

# QUAD-CHANNEL SMART SWITCHES



## Automotive high-side drivers for multiple loads



**Intelligent power switches manage cameras, radars, and sensors in automobiles, simplifying design while ensuring high reliability and safety**

With parallel inputs for precise control, these versatile drivers efficiently manage multiple automotive loads, including resistive, inductive, and capacitive types, simplifying design complexity. They ensure a protected and reliable power supply for ADAS systems, such as cameras, radars, and sensors, ensuring optimal performance in safety-critical environments.

Featuring advanced diagnostics and protection mechanisms — such as short-to-ground, overcurrent, and overtemperature safeguards — they enhance the safety and longevity of critical ADAS components. Their compact design is ideal for space-constrained applications, while their robust performance ensures superior safety, reliability, and efficiency in demanding automotive environments.

### KEY FEATURES

- AEC-Q100 qualified
- Integrated current sensing with analog feedback
- Advanced protection functions: overload management, power limitation, and overtemperature shutdown

### MAIN BENEFITS

- Maximum design flexibility: identical package footprint throughout the VIPower MO-9 series
- Reliable performance: seamless operation during deep cold cranking at extremely low voltages
- Enhanced efficiency: reduced power consumption for optimized energy use

### KEY APPLICATIONS

- Protected supply for ADAS systems: cameras, radars, and sensors
- Automotive resistive, inductive and capacitive loads

## A fully integrated ecosystem streamlines development workflow

The comprehensive solution combines the automotive quad-channel VIPower M0-9 high-side drivers, simple and cost-effective EasyBoards for product validation, and the TwisterSIM simulation software, ensuring a seamless development experience.

## Multiple benefits for designer and engineers

Compact PowerSSO-16 package across the entire **VIPower M0-9** high-side drivers series with parallel inputs



**TwisterSIM** accelerates design by enabling quick, accurate electro-thermal simulations for load compatibility, fault analysis, diagnostics, and thermal performance. Its interactive selector helps you rapidly identify suitable devices and customize system layouts and profiles for precise modeling.



**Easyboards** offer a quick, low-cost way to evaluate VIPower drivers without designing custom PCBs. They provide ready-to-use boards optimized for performance and thermal management, enabling straightforward testing of device functions and protections across various applications.



## Multiple benefits for designer and engineers

| Product                    | Channels | Rating     | Current limitation (A) | On-resistance per channel (mΩ) | Operating voltage (V) | Undervoltage shutdown (V) | Ready-to-use evaluation boards |
|----------------------------|----------|------------|------------------------|--------------------------------|-----------------------|---------------------------|--------------------------------|
| <a href="#">VNQ9025AJ</a>  | 4        | Automotive | 30.0                   | 25.0                           | 4 to 28               | 2.1                       | <a href="#">EV-VNQ9025AJ</a>   |
| <a href="#">VNQ9050LAJ</a> | 4        | Automotive | 17.8                   | 50.0                           | 4 to 28               | 2.1                       | <a href="#">EV-VNQ9050LAJ</a>  |
| <a href="#">VNQ9080AJ</a>  | 4        | Automotive | 13.6                   | 86.0                           | 4 to 28               | 2.1                       | <a href="#">EV-VNQ9080AJ</a>   |



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