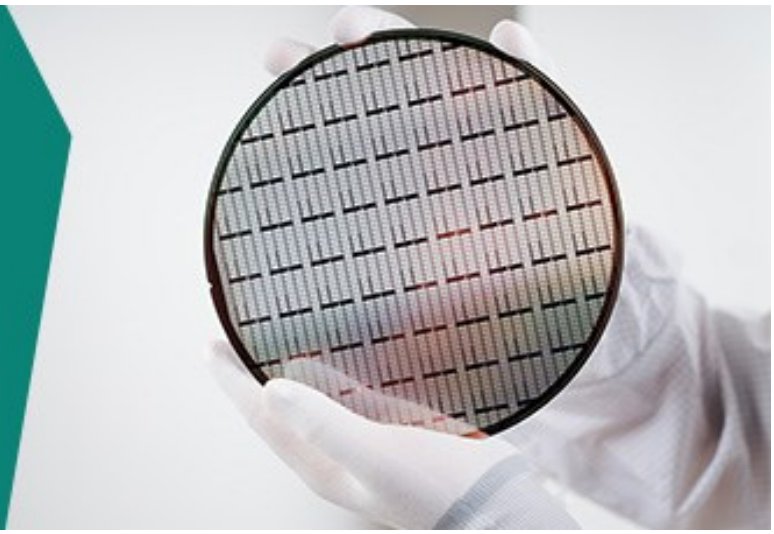
New Product Introduction



New Product Introduction

May 2025

ESD188-B1-W0201 – very low insertion loss bi-directional ESD protection device

PSOC™ 4 HVMS-64K

PSOC™ 4 HVMS-128K

650 V CoolMOS™ 8 SJ MOSFET

Easy module extension for EV charging applications

Easy module portfolio extension for solar applications

Lower power ESS portfolio extension

OptiMOS™ 6 power MOSFETs 200 V

62 mm IGBT4 chopper portfolio extension

CoolSiC™ MOSFET 650 V Generation 2 in Thin-TOLL 8x8 package, 26 mΩ and 33 mΩ

MOTIX™ BTM9020EP and BTM9021EP full-bridge ICs

New OPTIREG™ linear voltage regulators TLE4263-2Gx

OptiMOS™ 6 power MOSFETs 200 V

BGSA406MN10 – shunt to ground 4xsingle-pole single-throw (4xSPST) RF antenna tuning switch

XENSIV™ – TLE4802SC16-S0000 inductive position sensing

IM69D129F – ultra-low power digital XENSIV™ MEMS microphone

EZ-USB™ FX5 USB 5 Gbps peripheral controller

EZ-USB™ FX5N USB 10 Gbps peripheral controller

EZ-USB™ FX10 USB 10 Gbps peripheral controller

EZ-USB™ FX20 USB 20 Gbps peripheral controller

Half-bridge evaluation board with CoolGaN™ Transistor 100 V G3 – EVAL_7126G_100V_GANC

Half-bridge evaluation board with CoolGaN™ Transistor 100 V G3 – EVAL_7136G_100V_GANC

TRAVEO™ T2G Cluster 6M Lite

Communication interface between Infineon XDP™ Designer GUI and Infineon's controllers and digital POL – USB0010

ESD188-B1-W0201 – very low insertion loss bi-directional ESD protection device

ESD protection device with a bi-directional I/V characteristic and excellent clamping performance, extremely low capacitance and insertion loss.

Features

- Very low insertion loss
- Low clamping
- Bi-directional protection device
- Small package

Benefits

- Improved system reliability
- Absolute minimum board space
- Best protection allows engineers to focus on higher value portions of their designs

Competitive advantage

- Very low insertion loss for high-speed data lines

Target applications

- USB4, USB 3.x Gen 1/Gen 2/Gen 3/Gen 4
- Thunderbolt 5, thunderbolt 4, thunderbolt 3

Block diagram

Product collaterals / Online support

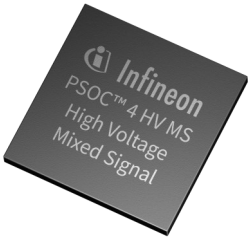
Product page

Product overview incl. datasheet link

OPN	SP Number	Package
ESD188B1W0201E6327XTSA1	SP006040531	SG-WLL-2

PSOC™ 4 HVMS-64K

The PSOC™ 4 HVMS-64K, part of the PSOC™ 4 HV mixed-signal (MS) series, is a fully integrated, programmable embedded system designed for automotive HMI, body, and powertrain applications. It combines an Arm® Cortex®-M0+ processor with programmable analog and digital blocks, featuring a 12-bit SAR ADC, 5th-gen CAPSENSE™ for capacitive sensing, digital peripherals like PWMs, serial communication interfaces, and an integrated LIN PHY. Its high-voltage subsystem enables direct operation from a 12 V car battery, making it ideal for robust automotive solutions.



Features

- Automotive-grade reliability: AEC-Q100 qualified, ASIL B compliant (ISO 26262)
- High-performance core: 48 MHz Arm® Cortex®-M0+ CPU with MPU and single-cycle multiply
- Memory: up to 64 KB Flash and 8 KB SRAM with SECDED ECC for error detection / correction
- Advanced analog: 12-bit SAR ADC (1 Msps), temperature sensor, and low-power comparators
- Best-in-class CAPSENSE™: Superior SNR (>5:1) and water tolerance for capacitive sensing
- High-voltage operation: direct 12 V / 24 V battery support (up to 42 V) with LIN/CXPI transceiver
- Flexible communication: LIN, CXPI, I²C, SPI, UART via reconfigurable SCBs
- Smart I/O: up to 41 GPIOs configurable as CAPSENSE™, analog, or digital
- Functional safety: watchdog timer, supply monitoring, and SECDED ECC on critical memories
- Timing and control: five 16-bit PWM blocks and quadrature decoder for motor control
- Compact packaging: 32-, 48-, 56-lead QFN with wettable flanks

Benefits

- Automotive-grade MCU with ASIL-B compliance and AEC-Q100 qualification
- High-performance analog and digital integration for mixed-signal automotive applications
- Best-in-class CAPSENSE™ technology for robust capacitive sensing in harsh environments
- Flexible communication and I/O options for diverse automotive use cases
- Low-power operation with advanced safety and diagnostic features

Competitive advantage

- Supports 12 V operation (directly interfaces with higher-voltage systems) and includes 12-bit SAR ADC for robust automotive/ industrial environments
- Robust capacitive-sensing performance with best inclass SNR enabling elegant automotive HMI designs
- AEC-Q100 qualified (grade 1: -40°C to +125°C), ideal for harsh automotive applications (e.g. sensors, motor control)
- High safety support up to ASIL-B with safety materials (Safety manual, Safety case report, FMEDA)
- Supported by automotive quality software with safety support for quick system market launch (AutoPDL, CAPSENSE MW, SafeTlib)
- "One-chip solution" for analog / digital needs vs. discrete MCU+external ICs
- ModusToolbox™ enables custom peripheral configuration without full ASIC development

