additional ceramic capacitor connected to the DC bus
- > Optional branch out connection for paralleling of MOSFETs

### Benefits

- > Easy - to - use platform intended for initial evaluation of power MOSFETs in set - ups ranging from single half - bridge to three-phase inverter (motor drive topology)
- > Provides an easy approach to power MOSFET paralleling, without need for soldering processes on Insulated Metal Substrate (IMS) boards
- > All necessary connections established through onboard connectors
- > Fast method of hardware requirement verification - the platform can be used instead of various preliminary test designs, thus shortening the initial design phase

### Target applications

- > Prototyping forklifts and LEVs (low speed cars, e - scooters, 3 - wheelers, golf cars)
- > Cordless power tools
- > BLDC motor drives

### Product collaterals / Online support

[Board page](#)

Product overview incl. user manual link

OPN	SP Number
<a href="#">KITLGMBBOM504TOBO1</a>	SP005952569