



New Product Introduction

October 2022

EiceDRIVER™ 1EDN71x6U - 200 V high-side TDI gate driver IC for GaN SG HEMTs and MOSFETs

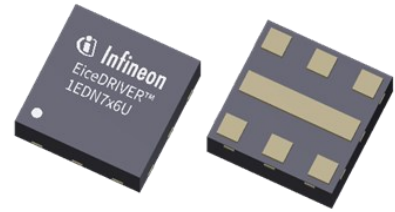
EiceDRIVER™ X3 Compact (1ED31xx) – The next generation easy-to-design-in single-channel, isolated gate driver family. Now with SiC MOSFET UVLO

1100 V, 30 A IGBT with monolithically integrated diode in TO-247 package

8-Mbit and 16-Mbit EXCELON™ F-RAM

EiceDRIVER™ 1EDN71x6U - 200 V high-side TDI gate driver IC for GaN SG HEMTs and MOSFETs

The 1EDN71x6U is a single-channel gate-driver IC optimized for driving Infineon CoolGaN™ Schottky gate (SG) HEMTs, as well as other GaN SG HEMTs and Si MOSFETs. This gate driver family includes several key features that enable a high-performance system design with fast-switching transistors, including Truly Differential Input (TDI), four driving strength options, active Miller clamp, and bootstrap voltage clamp. Thanks to the TDI feature, the gate driver output state is exclusively controlled by the voltage difference between the two inputs, independent of the driver's reference (ground) potential as long as the common-mode voltage is below 150 V (static) and 200 V (dynamic). This eliminates the risk of false triggering due to ground bounce in low-side applications, while also allowing 1EDN71x6U to address even high-side applications. The driver family comes in small 1.8 x 1.8 mm TSNP-7 package.



Features

- > Truly differential input
- > Four driving strength options
- > Active Miller clamp
- > Bootstrap voltage clamping
- > GaN-optimized flip-chip package with very low inductance

Benefits

- > High side driving and low side ground bounce immunity during fast switching transitions
- > Optimized switching speed without external gate resistors
- > Induced turn-on immunity during fast switching transitions
- > Regulated bootstrap voltage, by eliminating bootstrap capacitor overcharging during dead-time

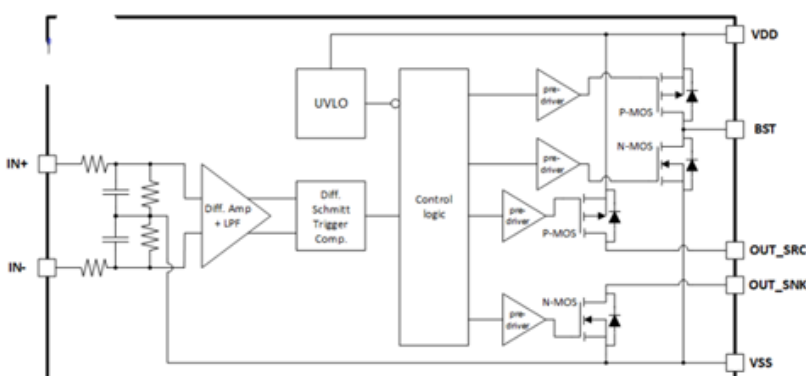
Competitive advantage

- > 200 V dynamic voltage
- > TDI
- > Four driving strength variants
- > Robustness against spurious switching
- > Small package

Target applications

- > Telecom
- > Server
- > DC-DC
- > Motor Drives
- > Class D Audio
- > AI

Block diagram



Product collaterals / Online support

[Product page 1EDN7116U](#)

[Product page 1EDN7126U](#)

[Product page 1EDN7136U](#)

[Product page 1EDN7146U](#)

[Product family page](#)

Product overview incl. data sheet link

OPN	SP Number	Package
1EDN7116UXTSA1	SP005538831	PG-TSNP-7
1EDN7126UXTSA1	SP005538835	PG-TSNP-7
1EDN7136UXTSA1	SP005538839	PG-TSNP-7
1EDN7146UXTSA1	SP005538843	PG-TSNP-7

EiceDRIVER™ X3 Compact (1ED31xx) – The next generation easy-to-design-in single-channel, isolated gate driver family Now with SiC MOSFET UVLO

The X3 Compact (1ED31xx) family is a compact & easy-to-design-in isolated gate driver family including a Miller Clamp option.

The gate driver family provides typical peak output currents of up to 14 A, excellent propagation delays and matching. This makes it ideal for any type of switches, from conventional IGBTs or MOSFETs to SiC MOSFETs and IGBT7.