Target applications

- Steering wheel HMI controls
- Hands-on detection
- PTC heater
- Car door handle
- Liquid level sensing foot kick
- Trunk detection window
- Sunroof control
- Passenger occupant detection
- Lighting (Interior, exterior)
- HMI – CAPSENSE™ buttons, trackpads

Product collaterals / Online support

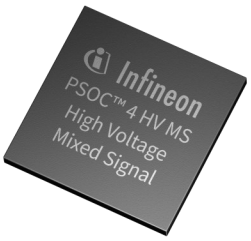
Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
CY8C4146LWEHVS015XXQLA1	SP005753890	PG-VQFN-56
CY8C4146LWEHVS115XXQLA1	SP005742448	PG-VQFN-56

PSOC™ 4 HVMS-128K

The PSOC™ 4 HVMS-128K, part of the PSOC™ 4 HV mixed-signal (MS) series, is a fully integrated, programmable embedded system designed for automotive HMI, body, and powertrain applications. It combines an Arm® Cortex®-M0+ processor with programmable analog and digital blocks, featuring a 12-bit SAR ADC, 5th-gen CAPSENSE™ for capacitive sensing, digital peripherals like PWMs, serial communication interfaces, and an integrated LIN PHY. Its high-voltage subsystem enables direct operation from a 12 V car battery, making it ideal for robust automotive solutions.



Features

- Automotive-grade: AEC-Q100, ASIL B (ISO 26262)
- Core: 48 MHz Arm® Cortex®-M0+ with MPU, 8-channel DMA
- Memory: 128 KB Flash, 16 KB SRAM, SECDED ECC
- Analog: 12-bit SAR ADC (1 Msps), 24-ch mux, 2 opamps, 2 comparators (Deep Sleep)
- CAPSENSE™: best-in-class SNR (>5:1), water-tolerant
- High-Voltage: operates off 12 V / 24 V battery (up to 42 V), LIN / CXPI transceiver
- Safety: WDT, supply monitoring, overvoltage/brownout detection
- Timing: 8x 16-bit PWM, quadrature decoder
- Communication: 2x SCB (I²C, SPI, UART, LIN), 1x LIN, 1x CXPI
- I/O: 49 GPIOs, configurable as CAPSENSE™, analog, or digital
- Clocks: ±2% IMO, ±1% HPOSC, ±5% PILO, software calibrated
- Packages: 32-, 48-, 56-, 64-lead QFN with wettable flanks

Competitive advantage

- Supports 12 V direct operation, eliminating level shifters for industrial / automotive systems. Includes 12-bit SAR ADC with HV tolerance
- Robust capacitive-sensing performance with best inclass SNR enabling elegant automotive HMI designs
- AEC-Q100 qualified (grade 1: -40°C to +125°C), suitable for automotive apps (e.g. sensors, body control)
- High safety support up to ASIL-B with safety materials (Safety manual, Safety case report, FMEDA)
- Supported by automotive quality software with safety support for quick system market launch (AutoPDL, CAPSENSE MW, SafeTlib)
- Single-chip HV mixed-signal solution vs. MCU + external analog ICs
- ModusToolbox™ enables drag-and-drop peripheral customization

Benefits

- Automotive-grade MCU with ASIL-B compliance and AEC-Q100 qualification
- High-performance analog and digital integration for mixed-signal automotive applications
- Best-in-class CAPSENSE™ technology for robust capacitive sensing in harsh environments
- Flexible communication and I/O options for diverse automotive use cases
- Low-power operation with advanced safety and diagnostic features

Target applications

- Steering wheel HMI controls
- Hands-on detection
- PTC heater
- Car door handle
- Liquid level sensing foot kick
- Trunk detection window
- Sunroof control
- Passenger occupant detection
- Lighting (Interior, exterior)
- HMI – CAPSENSE™ buttons, trackpads
- e-Shifter (PRNDL)

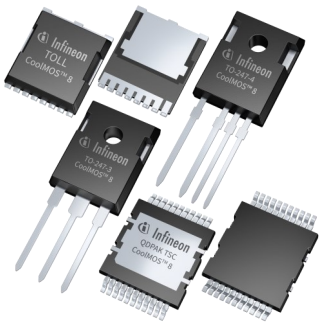
Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
CY8C4147LWEHVS035XXQLA1	SP005905670	PG-VQFN-56
CY8C4147LQEHVS136XXQLA1	SP005907468	PG-VQFN-64

650 V CoolMOS™ 8 SJ MOSFET



Infineon's newest CoolMOS™ 8 at 650 V is leading the way in high voltage super-junction MOSFET technology worldwide, setting the standard for both technology and price performance on a global scale. The series is providing additional 50 V buffer for high power applications. This will help to fulfill the requirement of increased AC-line input voltage of 277 in data center and telecom application. Additionally, it provides additional surge protection in EV charging and SSCB application. Our 650 V CoolMOS™ 8 SJ MOSFET is equipped with an integrated fast body diode, making it suitable for a wide range of other high-power applications. It is the successor of CoolMOS™ 7 MOSFET including C7 and CFD7.

Features

- World class $R_{DS(on)}$ *A
- Integrated fast body diode
- Excellent commutation ruggedness
- Advanced interconnect technology
- Gradual portfolio including BiC 8 mΩ
- Top-side cooling packages

Benefits

- Low ringing tendency
- Ease of use and fast design-in
- Crisp portfolio
- System level innovation

Competitive advantage

- World class $R_{DS(on)}$ *A
- Superior Q_{rr} improvement to competition
- 35% lower t_{rr} to our closest competitor
- Top-side cooled packages like QDPAK
- Outstanding Infineon Technologies quality
- Enhancing WBG offering
- 8 mΩ offering in QDPAK package

Target applications

- Data center
- Telecom
- Super solid-state solutions (relays, circuit breakers)
- EV charging
- UPS
- Industrial SMPS

Product collaterals / Online support

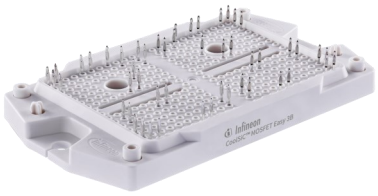
Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
IPDQ65R008CM8XTMA1	SP006050908	PG-HDSOP-22
IPDQ65R018CM8XTMA1	SP006050907	PG-HDSOP-22
IPT65R018CM8XTMA1	SP006050912	PG-HSOF-8
IPT65R025CM8XTMA1	SP006050911	PG-HSOF-8
IPT65R040CM8XTMA1	SP006050910	PG-HSOF-8
IPW65R018CM8XKSA1	SP006050914	PG-TO247-3
IPW65R025CM8XKSA1	SP006050913	PG-TO247-3
IPW65R040CM8XKSA1	SP006050921	PG-TO247-3
IPW65R060CM8XKSA1	SP006050924	PG-TO247-3
IPZA65R018CM8XKSA1	SP006050916	PG-TO247-4
IPZA65R025CM8XKSA1	SP006050915	PG-TO247-4
IPZA65R040CM8XKSA1	SP006050909	PG-TO247-4

Easy module extension for EV charging applications

EasyPACK™ 3B 2000 V 6 mΩ, 2000 V 10 mΩ and 1200 V 11 mΩ fourpack module with CoolSiC™ MOSFET enhanced generation 1, integrated NTC temperature sensor and PressFIT contact technology.



