



New Product Introduction

January 2023

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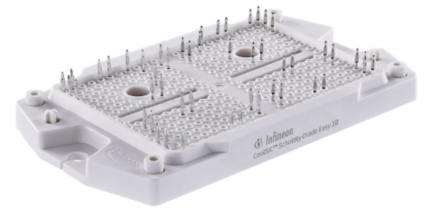
[OPTIGA™ TPM SLB 9673 RPI evaluation board](#)

EasyPACK™ 3B with 950 V TRENCHSTOP™ IGBT7 and 1200 V CoolSiC™ MOSFET Diode - FS3L400R10W3S7F_B11

The FS3L400R10W3S7F_B11 is an addition to the EasyPACK™ power module portfolio. It features a 950 V TRENCHSTOP™ IGBT7 and a 1200 V CoolSiC™ Schottky Diode in boost configuration. In this combination, the SiC diode reduces switching losses of the IGBT.

The module is equipped with 3 MPPTs which enable 45 A input current per MPPT for a 1500 V_{DC} boost stage.

Thanks to the well-established PressFIT pin technology the mounting is simple. In addition, designers can easily upgrade and extend their designs with other Easy products thanks to the same height of 12mm.



Features

- > 950 V TRENCHSTOP™ IGBT7
- > 1200 V CoolSiC™ Schottky Diode
- > PressFIT pins
- > 3-level boost topology with 3 MPPTs
- > 12mm module height
- > Base-plate less module
- > Low inductive design

Benefits

- > SiC diode reduces switching losses of the IGBT
- > Simple PCB mounting
- > Scalable designs
- > Low FIT rate for cosmic ray induced fails
- > Supports full current operation at 1500 V_{DC}

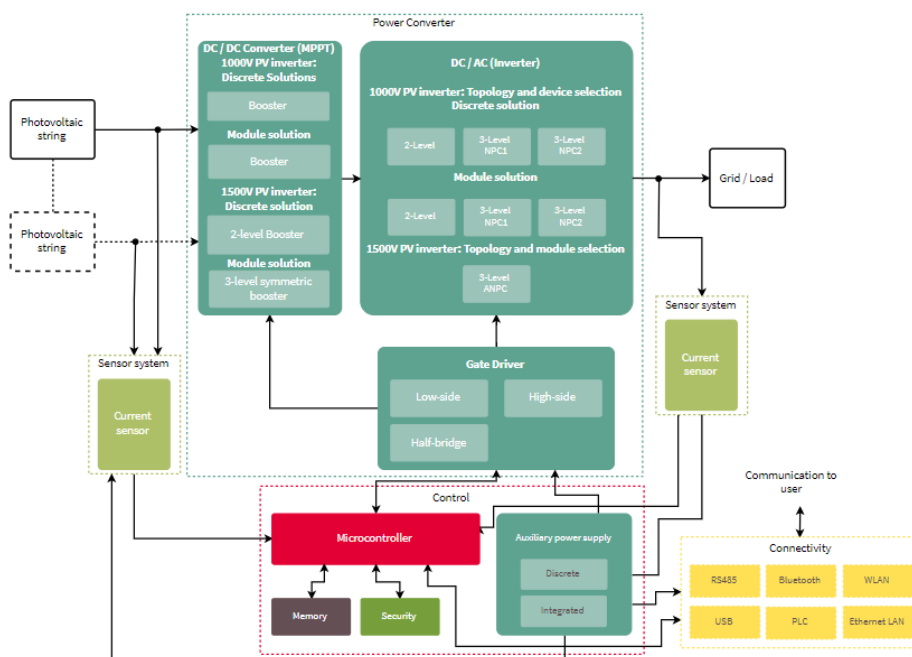
Competitive advantage

- > Broadest portfolio of Easy modules on the market, customers can choose between different topologies, voltage classes, packages and technologies

Target applications

- > Solar string inverter

Block diagram



Product collaterals / Online support

[Product page](#)

[Product family page](#)

Product overview incl. data sheet link

OPN	SP Number	Package
FS3L400R10W3S7FB11BPSA1	SP005567323	AG-EASY3B-7011

EasyPACK™ 2B IGBT module 1700 V & EasyBRIDGE rectifier module 2200 V

The EasyPACK™ 2B IGBT module and the EasyBRIDGE rectifier module are an extension of the existing Easy portfolio.

The EasyPACK™ 2B comes with an IGBT4 and an emitter-controlled 4 diode. It is the first 1700 V module in an Easy housing with 75 A nominal current. The EasyBRIDGE rectifier module with 2.2 kV rectifier diodes comes in an Easy 1B housing.



