

600-V Gate Driver Family Enables Fast Switching And High Efficiency

[Microchip Technology's](#) 600-V gate driver portfolio features 12 devices available in half-bridge, high-side/low-side and three-phase driver configurations. Building on Microchip's power management solutions, these high-voltage gate drivers are designed to facilitate the development of motor control and power conversion systems for industrial and consumer applications (see the figure).

The 600-V gate drivers enable fast switching and efficient performance with current drive options from 600 mA to 4.5 A. They support 3.3-V logic for seamless integration with microcontrollers. Designed with enhanced noise immunity, Schmitt-triggered inputs and internal deadtime to protect MOSFETs, these gate drivers enable reliable performance in high-noise environments.

For a low-side or high-side drive topology, the family includes these seven models: MCP14LH2101, MCP14LH2106, MCP14LH21064, MCP14LH2190, MCP14LH21904, MCP14LH2181, and MCP14LH21814. For a half-bridge drive topology, the family offers four models: MCP14H2103, MCP14H2104, MCP14H2184 and MCP14H2304. And for a three-phase motor drive topology, it has the MCP8062136.

"Microchip's 600-V gate drivers give our customers the reliability and efficiency they need to tackle complex motor control and power conversion challenges," said Rudy Jaramillo, VP of Microchip's analog power and interface division. "These devices help engineers bring their power systems to market faster and with greater confidence."

For a comprehensive system solution, Microchip's motor control and power conversion products can be used alongside the company's MCUs and MOSFETs. These gate drivers support industry trends such as the electrification of industrial systems, growth in renewable energy and the increasing demand for compact, efficient motor control solutions. The 600-V gate drivers are supported by simulation models enabling engineers to mitigate design risks before prototyping.

The portfolio of 600-V gate drivers is now available for purchase in production quantities. To learn more about the company's gate drivers, visit the Gate Drivers for Power MOSFETs and IGBTs [page](#). Or for electrical specs on the 12 new models, see the High-Voltage MOSFET and IGBT Silicon Gate Drivers (600 V) [page](#).

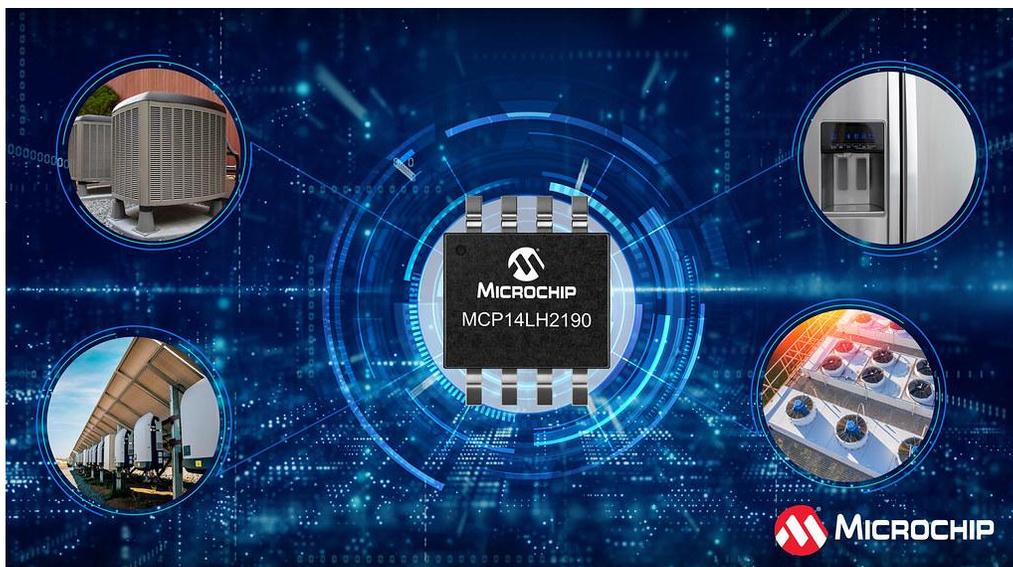


Figure. Microchip's 600-V gate driver family aims to simplify high-voltage power designs by combining flexible topologies, robust noise immunity and built-in MOSFET protection. These devices help power engineers reduce design risk and accelerate motor control and power conversion development.