Features

- Best-in-class packages with 12 mm height
- Leading edge WBG material
- Very low module stray inductance
- Wide gate source voltage range
- Low switching and conduction losses
- Overload operation up to 175°C

Benefits

- System efficiency improvement
- System cost advantage
- Enabling higher frequency
- Increase of power density
- Compact design

Competitive advantage

- Expansion of 2 kV and 1.2 kV portfolio to offer our customers a scalable solution for applications with higher application requirements
- The new Easy modules are an extension of the already existing Easy portfolio and serves as a perfect replacement for the modules with baseplate for the 2000 V and 1200 V applications

Target applications

- DC-DC converter
- EV charging
- Photovoltaic
- Energy storage systems

Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
F46MR20W3M1HB11BPSA1	SP005975717	AG-EASY3B-3111
F410MR20W3M1HB11BPSA1	SP005596760	AG-EASY3B-3111
F411MR12W3M1HB11BPSA1	SP006060405	AG-EASY3B-3111

Easy module portfolio extension for solar applications

EasyPACK™ 1B module in half-bridge/ booster topology featuring CoolSiC™ MOSFET enhanced generation 1.

The module is equipped with Pressfit pin contact technology and integrated NTC. The module offers an all-in-one solution, a perfect fit for solar inverter system design.

Features

- Easy family with 12 mm height
- CoolSiC™ MOSFET 1.2 kV with enhanced generation 1 trench technology
- Very low module stray inductance
- Gate-source voltages of +23 V and -10 V
- Very low stray inductance
- Overload capabilities up to 175°C
- PressFIT pins

Benefits

- Easy to design
- Highest power density by lowest R_{DS}
- Outstanding module efficiency which enables system cost advantages
- A low FIT rate for cosmic ray induced fails

Competitive advantage

- Compact design
- Reduced system costs
- High power density

Target applications

- Solar

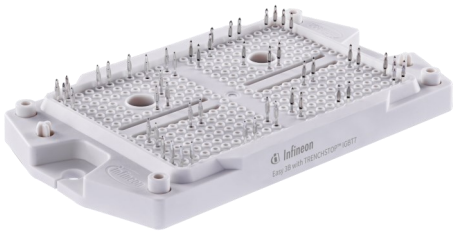
Product collaterals / Online support

Product page

Product overview incl. datasheet link

OPN	SP Number	Package
DF17MR12W1M1HFB86BPSA1	SP006008193	AG-EASY1B-3111

Lower power ESS portfolio extension



EasyPACK™ 3B in 3-level NPC 1 topology featuring with latest 1200 V TRENCHSTOP™ IGBT H7, EC7, Rapid Diode technologies.

EasyPACK™ 3B in ANPC topology featuring 1200 V CoolSiC™ MOSFET 1200 V, with L7, EC7 technologies.

EasyPACK™ 3B in half-bridge topology featuring 2000 V CoolSiC™ MOSFET.

All three modules are equipped with high current PressFit Pin contact technology and NTC. All are single module solution targeting 1500 V_{DC} 200 kW power conversion system design.

Features

- Easy family with 12 mm height
- Very low stray inductance
- Overload capabilities up to 175°C
- High current pin

Benefits

- Easy to design
- Increased power density
- Best cost-performance

Competitive advantage

- Reduced system costs
- Easy to design product
- High degree of freedom for inverter design
- Highest power density

Target applications

- Energy storage systems

Product collaterals / Online support

Product page FF3MR20W3M1H_H11

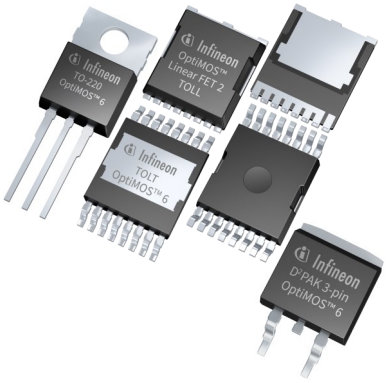
Product page F3L3MR12W3M1H_H11

Product page F3L340R12W3H7_H11

Product overview incl. datasheet link

OPN	SP Number	Package
FF3MR20W3M1HH11BPSA1	SP006049702	AG-EASY3B-3111
F3L3MR12W3M1HH11BPSA1	SP005952735	AG-EASY3B-3111
F3L340R12W3H7H11BPSA1	SP006012287	AG-EASY3B-3111

OptiMOS™ 6 power MOSFETs 200 V



Infineon's new OptiMOS™ 6 200 V technology was designed to fulfill the requirements of a wide range of Applications: from static switching applications to high frequency applications in hard and soft switching.

The OptiMOS™ 6 200 V technology is employing an advanced cell structure to enable industries lowest $R_{DS(on)}$ and Q_{rr} in 200 V. This enables unparallel efficiency, power density compared to the previous generation.

Features

- Industries lowest $R_{DS(on)}$ in 200 V
- Industries lowest Q_{rr} in 200 V
  - Up to 42 % lower $R_{DS(on)}$
  - Up to 89% lower $Q_{rr(typ)}$
  - 36% lower FOMg
  - More than 3 times softer diode
  - Improved capacitance linearity
  - Improved SOA
- Tight $V_{gs(th)}$ spread of +/-750 mV
- High avalanche ruggedness
- Max T_j of 175°C and MSL1

Benefits

- Low conduction and switching losses
- Stable operation with improved EMI
- Better current sharing when paralleling
- Enhanced robustness
- Improved system reliability

Competitive advantage

- Industry lowest $R_{DS(on)}$ and Q_{rr} in 200 V
- High efficiency and power density
- Improved price performance compared to the previous generation
- Better performance and lower price alternatives to address existing market segments
- High reliability

Target applications

- SMPS in telecom, server, high power chargers
- Renewables like solar, EES
- Drives in a wide range of applications: Forklift, LEV, battery powered applications, robots and drones, servo drives
- Battery protection in the battery management system (BMS)
- Audio

Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
IPB095N20NM6ATMA1	SP006070075	PG-TO263-3
IPP095N20NM6AKSA1	SP006070072	PG-TO220-3
IPP130N20NM6AKSA1	SP006063001	PG-TO220-3
IPTC068N20NM6ATMA1	SP006063004	PG-HDSOP-16

62 mm IGBT4 chopper portfolio extension

The 62mm portfolio is extended by 2 further products. Both chopper IGBT4 modules are equipped with emitter controlled HE diode and are also available with Thermal Interface Material. They come in 1200 V and 450 A or 1700 V and 300 A.