Both new modules come with pre-applied thermal interface material (TIM). As a result, customers benefit from high automation level because they don't have to handle thermal grease in the production.

In addition, the Easy housing does not have a baseplate and is equipped with the well-known PressFIT technology for a quick assembly making it a perfect fit for 1700 V applications.

Features

- > EasyPACK™ 2B
 - > IGBT4 chip generation
 - > Emitter-controlled 4 diode
 - > 1700 V, 75 A
- > EasyBRIDGE
 - > Rectifier diodes
 - > 2200 V
- > Both EasyPACK™ and EasyBRIDGE
 - > Pre-applied thermal interface material (TIM)
 - > PressFIT pins
 - > No baseplate

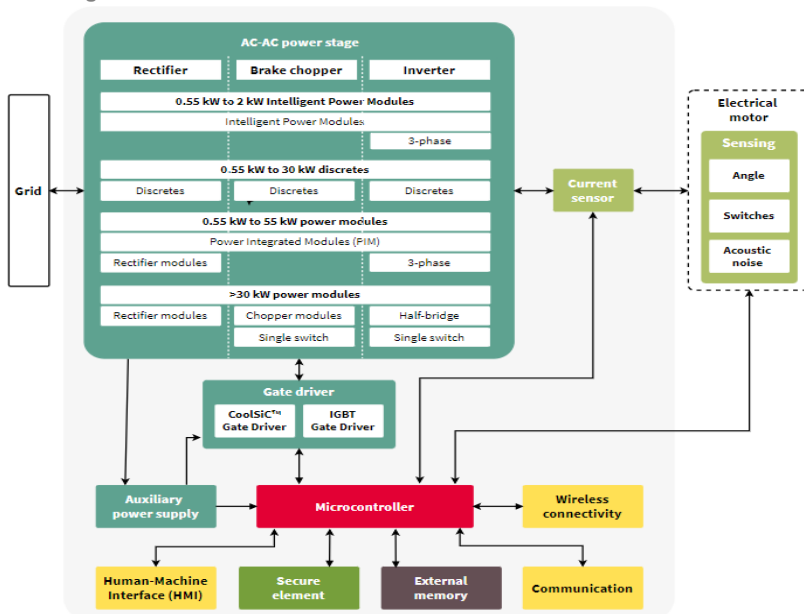
Benefits

- > No handling of thermal grease in the production line lowers process cost in manufacturing
- > High automation level and production efficiency
- > Extends the already existing portfolio towards higher voltage classes
- > Reduction of system-cost

Target applications

- > Servo drives
- > Industrial robots

Block diagram



Product collaterals / Online support

[Product page FS75R17W2E4P_B11](#)

[Product page DDB6U50N22W1RP_B11](#)

[Product page Easy IGBT modules page](#)

[Product page Bridge Rectifier & AC-Switches](#)

Product overview incl. data sheet link

OPN	SP Number	Package
FS75R17W2E4PB11BPSA1	SP005629666	AG-EASY2B-411
DDB6U50N22W1RPB11BPSA1	SP005632048	AG-EASY1B-411

6ED2742S01Q - 160 V MOTIX™ 3-phase gate driver with integrated power management unit (PMU), current sense amplifier (CSA) and overcurrent protection (ITRIP)

The MOTIX™ 6ED2742S01Q is a 160 V SOI based gate driver designed for three phase BLDC motor drive applications. Integrated bootstrap diodes are used to supply the three external high sides charging bootstrap capacitors and supports 100% duty cycle operation by a trickle charge pump. Protection features include under voltage lockout, over current protection with configurable threshold, fault communication and automatic fault clear. The output drivers feature a high-pulse current buffer stage designed for minimum driver cross-conduction. A current sense operational amplifier (CSA) with selectable gain is integrated between the VSS and COM. This driver is a simple, easy-to-use and cost-effective, one stop solution for a variety of battery-powered applications such as power tools, robotics & LEVs for wide range of battery voltages.



