

# Ti solar inverter Solution



## Overview

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Why choose TI for your solar energy design?

Deliver end-to-end power conversion with advanced real-time control, integrated GaN technology and isolated ICs. Maintain system stability and simplicity with high-precision current and voltage sensing. The TMS320F2808 32-bit digital signal controller with flash, the AFE031AIRGZT powerline communications analog front end, and the SM72295 photovoltaic full bridge. Challenge: How to reduce Ringing to guarantee increased lifetime of MOSFETs?

Si MOSFET have a resistive feature which helps to reduce conduction loss at light load conditions compared with IGBT, but the high reverse recovery of the body diode will increase voltage and current overshoot. High-power density to ensure a small. ected Solar Microinverter systems. The PWM switching frequency t disclaimers and information. One technology that has contributed to the increase in solar installations is the availability of low cost and efficient string (see Figure 1) and micro inverter technologies that help address efficiency and scalability concerns often associated with investing in solar power generation.

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### [TI 10KW High efficient/small size solar inverter new solution](#)

Platform for testing both 2-level and 3-level inverter by enabling or disabling middle devices through digital control. 70 ns (max) Prop Delay. 3V to 15V input supply range. Thanks!

### [TIDA-01606 Design Overview](#)

Reduced size at higher efficiency using low R<sub>dson</sub> SiC MosFET and higher switching frequency (50kHz) at higher power (10kW) Platform for testing both 2-level and 3-level inverter by enabling or disabling ...

### 114KWh ESS



### [String inverter design resources , TI](#)

Our integrated circuits and reference designs help you accelerate development of solar string inverters, improving power density and efficiency while providing real-time communication and monitoring.



### [Enabling Smart Solar Inverter Designs with Level Translation](#)

For open drain interfaces like I2C and SMBus, TI's TXS and LSF level translation families provide cost effective solutions that are available in a wide variety of channel counts and industry standard ...



[TIDM-SOLARUINV reference design . TI](#)

This design is a digitally-controlled, grid-tied, solar micro inverter with maximum power point tracking (MPPT). Solar micro inverters are an emerging segment of the solar power industry.



[Ti solar inverter reference design](#)

ected Solar Microinverter systems. This reference design has a maximum output power of 215 Watts and ensures maximum power point tracking for PV pa.



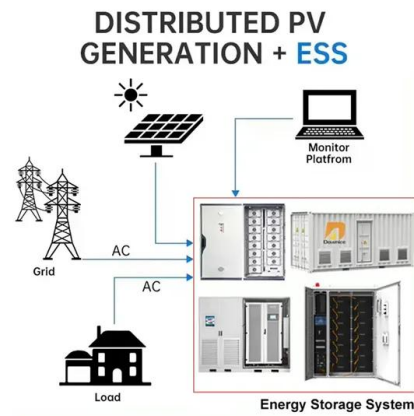
[Solar energy design resources . TI](#)

This reference design shows how to implement a Power Line Communication (PLC) for HV DC and AC lines from multiple solar panels to a data agregator connected or embedded to the string inverter input.



[TIDA-010938 reference design . TI](#)

This reference design provides an overview into the implementation of a GaN-based single-phase string inverter with bidirectional power conversion system for battery energy storage systems (BESS).



[An Intelligent Solar Micro-Inverter Solution](#)

Check out Texas Instruments' solar micro-inverter solution that maximizes power output, providing real time control and performance data.

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