Features

- Designed for frequency controlled drives
- UL/CSA Certification with UL1557 E83336
- Overload capability up to 175°C max
- Optimized switching behavior
- RoHS compliant

Benefits

- Flexibility
- Optimal electrical performance
- Highest reliability

Competitive advantage

- Highest reliability
- Improved switching behavior
- Mature and robust 62 mm housing

Target applications

- Energy storage systems
- General purpose motor drive - variating frequency and voltage
- Motor control
- Uninterruptible power supplies (UPS)

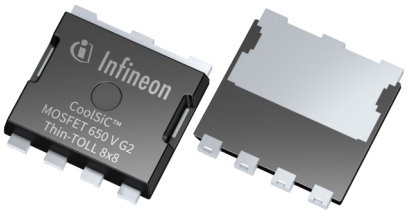
Product collaterals / Online support

Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
FD300R17KE4HPSA1	SP005729021	AG-62MM-411
FD450R12KE4HPSA1	SP005947395	AG-62MMHB-411

CoolSiC™ MOSFET 650 V generation 2 in Thin-TOLL 8x8 package, 26 mΩ and 33 mΩ



The CoolSiC™ MOSFET discrete 650 V G2 in Thin-TOLL 8x8 package portfolio has been expanded by 26 mΩ and 33 mΩ and now offers a more granular $R_{DS(on)}$ range from 20 mΩ up to 60 mΩ.

The Thin-TOLL package is the best 8x8 option to leverage a performing technology, like CoolSiC™ G2. It overcomes the limits in thermal cycles of the standard 8x8 and improves the .XT interconnect to reduce the thermal resistance. It is hence possible to fully use the characteristics of SiC, but maintaining a small footprint with a product which is the next logical step in power density.

Features

- Excellent figures of merit (FOMs)
- Best in class $R_{DS(on)}$
- High robustness and overall quality
- Flexible driving voltage range
- Support for unipolar driving (V_{GSoff}=0)
- Pin to pin compatible with all 8x8 FETs
- Improved package interconnect with .XT
- 4x improvement in TCoB

Benefits

- Enables BOM savings
- Maximizes the system performance per $
- Highest reliability and longer lifetime
- Enables top efficiency and power density
- Small footprint to more power density
- Most compact daughter card design

Competitive advantage

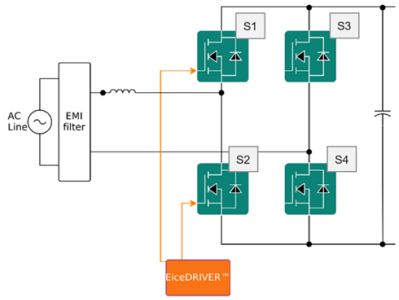
- CoolSiC™ MOSFETs 650V G2 in Thin-TOLL 8x8 package are built on the CoolSiC™ generation 2 technology, featuring leading FOMs (figure of merit), reliability and ease of use. Thin-TOLL 8x8 is compatible with any similar 8x8 package, but it boasts an improved TCoB (thermal cycling on board) capability closer to higher power packages

Target applications

- Complete system solutions for smart TVs
- Heating ventilation and air conditioning (HVAC)
- Home appliances
- Microinverter solutions
- Power conversion

Block diagram

Topology example 1: CCM Totem Pole PFC



S1, S2	– CoolSiC™ MOSFET 650 V – CoolGaN™ HEMT 600 V / 650 V – Low Q_{rr} CoolMOS™ solution
S3, S4	– CoolMOS™ 8 – CoolMOS™ S7
Gate Driver ICs	– EiceDRIVER™ 2EDB9259Y – EiceDRIVER™ 2EDF9275F

Product collaterals / Online support

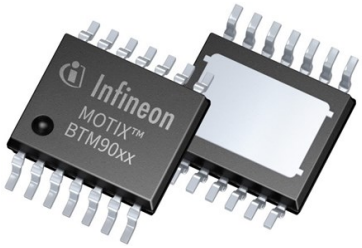
Product family page

Product overview incl. datasheet link

OPN	SP Number	Package
IMTA65R026M2HXTMA1	SP006051130	PG-LHSOF-4
IMTA65R033M2HXTMA1	SP006051131	PG-LHSOF-4

MOTIX™ BTM9020EP and BTM9021EP full-bridge ICs

MOTIX™ BTM9020EP and BTM9021EP complement the AEC Q100 qualified MOTIX™ BTM90xx full-bridge IC family for automotive brushed DC motor control applications offering min. current limit of 20 A.



Our latest additions have a supply voltage range for normal operation from 7 V to 18 V (extended: 4.5 V to 40 V) and provide a broad range of protection and diagnosis features.

Our SPI variants, including the BTM9021EP, support Daisy chained operation. BTM9021EP additionally features built-in watchdog.

The TSDSO-14 package with exposed pads of our devices ensures optimized thermal performance.

Features

- Supply voltage range 7 – 18 V, for transients 4.5 – 40 V
- BTM901x min current limit 10 A, 5.2 A for 1 sec @85°C
- BTM902x min current limit 20 A, 8.8 A for 1 sec @85°C
- PWM frequency up to 20 kHz
- SPI variants BTM9011/21 supporting daisy chain operation
- Current sense on both high side and low side
- Independent half-bridge mode (more flexibility)

Benefits

- Extensive protections and diagnostics features
- Tiny package with lowest pin count
- Improved thermal performance with exposed pad (11 mm²)
- AEC Q100 qualified (grade 1)
- QM device with safety documentation (ISO 26262-ready)

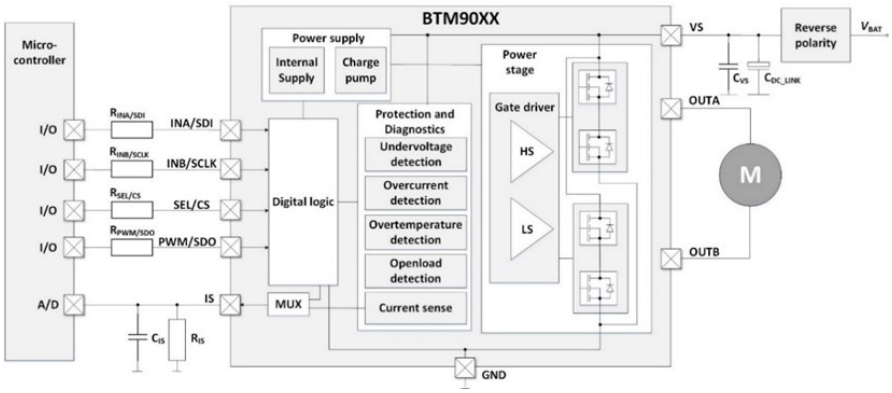
Competitive advantage

- Small PCB footprint
- Improved thermal performance with exposed pad
- EMC: slew rate configurable in two modes
- Current sense for both high side and low side
- Overload (OL) detection without current sense method
- Flexible half-bridge control
- On state open load detection