Features

- > Wide input voltage range VIN of 6 V to 140 V
- > I_{O+} / I_{O-} 1 A / 2 A drive current (typical - peak)
- > Integrated power management unit (PMU) with:
 - > Linear pre-regulator to enable wide input VIN range
 - > Integrated charge pump for stable VCC
- > Integrated trickle charge pumps for 100% duty cycle
- > Integrated current sense amplifier w/four selectable gains
- > Integrated ITRIP with four selectable thresholds
- > Integrated ultra-fast, low $R_{DS(on)}$ bootstrap diode
- > Smaller package with 2KV HBM ESD

Target applications

- > Battery-powered applications such as
 - > Cordless power tools
 - > Vacuum cleaners
 - > Robotics & drones
 - > LEVs (Light Electric Vehicles)
 - > Gardening tools
 - > Outdoor power equipment (OPE)

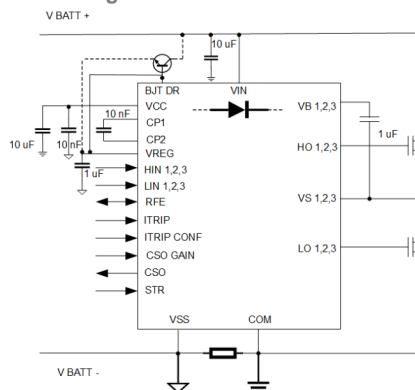
Benefits

- > Simple one stop solution till 120 V for all battery-powered applications
- > High power density enables smaller footprints for space savings
- > High reliability & durability
- > Excellent functionality (100% duty cycle) for hand-held power tools
- > Scalable solution for outdoor power equipment, drones & robotics

Competitive advantage

- > Supports wide range of battery voltages across multiple battery powered applications
- > Significantly lower level-shift losses
- > Superior -Vs latch up immunity
- > Integrated features (PMU, ITRIP, CSA et all) with design freedom due to discrete driver
- > Faster time to market due to integrated feature set
- > Optimized functionality with IFX OptiMOS™ as well as StrongIRFET™ MOSFETs & XMC™ Microcontrollers for stronger P2S

Block diagram



Product overview incl. data sheet link

Product collaterals / Online support

[Product page](#)

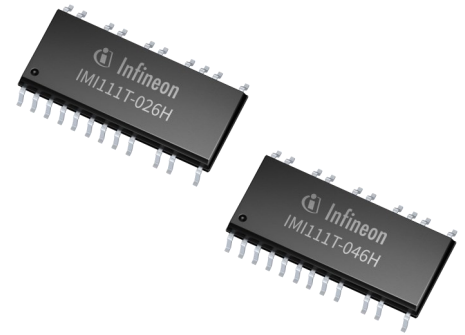
OPN	SP Number	Package
6ED2742S01QXTMA1	SP005548314	PG-VQFN-32

IMI111T - iMOTION™ Intelligent Power Module (IPM) with microcontroller, gate driver and IGBTs

iMOTION™ IPM integrating motor controller, three phase gate driver and 600V/2A and 600V/4A IGBTs in DSO-22 package.

The IMI111T device does not require a heatsink and addresses motor drives with a fan application typical output power of 50 W / 70 W with 600 V maximum DC blocking voltage. Depending on the system setup even higher power ratings are possible.

Infineon's field-proven MCE implements highly efficient field-oriented control (FOC) in sensor-less motor inverters. The ready-to-use Motion Control Engine with a code-free motor control and integrated scripting achieves, with its easy configuration and tuning software tool Solution Designer, a fast time to market.



Features

- > MCE with FOC, integrated scripting and code-free motor control
- > Controller, gate driver and power stage in one package
- > Typically 70 W without heatsink
- > DSO-22 package with single layer layout option
- > Completely self-sustaining motion control engine
- > Support for IEC 60335-1 (Class B)

Benefits

- > Unique combination of ready-2-use motor control algorithms with market leading gate driver
- > Reduced System Cost by: reduced bill of material (BOM) count and PCB size
- > Hall sensor based startup and sensorless high speed operation
- > Fastest time to market by using iMOTION™ design kits: no software development and inverter hardware design needed
- > Easy motor parametrization and tuning

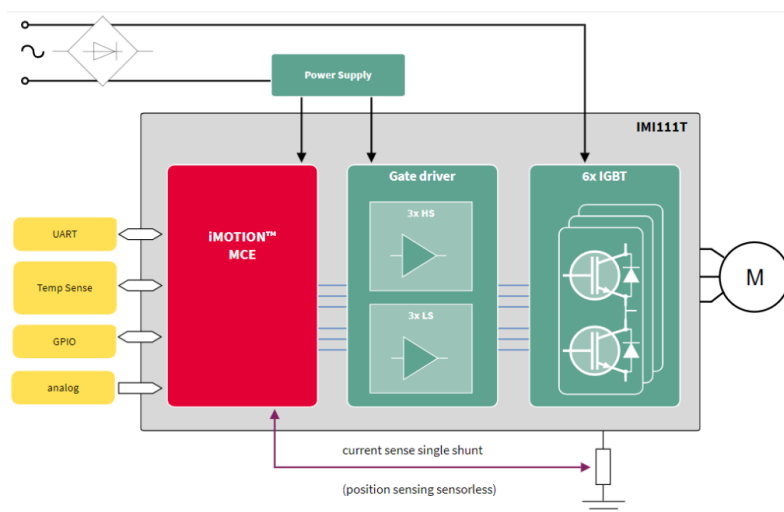
Target applications

- > Small and Major Home Appliances
- > Air conditioning
- > Fans, pumps
- > Refrigerators