The new family member on top comes with undervoltage lockout (UVLO) tailored to SiC MOSFETs.

Higher UVLO and the active Miller Clamp function is a great fit for SiC MOSFETs to avoid parasitic turn-on and to improve application safety.

A wide range of target applications are enabled, e.g., Solar, EV charging or energy storage systems while adding certified galvanic isolation (UL1577).



Features

- > For IGBTs (incl. IGBT7), SiC and Si MOSFETs
- > 14 A typical output current, 7 ns propagation delay matching
- > 90 ns propagation delay with 30 ns input filter
- > 40 V absolute maximum output supply voltage
- > Separate source and sink outputs or Miller clamp
- > DSO-8 300 mil wide-body package with large creepage distance (>8 mm)
- > 12 V undervoltage lockout (UVLO) protection with hysteresis

Benefits

- > Integrated filters reduce the need for external filters
- > Tight IC-to-IC turn on propagation delay matching (7 ns max.) improves application robustness & improves system efficiency
- > Suitable for operation in fast switching applications
- > UL 1577 (planned) VISO = 6.8 kV (rms) for 1 s, 5.7 kV (rms) for 1 min
- > The precise threshold and timings, combined with UL 1577 certification enable superior application safety

Target applications

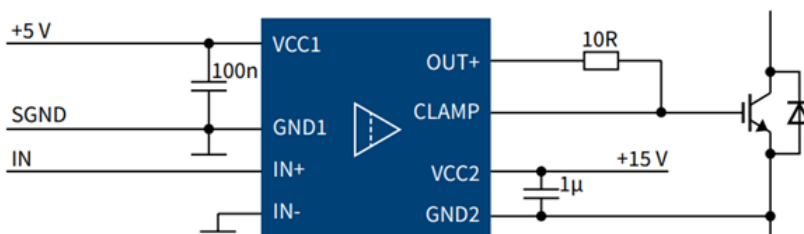
- > Solar inverters
- > UPS systems
- > EV charging
- > Energy storage systems

Competitive advantage

- > Coreless-transformer technology enabling CMTI (200kV / us) 30% above industry-standard
- > Industry-leading propagation delay matching allows for minimum deadtime and improves application robustness & system efficiency
- > Higher UVLO and the active Miller Clamp function is a great fit for SiC MOSFETs to avoid parasitic turn-on and to improve application safety

Block diagram

Active Miller clamp



Product collaterals / Online support

- [Product page](#)
- [Product presentation](#)
- [Application note](#)

Product overview incl. data sheet link

OPN	SP Number	Package
1ED3127MU12FXUMA1	SP005590423	PG-DSO-8

1100 V, 30 A IGBT with monolithically integrated diode in TO-247 package

Reverse Conducting R5 1100V, 30 A IGBT in TO-247 package with monolithically integrated diode is designed to fulfill demanding requirements of induction heating applications using single-ended resonant topology.

The best replacement of previous R3 generation with improved FE capacity.



Features

- > Powerful monolithic body diode with low forward voltage designed for soft commutation only
- > Very tight parameter distribution
- > High ruggedness, temperature stable behavior
- > Very low V_{CEsat}
- > Easy parallel switching capability due to positive temperature coefficient in V_{CEsat}
- > Low EMI
- > $V_g = 25\text{ V}$
- > Maximum operating T_J of 175°C
- > Pb-free lead plating; RoHS compliant

Benefits

- > Lowest power dissipation
- > Better thermal management for higher reliability
- > Optimized for switching frequency up to 60 kHz
- > Highest reliability against capacitive peak currents
- > Lower EMI filtering requirements

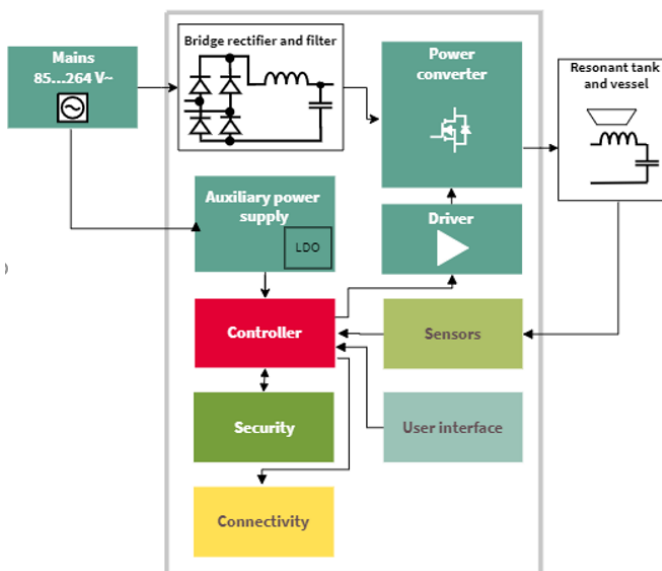
Competitive advantage

- > Best-in-class performance in terms of conduction and switching losses
- > Easy to design products – direct replacement of previous R3 generation with improved FE capacity
- > High system reliability