Target applications

- Door lock / safe lock
- Fuel / e-charging lid
- Mirror fold
- Door cinching latch
- Trunk cinching latch
- Body control modules

Block diagram



Product collaterals / Online support

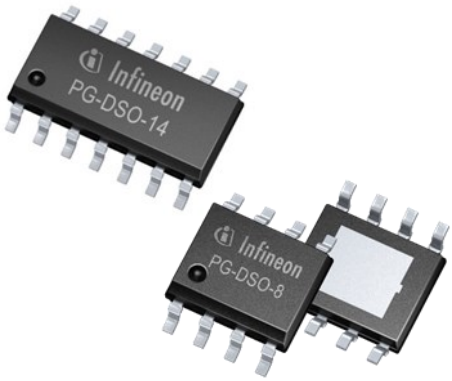
Product family page

Board page

Product overview incl. datasheet and user manual link

OPN	SP Number	Package
BTM9020EPXUMA1	SP005860479	PG-TSDSO-14
BTM9021EPXUMA1	SP005860483	PG-TSDSO-14
KITBTM902021TOBO1	SP005930686	

New OPTIREG™ linear voltage regulators TLE4263-2Gx



TLE4263-2GS/2GM are compact, reliable voltage regulators for automotive use. Monolithic design, low dropout, SMD package PG-DSO-8/14. The two OPTIREG™ LDOs regulate input voltage up to 45 V, wide range, to 5.0 V, with a load capacity of 180 mA. The two variants only differ in the package PG-DSO-8 / PG-DSO-14. TLE4263-2GS and TLE4263-2GM are the successors for TLE4263GS & TLE4263GM, and even with significant reduction in the quiescent current from 50 µA to 10 µA.

Both offers short-circuit protection, overtemperature shutdown, power-on reset, undervoltage reset, watchdog circuit, and an inhibit input. Reset output and watchdog trigger time can be adjusted with external components. Inhibit input switches off the IC, minimizing current consumption (typically 0 mA).

Features

- Output voltage tolerance ≤ ±2 %
- 180 mA output current capability
- Low-drop voltage
- Very low standby current consumption
- Overtemperature protection
- Reverse polarity protection
- Short-circuit proof
- Adjustable reset threshold
- Watchdog for monitoring microprocessor
- Power-on and undervoltage reset with programmable delay time
- Reset low down to V_Q = 1 V
- Wide temperature range
- Suitable for use in automotive electronics
- Green product (RoHS compliant)

Benefits

- Robust protection features
- Wide input operation and temperature range

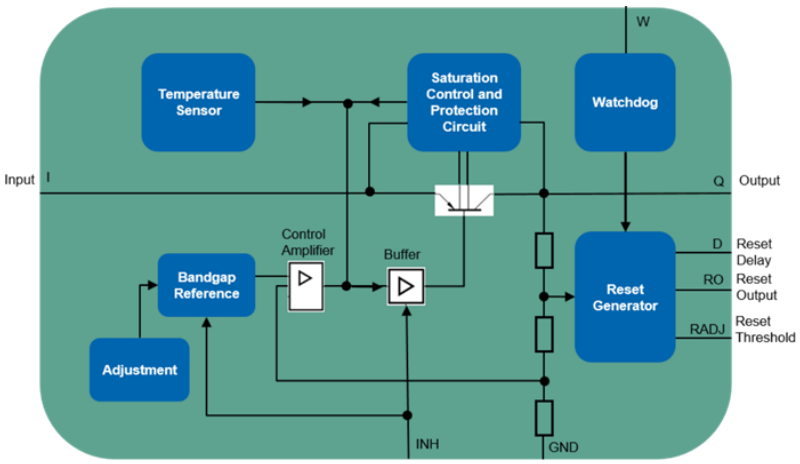
Competitive advantage

- Very low current consumption
- Easy to design
- PCB space and cost savings

Target applications

- General automotive applications

Block diagram



Product collaterals / Online support

Family product page

Product overview incl. datasheet link

OPN	SP Number	Package
TLE42632GMXUMA1	SP005907754	PG-DSO-14
TLE42632GSXUMA1	SP005907750	PG-DSO-8

BGSA406MN10 – shunt to ground 4xsingle-pole single-throw (4xSPST) RF antenna tuning switch

The BGSA406MN10 is a versatile shunt to ground 4xsingle-pole single-throw (4xSPST) RF antenna tuning switch. It is optimized for low C_{OFF} as well as low R_{ON} enabling applications up to 7.125 GHz. This chip features on-chip CMOS logic and power regulation, with a digital control interface compliant with MIPI 2.1 RFFE. Each switch throw is individually or collectively programmable within the same RFFE command frame.

Features

- Low R_{ON} resistance of 2.0 Ω in ON state
- Low C_{OFF} capacitance of 110 fF in OFF state
- 80 V peak voltage handling in OFF state
- Ultra-fast switching speed, typ. 1.2 µs
- Single V_{IO} supply support in 1.2 V and 1.8 V
- Small form factor 0.95 mm x 1.3 mm
- 4 df. USID address via ext. USID_SEL pin
- MIPI RFFE 2.1 control interface

Benefits

- Highly performant 4xSPST antenna tuning switch for applications ranging from LB to 5G bands, operating up to 7.125 GHz
- Fast switching speed (typ. 1.2 µs) for 5G SRS switching
- Optimized low C_{OFF} and low R_{ON} figure of merit with high voltage handling
- Beyond R_{ON}/C_{OFF} antenna efficiency improvement through tailored band of interest performance
- Single V_{IO} supply, supporting both 1.8 V and 1.2 V for the next generation 5G chipsets
- Supports 4 USIDs
- Small form factor

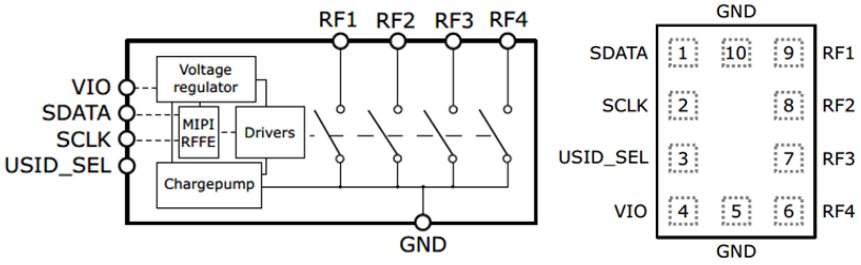
Target applications

- Smartphones
- Notebooks, tablets, and wearables
- Various battery powered cellular applications
- Impedance, aperture, and inductance tuning
- Tunable filters