Competitive advantage

- > Integrated scripting engine
 - > background execution with access to MCE, GPIO, AIN and UART
 - > 1/10 ms task cycles
- > DSO-22 package
 - > improved creepage and clearance
 - > single layer PCB design possible
 - > easy assembly and inspection

Block diagram



Product collaterals / Online support

[Product page IMI111T-026H](#)

[Product page IMI111T-046H](#)

[Product family page](#)

Product overview incl. data sheet link

OPN	SP Number	Package
IMI111T026HXUMA1	SP005410748	PG-DSO-22
IMI111T046HXUMA1	SP005416647	PG-DSO-22

HY-Power Disc T3841N18TOF and T2481N28TOF

Phase Control Thyristor 1800 V / 2800V, 4040 A / 2720 A with 120 mm diameter and a height of 26 mm assembled in high reliable, robust and hermetic sealed ceramic housings. The Hydrogen – Power disc is specially optimized for applications like high current rectifier for electrolysis and can be protected by standardly available fuse designs.



Features

- > Full blocking capability 50 / 60 Hz over a wide temperature range
- > High DC blocking stability
- > High turn-on di / dt capability
- > High dv / dt capability

Benefits

- > Minimized maintenance and reduced downtime due to high reliability
- > High power-density compared with optimized housing diameter
- > Designed for fuse protection in high current rectifiers

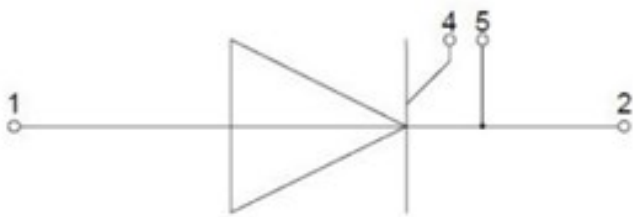
Target applications

- > Hydrogen electrolyzer
- > Motor control and drives
- > Power converter and inverter for wind turbines
- > Traction
- > Uninterruptible Power Supplies (UPS)

Competitive advantage

- > Protection with fuse possible and high power-density compared with optimized housing diameter

Block diagram



1: Anode / Anode

4: Gate

2: Kathode / Cathode

**5: Hilfskathode/
Auxiliary Cathode**

Product collaterals / Online support

[Product page T3841N18TOF VT](#)

[Product page T2481N28TOF VT](#)

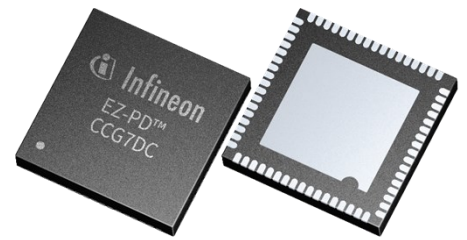
[Product family page](#)

Product overview incl. data sheet link

OPN	SP Number	Package
T3841N18TOFVTXPSA1	SP005731003	BG-T12026K-1
T2481N28TOFVTXPSA1	SP005731000	BG-T12026K-1

EZ-PD™ CCG7DC: dual-port USB-C PD controller with integrated buck-boost controller

EZ-PD™ CCG7DC CYPD7271-68LQXQ complies with the latest USB Type-C and PD specifications and is targeted for multi-port consumer charging applications and cigarette lighters adapters (CLA). Integration offered by EZ-PD™ CCG7DC not only reduces the BOM but also provides a footprint-optimized solution to support higher power density designs. It has integrated gate drivers for VBUS NFET on the provider path. It also includes hardware-controlled protection features on the VBUS. EZ-PD™ CCG7DC supports a wide input voltage range (4 V to 24 V with 40 V tolerance) and programmable switching frequency (150 kHz to 600 kHz) in an integrated PD solution.