Target applications

- > Induction cooking
- > Microwave oven
- > Induction rice cooker

Block diagram



Product collaterals / Online support

[Product page](#)

[Product family page](#)

Product overview incl. data sheet link

OPN	SP Number	Package
IHW30N110R5XKSA1	SP005727472	PG-TO247-3

8-Mbit and 16-Mbit EXCELON™ F-RAM

The 8-Mbit and 16-Mbit EXCELON™ Ferroelectric RAMs (F-RAM) are Infineon Technologies' latest addition to the EXCELON™ family of next-generation F-RAM devices, delivering the industry's highest density serial non-volatile RAM (NVRAM), and offering superior performance and reliability for mission-critical data capture. The new 8-Mbit and 16-Mbit EXCELON™ F-RAM products offer low-pin-count serial SPI and Quad SPI (QSPI) interfaces for high-speed non-volatile data logging, preventing data loss even in harsh industrial and automotive operating environments over extreme temperatures.



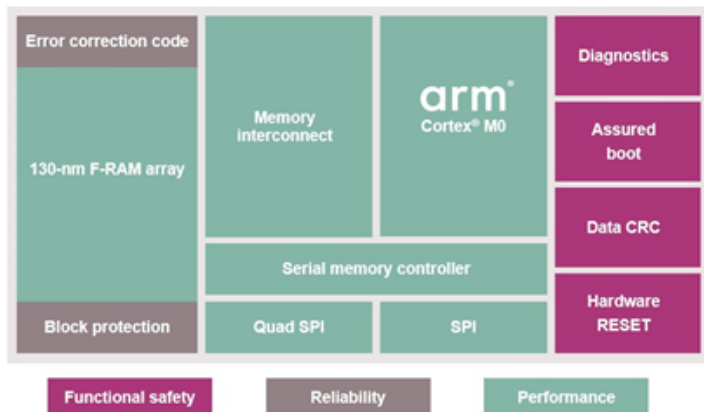
Features

- > Operating voltages: 1.8 V to 3.6 V and 1.71 V to 1.89 V
- > Dedicated 256 - byte special sector F-RAM
- > Available in 24 - ball FBGA package
- > Operating temperature: 0 °C to +70 °C (for F-RAMs with inrush current control), -40 °C to +85 °C and -40 °C to +105 °C
- > Data retention of 10 years at +85° C and 10¹⁴ cycles of endurance

Target applications

- > Programmable Logic Controller (PLC)
- > Computer Numerical Control (CNC) machines
- > Automotive Event Data Recorders
- > Portable and implantable medical

Block diagram



Benefits

- > High - density non - volatile storage (up to 16-Mbit)
- > High performance (up to 54MB/s data throughput)
- > Low-pin-count serial interface
- > Enhanced reliability
- > Operational in harsh environments
- > Reduction of system design complexity
- > AEC-Q100 automotive qualified memories

Competitive advantage

- > Industry's highest density 16-Mbit serial NVRAM
- > Virtually unlimited (10¹⁴ cycles) endurance for write-intensive data-logging
- > No delay writes for instantaneous non-volatility with no battery back-up
- > Ultra-low-power operation with 14 µA typ. Standby current at 25° C and 0.1 µA typ. Hibernate current at 25° C

Product collaterals / Online support

[Product family page](#)

[Application brief](#)

[Product selection guide](#)

[Whitepaper](#)

[Application note](#)

Product overview incl. data sheet link

OPN	Package
CY15B108QSN-108BKXI	24-BGA
CY15V108QSN-108BKXI	24-BGA
CY15B116QI-20BKXC	24-BGA
CY15V116QI-20BKXC	24-BGA
CY15B116QN-40BKXI	24-BGA
CY15V116QN-40BKXI	24-BGA
CY15B116QSN-108BKXI	24-BGA
CY15V116QSN-108BKXI	24-BGA
CY15B108QN-50BKXQ	24-BGA
CY15V108QN-50BKXQ	24-BGA
CY15B116QN-40BKXA	24-BGA
CY15V116QN-40BKXA	24-BGA