Product collaterals / Online support

Product page

Block diagrams



Product overview incl. datasheet link

OPN	SP Number	Package
BGSA406MN10E6327XTSA1	SP005631230	PG-TSNP-10

XENSIV™ – TLE4802SC16-S0000 inductive position sensing

Infineon's new TLE480x family employs the inductive measurement principle and inherently offer robustness against stray fields, thereby eliminating the need for additional shielding against electromagnetic disturbances.
The products show exceptional accuracy with an impressive angle error of 0.1% full scale (FS). The monolithic design of these devices enables system cost savings through reduced device count as they have been developed in accordance with ISO 26262 and fully support system design up to automotive safety integrity level (ASIL D), ensuring a high level of safety and reliability.
The TLE4802SC16-S0000 supports cyber security according to ISO 21424 to prevent the threat of cyber attacks

Features

- ISO 26262 Safety element out of context up to ASIL D
- Angle error over full scale: <0.1%
- Intrinsic stray field robustness according to ISO 11452-8:2015
- Digital interfaces: SENT/SPC
- Integrated memory for calibration and configuration
- TLE4802 offers an implemented security feature to verify the sensor data integrity via an AES128-CMAC block (cyber-security read according to ISO 21434)
- Operating temperature range T_j = -40°C to 150°C

Benefits

- ASIL D (product level) saves cost
- Highly accurate measurements
- Intrinsic stray field robustness saves cost
- High flexibility programmability
- TLE4802 prevents threat of cyber-attacks

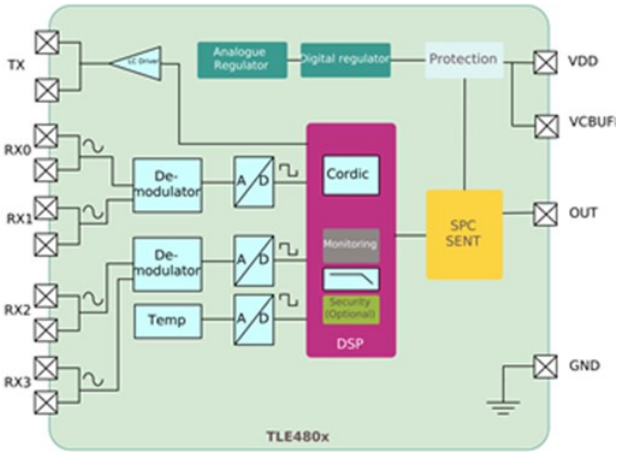
Competitive advantage

- Excellent functional safety rating
- Cyber security feature
- One-stop-shop product variety
- SPC and SENT communication protocol

Target applications

- Electric power steering systems
- Pedal
- Suspension applications

Block diagram



Product collaterals / Online support

Product page

Product overview incl. datasheet link

OPN	SP Number	Package
TLE4802SC16S0000XUMA1	SP006068556	PG-TSSOP-16

IM69D129F – ultra-low power digital XENSIV™ MEMS microphone

Discover the IM69D129FV01 – a low power digital XENSIV™ MEMS microphone designed for applications which require a digital PDM MEMS microphone with high SNR (low self-noise), low distortion (high AOP), and very low current consumption. SNR of 69 dB(A) enables far-field and low volume audio pick-up. The flat frequency response (11 Hz low-frequency roll-off) and tight manufacturing tolerance improve performance of multi-microphone (array) applications.

Features

- Current consumption in low power mode (170 µA) at 768 kHz
- Signal to noise ratio (SNR) of 69 dB(A)
- Flat frequency response with mechanical resonance peak at 33 kHz
- Package dimensions: 3.5 mm x 2.65 mm x 0.98 mm
- Digital PDM output

Benefits

- Battery saving without compromising in acoustic performance
- Clear audio signals even for highest sound pressure levels
- Highest precision of audio beams and algorithms

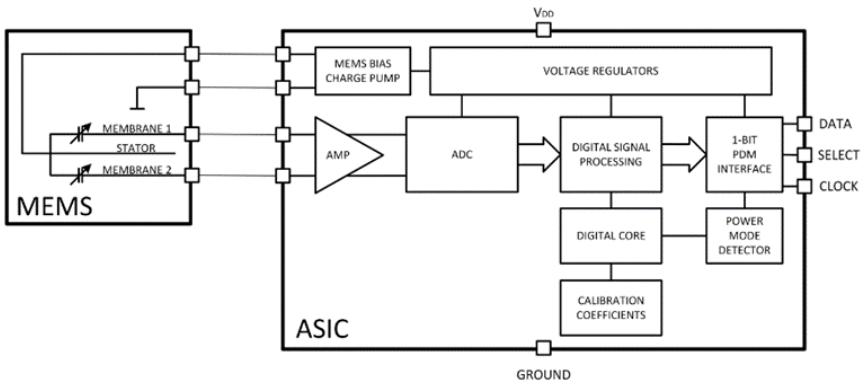
Competitive advantage

- The IM69D129FV01 XENSIV™ MEMS microphone offers exceptional audio clarity with a 69 dB(A) SNR, ideal for far-field and low-volume applications. It features a high acoustic overload point to minimize distortion and a flat frequency response for improved multi-microphone performance. With advanced calibration ensuring minimal sensitivity variance and selectable power modes for optimized current consumption, it is perfect for devices that demand both high audio quality and energy efficiency

Target applications

- Active noise cancellation (ANC) headphones and earbuds
- High quality audio capturing
  - Laptops and tablets
  - Conference systems
  - Cameras, camcorders, and camera accessories
- Devices with voice user interface (VUI)
  - Smart speakers
  - Home automation
  - IOT devices
- Industrial or home monitoring with audio pattern detection

Block diagram



Product collaterals / Online support

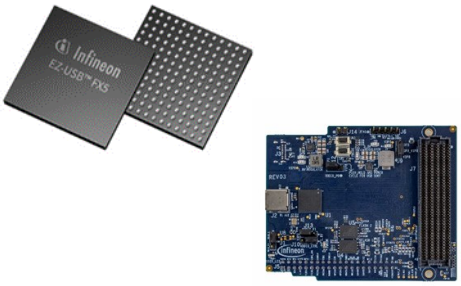
Product page

Board page

Product overview incl. datasheet link

OPN	SP Number	Package
IM69D129FV01XTMA1	SP005969500	PG-TLGA-5
KITIM69D129FV01FLEXTOBO1	SP006038667	

EZ-USB™ FX5 USB 5 Gbps peripheral controller



EZ-USB™ FX5 extends the legacy of EZ-USB™ FX3, the industry's gold standard for USB peripheral controllers, to the next level with higher bandwidth, more I/Os, integrated flash memory, and the best-in-class USB PHY with direct USB-C connection and 10-meter cable support.

