



Product Brief

1EDN MOSFET EiceDRIVER™ family

Rugged, cool and fast, 1-channel low-side 4/8 A gate driver ICs

1EDN family overview

1-channel MOSFET gate driver ICs are the crucial link between control ICs and powerful MOSFET and GaN switching devices. Gate driver ICs enable high system level efficiencies, excellent power density and consistent system robustness.

1EDN family: Fast, precise, strong and compatible

- > Highly efficient SMPS enabled by 5 ns short slew rates and ± 5 ns propagation delay precision for fast MOSFET and GaN switching
- > Separate source and sink outputs simplify the application design
- > Industry standard packages and pinout ease system design upgrades

1EDN family: The new reference in ruggedness and low power dissipation

- > -10 V robustness of control and enable inputs provides crucial safety margin when driving pulse transformers
- > 5 A reverse output current robustness eliminates the need for Schottky switching diodes when driving MOSFETs in TO-220 and TO-247 packages
- > Cool driver ICs thanks to true rail-to-rail low impedance output stages
- > 4 V and 8 V UVLO (Under Voltage Lock Out) options for instant MOSFET protection during start-up and under abnormal conditions

Applications

- > PFC
- > Synchronous rectification
- > DC-DC converters
- > Telecom bricks
- > Power tools
- > Industrial SMPS
- > Motor control
- > Wireless charging

Product features
<ul style="list-style-type: none"> > 4 A source/8 A sink current > 6 ns rise/5 ns fall times > ± 5 ns propagation delay precision
<ul style="list-style-type: none"> > True rail-to-rail low impedance output stages
<ul style="list-style-type: none"> > 4 V and 8 V UVLO options > 19 ns propagation delay
<ul style="list-style-type: none"> > -10 V robustness of inputs
<ul style="list-style-type: none"> > 5 A reverse output current robustness
<ul style="list-style-type: none"> > Industry standard pinout and packages

Product benefits
<ul style="list-style-type: none"> > Fast Miller plateau transition > Precise timing
<ul style="list-style-type: none"> > Low power dissipation in driver IC
<ul style="list-style-type: none"> > Fast and reliable MOSFET turn-off, independent of control IC
<ul style="list-style-type: none"> > Increased GND-bounce robustness
<ul style="list-style-type: none"> > Saves switching diodes
<ul style="list-style-type: none"> > Straight forward design upgrades

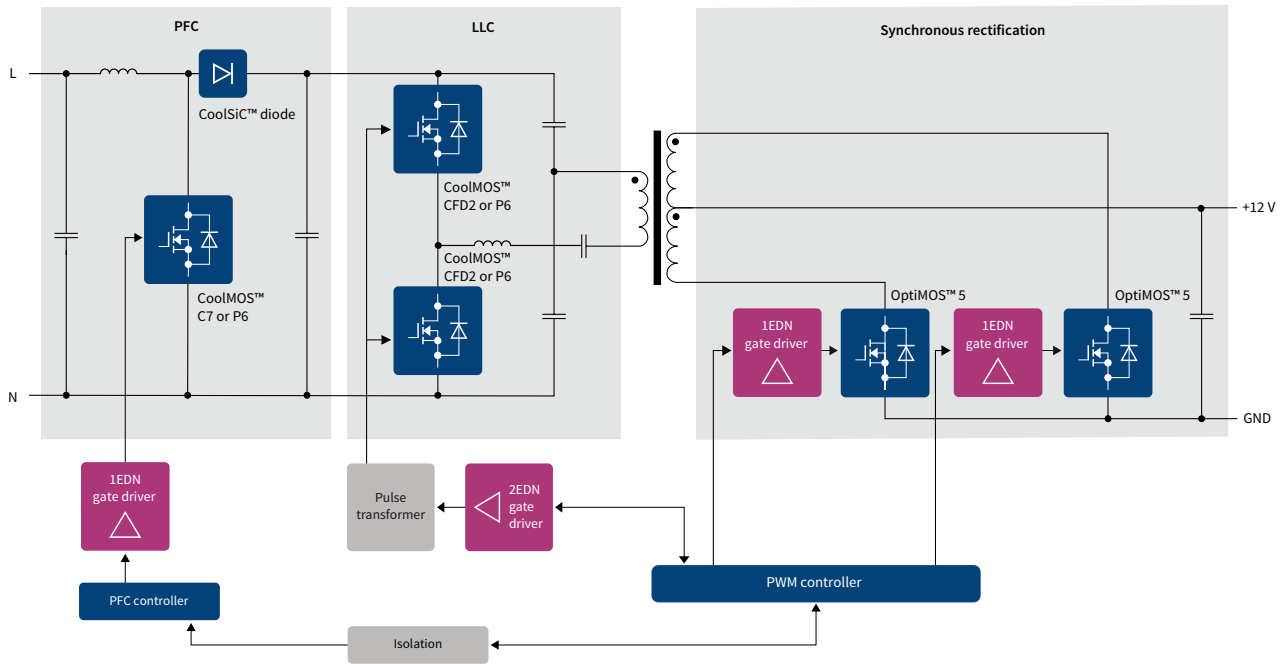
System benefits
<ul style="list-style-type: none"> > High power efficiency <ul style="list-style-type: none"> - in hard switching PFC with SiC diode - in half-bridges and synchronous rectifications
<ul style="list-style-type: none"> > Cooler driver IC operation > Higher MOSFET drive capability
<ul style="list-style-type: none"> > Instant MOSFET protection during start-up and under abnormal operation
<ul style="list-style-type: none"> > Crucial safety margin to drive pulse transformer
<ul style="list-style-type: none"> > Increases power density > BOM savings
<ul style="list-style-type: none"> > Short time-to-market








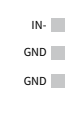
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Application overview 800 W switched mode power supply



Product portfolio

Package	UVLO	Product name	Orderable part number	Pinout
 SOT-23 6pin	4 V	1EDN7511B	1EDN7511BXUSA1	
	8 V	1EDN8511B	1EDN8511BXUSA1	
 SOT-23 5pin	4 V	1EDN7512B	1EDN7512BXTSA1	
 WSO 6pin	4 V	1EDN7512G	1EDN7512GXTMA1	



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www.infineon.com/1edn

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