Features

- > Integrates 2 USB-C PD controllers + 2 DC-DC controllers in one single chip
- > Charging protocols: supports latest USB-C PD v3.0 with PPS, QC4+, QC4.0, Samsung AFC, Apple 2.4 A, BCv1.2
- > DC-DC controller: configurable switching frequency of 150 kHz - 600 kHz, wide input voltage range of 4 - 24 V (40 V tolerant), and programmable spread spectrum frequency for low EMI
- > Arm® Cortex®-M0 with Flash allows users to implement custom features
- > Integrates VBUS NFET gate drivers, buck-boost NFET gate drivers, VCONN FETs and high-side current sense amplifier (HSCSA)

Benefits

- > Enables high power density designs by integrating 2 DC-DC controllers + 2 USB-C PD controllers in one single chip
- > Dynamic load sharing enables intelligent redistribution of power between two ports
- > Optimized buck input voltage using TL431 provides optimized efficiency for AC-DC designs
- > Supports USB-C PD3.0 with PPS and other legacy protocols including Apple 2.4A, Samsung AFC, QC4.0, BC1.2 at no additional BOM cost

Competitive advantage

- > Dynamic load sharing
- > Programmability and flexibility
- > Signed field firmware upgradability
- > Optimized buck input voltage
- > Protection on-chip

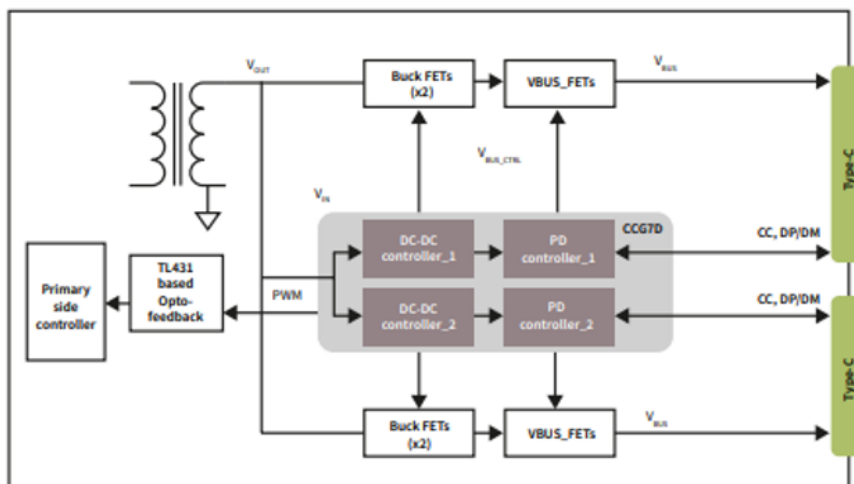
Target applications

- > Cigarette lighter adapter (CLA)
- > Multi-port AC-DC charger and adapter

Product collaterals / Online support

[Product page](#)

Block diagram



Product overview incl. data sheet link

OPN	SP Number	Package
CYPD7271-68LQXQ	SP005671763	PG-VQFN-68

OPTIGA™ TPM SLB 9673 RPI evaluation board

The OPTIGA™ TPM SLB 9673 RPI evaluation board provides a quick and easy way for developers to get started with Infineon's OPTIGA™ TPM SLB 9673 for Raspberry Pi. The board comes as a Raspberry Pi HAT (hardware attached on top) that conforms with the rules defined by the Raspberry Pi Foundation. This add-on makes it easier for users to connect the board to all 40-pin GPIO Raspberry Pi boards.

To enable easy evaluation and integration of the board, Infineon also provides the OPTIGA™ TPM Explorer, a GUI-based software tool that allows designers to check out OPTIGA™ TPM SLB 9673 features and use cases without deeper knowledge of the product. In addition, ready-to-use code examples can be downloaded from GitHub.



Features

- > OPTIGA™ TPM SLB 9673XU2.0
- > Standard Raspberry Pi HAT header, compatible with Raspberry Pi 40-pin header
- > I²C communication bus interface
- > 3 V or 1.8 V power supply
- > Reset input from Raspberry Pi board

Benefits

- > Simple integration with Linux-based OS thanks to easy-to-understand materials and sample codes on GitHub
- > Proven, standardized turnkey IoT security solution

Target applications

- > Home & office devices: enterprise printers
- > Industrial automation: factory robots, programmable logic controllers (PLC)
- > Smart building: surveillance camera
- > Health & lifestyle: monitoring system
- > Renewable energy: solar energy farms, electrical windmills
- > Smart mobility: EV charging
- > Network infrastructure: routers, switches, access points, gateway, 5G equipment

Product collaterals / Online support

[Board page](#)

[Product page](#)

Product overview incl. data sheet link

OPN	SP Number
TPM9673FW2610RPIEBTOBO1	SP005750438