Features

- USB 5 Gbps device port
- USB-C orientation detection
- Dual-core ARM® Cortex® M4F/M0+ CPU
- Integrated 512 KB flash
- 1024 KB buffer memory
- 16-lane LVDS interface @1.25 Gbps
- 32-bit LVCMOS interface @160 MHz DDR
- 2x Quad-SPI (QSPI)
- 7 serial communication blocks
- USB full-speed device debug port
- 2x I2S/PDM-PCM and GPIOs
- Cryptography accelerator

Benefits

- 116 % performance improvement from predecessor
- Smaller PCB footprint and optimized BOM cost
- 10X10 BGA package
- USB-C direct connection without a high-speed signal mux
- Integrated FLASH
- Quick start development
- Firmware jumpstart with configuration utility
- USB video class, UVC, firmware ready
- USB3 vision firmware ready
- DVK with standard FMC for quick connection to FPGA boards
- All-in-one programming and debugging accessory board
- Application notes for hardware and software

Target applications

- Machine vision
- Industrial automation
- Frame grabber
- Mixed reality headset
- 3D scanners
- Text and measurement

Product collaterals / Online support

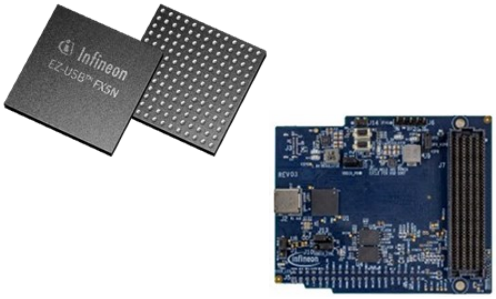
Product family page

Board page

Product overview incl. datasheet and user manual link

OPN	SP Number	Package
CYUSB3082FCAXIXQMA1	SP005953709	PG-TFBGA-169
CYUSB3083FCAXIXQMA1	SP005953713	PG-TFBGA-169
CYUSB3084FCAXIXQMA1	SP005957784	PG-TFBGA-169
KITFX5FMC001TOBO1	SP006138286	

EZ-USB™ FX5N USB 10 Gbps peripheral controller



EZ-USB™ FX5N extends the legacy of EZ-USB™ FX3, the industry's gold standard for USB peripheral controllers, to the next level with the latest ultra-fast USB 10 Gbps and LVDS interfaces, increasing the total bandwidth up to 275% of its predecessor (8.8 Gbps vs. 3.2 Gbps).

Features

- USB 10 Gbps device port
- USB-C orientation detection
- Dual-core ARM® Cortex® M4F/M0+ CPU
- Integrated 512 KB flash
- 1024 KB buffer memory
- 16-lane LVDS interface @1.25 Gbps
- 32-bit LVCMOS interface @160 MHz DDR
- 2x Quad-SPI (QSPI)
- 7 serial communication blocks
- USB full-speed device debug port
- 2x I2S/PDM-PCM and GPIOs
- Cryptography accelerator

Benefits

- 275% performance improvement from predecessor
- Smaller PCB footprint and optimized BOM cost
- 10X10 BGA package
- USB-C direct connection without a high-speed signal mux
- Integrated FLASH
- Quick start development
- Firmware jumpstart with configuration utility
- USB video class, UVC, firmware ready
- USB3 vision firmware ready
- DVK with standard FMC for quick connection to FPGA boards
- All-in-one programming and debugging accessory board
- Application notes for hardware and software

Target applications

- Frame grabber
- Mixed reality headset
- 3D scanners
- Test and measurement
- Industrial automation
- Machine vision

Product collaterals / Online support

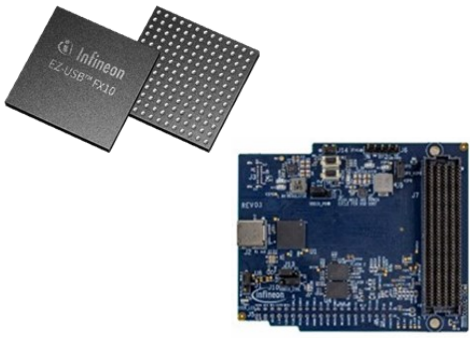
Product family page

Board page

Product overview incl. datasheet and user manual link

OPN	SP Number	Package
CYUSB3282FCAXIXQMA1	SP006123140	PG-TFBGA-169
CYUSB3284FCAXIXQMA1	SP006123182	PG-TFBGA-169
KITFX5NFMC001TOBO1	SP006138288	

EZ-USB™ FX10 USB 10 Gbps peripheral controller



EZ-USB™ FX10 extends the legacy of EZ-USB™ FX3, the industry's gold standard for USB peripheral controllers, to the next level with the latest ultra-fast USB 10 Gbps and LVDS interfaces, increasing the total bandwidth up to 275 % of its predecessor (8.8 Gbps vs. 3.2 Gbps).

Features

- USB 10 Gbps device port
- USB-C orientation detection
- Dual-core ARM® Cortex® M4F/M0+ CPU
- Integrated 512 KB flash
- 1024 KB buffer memory
- 16-lane LVDS interface @1.25 Gbps
- 32-bit LVCMOS interface @160 MHz DDR
- 2x Quad-SPI (QSPI)
- 7 serial communication blocks
- USB full-speed device debug port
- 2x I2S/PDM-PCM and GPIOs
- Cryptography accelerator

Benefits

- 275 % performance improvement from predecessor
- Smaller PCB footprint and optimized BOM cost
- 10X10 BGA package
- USB-C direct connection without a high-speed signal mux
- Integrated FLASH
- Quick start development
- Firmware jumpstart with configuration utility
- USB video class, UVC, firmware ready
- USB3 vision firmware ready
- DVK with standard FMC for quick connection to FPGA boards
- All-in-one programming and debugging accessory board
- Application notes for hardware and software

Target applications

- Frame grabber
- Mixed reality headset
- 3D scanners
- Test and measurement
- Industrial automation
- Machine vision

Product collaterals / Online support

Product family page

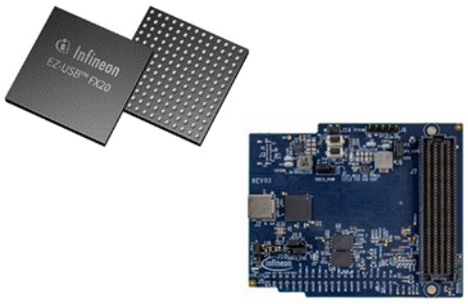
Board page

Product overview incl. datasheet and user manual link

OPN	SP Number	Package
CYUSB4012FCAXIXQMA1	SP005953687	PG-TFBGA-169
CYUSB4013FCAXIXQMA1	SP005953691	PG-TFBGA-169
CYUSB4014FCAXIXQMA1	SP005953695	PG-TFBGA-169
KITFX10FMC001	SP005990818	

EZ-USB™ FX20 USB 20 Gbps peripheral controller

EZ-USB™ FX20 extends the legacy of EZ-USB™ FX3, the industry's gold standard for USB peripheral controllers, to the next level with the latest ultra-fast USB 20 Gbps and LVDS interfaces, increasing the total bandwidth up to 550% of its predecessor (17.6 Gbps vs 3.2 Gbps).



Features

- USB 20 Gbps device port
- USB-C orientation detection
- Dual-core ARM® Cortex® M4F/M0+ CPU
- Integrated 512 KB flash
- 1024 KB buffer memory
- 16-lane LVDS interface @1.25 Gbps
- 32-bit LVCMOS interface @160 MHz DDR
- 2x Quad-SPI (QSPI)
- 7 serial communication blocks
- USB full-speed device debug port
- 2x I2S/PDM-PCM and GPIOs
- Cryptography accelerator

Benefits

- 600% performance improvement from predecessor
- Smaller PCB footprint and optimized BOM cost
- 10X10 BGA package
- USB-C direct connection without a high-speed signal mux
- Integrated FLASH
- Quick start development
- Firmware jumpstart with configuration utility
- USB video class, UVC, firmware ready
- USB3 vision firmware ready
- DVK with standard FMC for quick connection to FPGA boards
- All-in-one programming and debugging accessory board
- Application notes for hardware and software

Target applications

- Mixed reality headset
- 3D scanners
- Test and measurement
- Industrial automation
- Machine vision

Product collaterals / Online support

Product family page

Board page

Product overview incl. datasheet and user manual link

OPN	SP Number	Package
CYUSB4022FCAXIXQMA1	SP006125768	PG-TFBGA-169
CYUSB4024FCAXIXQMA1	SP006125778	PG-TFBGA-169
KITFX20FMC001TOBO1	SP006121887	

Half-bridge evaluation board with CoolGaN™ Transistor 100 V G3 – EVAL_7126G_100V_GANC

EVAL_7126G_100V_GaNC allows designers to conduct a comprehensive general-purpose evaluation of the featured CoolGaN™ transistor 100 V G3 together with the dedicated TDI EiceDRIVER™ gate driver. The GaN transistor is housed in a small PQFN 3x5 package and has a very low on-state resistance of 2.4 mΩ, making it ideal for demanding high-voltage and high-current applications. The high-side gate driver IC with truly differential inputs is tailor-made for driving GaN transistors.

Features

- Optimized half-bridge layout
- Waveform connection
- DC voltage connection
- On-board temperature sensing
- Multiple PWM input options

Benefits

- High efficiency
- High power density
- Easily scalable design
- Buck, boost, or double pulse test

Target applications

- General-purpose evaluation of GaN transistor

Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
EVAL7126G100VGANCTOBO1	SP006081287

Half-bridge evaluation board with CoolGaN™ Transistor 100 V G3 – EVAL_7136G_100V_GANC

EVAL_7136U_100V_GaNc allows designers to conduct a comprehensive general-purpose evaluation of the featured CoolGaN™ transistor 100 V G3 together with the dedicated TDI EiceDRIVER™ gate driver. The GaN transistor is housed in a small PQFN 3x5 package and has a very low on-state resistance of 2.4 mΩ, making it ideal for demanding high-voltage and high-current applications. The high-side gate driver IC with truly differential inputs is tailor-made for driving GaN transistors.

Features

- Optimized half-bridge layout
- Waveform connection
- DC voltage connection
- On-board temperature sensing
- Multiple PWM input options

Benefits

- High efficiency
- High power density
- Easily scalable design
- Buck, boost, or double pulse test

Target applications

- General-purpose evaluation of GaN transistor

Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
EVAL7136U100VGANCTOBO1	SP006081264

TRAVEO™ T2G Cluster 6M Lite

Experience the power and versatility of the TRAVEO™ T2G CYT4DN device with our cost-effective evaluation kit, the KIT_T2G_C-2D-6M_LITE. This comprehensive kit is built around the CYT4DN microcontroller from the TRAVEO™ Cluster 2D family, offering a range of features including an HDMI interface and onboard EZ-USB FX3. With the onboard Miniprog4, users can easily program and debug the device, while the CYUSB3014-BZXC component enables the conversion of RGB display signals into USB packets, allowing for seamless viewing of RGB frames on a PC using a media player application. Perfect for developers and engineers, this low-cost evaluation board provides a convenient and efficient way to explore the capabilities of the TRAVEO™ T2G CYT4DN device.

Features

- Pmod connector to support external RMII ethernet phy(DP83848)
- On-board Miniprog4 for program and debug functionalities
- On-board CYUSB3014-BZXC to stream RGB display signals to PC through USB packets
- High-speed serial memory interface using flash (S26HL) and RAM (S27KL)
- Multiple interfaces like Arduino, Microbus, 2x Shield_2_Go and a raspberry pi are supported
- LVDS connector to support G070Y2 FPD display
- LVDS connector to support OV5640 MIPI camera
- Potentiometer, LEDs and buttons to test basic

Benefits

- A low cost and quick solution to rapidly develop an instrument cluster prototype using TRAVEO™ T2G CYT4DN device
- Display output can be viewed in PC, thereby removing the need of physical displays

Competitive advantage

- High-performance automotive MCU – built on Arm® Cortex®-M7/ M0+ for real-time processing in automotive applications
- Scalable memory (6 MB Flash) – supports complex software stacks and over-the-air (OTA) updates
- Rich connectivity – includes CAN FD, ethernet, LIN, and USB for seamless automotive network integration
- Advanced security (HSM, AES, SHA, TRNG) – ensures secure communication and firmware integrity
- Optimized for cost-sensitive designs – lite version balances performance and affordability for mid-range clusters
- Easy prototyping – comprehensive evaluation kit with debug interfaces accelerates development
- Combines automotive-grade reliability, security, and connectivity in a cost-efficient package – ideal for next-gen instrument clusters

Target applications

- Instrument cluster
- Cockpit
- Two-wheelers
- Commercial, construction and agricultural vehicles (CAV)

Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
KIT_T2G_C-2D-6M_LITE	SP005922732

Communication interface between Infineon XDP™ Designer GUI and Infineon's controllers and digital POL – USB0010

This USB dongle is intended for specific customers with previously issued software licenses. The general public (gamers, overclockers, etc.) should not purchase this product as no product license will be provided. Should you have any uncertainties, please consult with your Infineon representative prior to making a purchase.

Features

- No external power supply
- Powered by USB 5 V connector pin
- I2C speed setting up to 800 KHz
- Speed can be set by XDP™ Designer GUI
- Heatbeat LED
- 5 V USB supply LED indicator
- Type A connector for USB
- 3 pin connector for I2C
- Clear red casing

Target applications

- USB to I2C communication

Product collaterals / Online support

Board page

Product overview incl. user manual link

OPN	SP Number
USB0010TOBO1	SP006036059