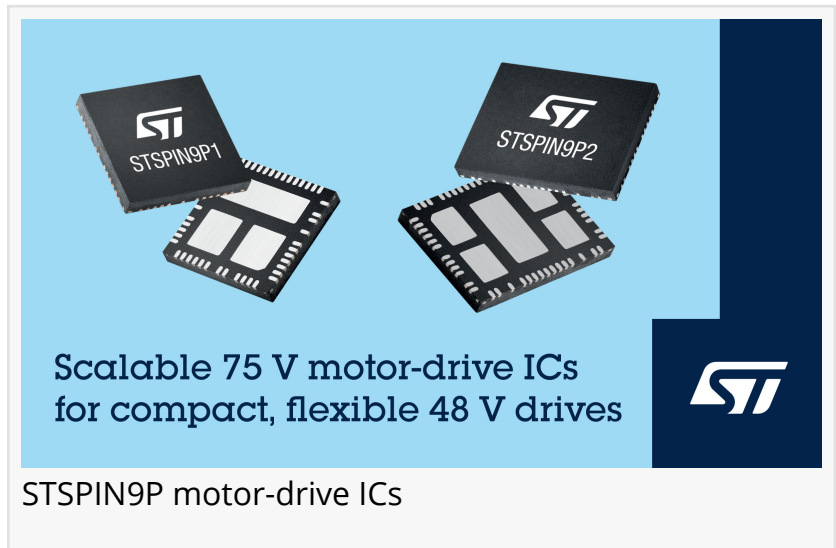


# STMicroelectronics reveals 75V STSPIN motor-drive ICs for scalable industrial drives

*Selection of half-bridge and full-bridge devices delivers exceptional flexibility in 48V applications*

GENEVA, SWITZERLAND, February 25, 2026 /EINPresswire.com/ -- STMicroelectronics' STSPIN9P series of 75V motor-drive ICs accelerates development of robust industrial drives. Suited to operation from popular bus voltages such as 48V, the 12 STSPIN9P devices let users conveniently scale their designs for different motor types and power ratings up to 500W.



The new [STSPIN9P1](#) half-bridge and [STSPIN9P2](#) full-bridge devices extend the STSPIN family that helps developers ensure motor-control applications begin turning quickly to allow testing and fine-tuning. Their wide operating-voltage range and output-current rating up to 10A allow use in industrial automation and robotics, as well as appliances, stage lighting, pumps, fans, and textile machines.

The IC is powered entirely from the main bus, at a voltage from 7V to 75V, permitting a simplified system design and PCB layout. Integrated regulators supply the internal circuitry, including the control logic and gate drivers, and a charge pump supplies the high-side enabling 100% duty-cycle operation. Analog front-end circuitry is also included, consisting of a current-sense amplifier that works with an external shunt resistor and a comparator that triggers when the current-limiting threshold is reached. The threshold is user-configurable by applying a reference voltage.

In STSPIN9P variants that feature internal current limiting, the comparator signal is connected directly to the IC's control logic. This option lets the user select the decay strategy via an external pin, choosing fixed off-time or PWM trimming depending on the motor, load, and required behavior. There is also a pin to select the gate-driver turn-on slew rate, which lets developers quickly and economically optimize for energy efficiency and electromagnetic emissions. The

turn-off time is always as fast as possible, which allows the shortest possible dead time in full-bridge devices.

While providing powerful and flexible features, all STSPIN9P ICs integrate protection against hazards including undervoltage, overvoltage, overcurrent, and overtemperature with a thermal sensor for each MOSFET. In addition, open-load detection performed while the power stage is disabled checks the motor is properly connected before turning on.

To assist developers, the EVLSPIN9P1-3PH reference design combines three STSPIN9P12 half-bridge drivers in a 3-phase driver for BLDC/PMSM motors. The board is designed to support a three-shunt or single-shunt current sensing topology.

Individual demonstration boards with single-shunt current sensing are available to help evaluate the features of all STSPIN9P1 and STSPIN9P2 drivers. These include the EVLSPIN9P11, EVLSPIN9P12, EVLSPIN9P15, and EVLSPIN9P16 for half-bridge drivers, and EVLSPIN9P21, EVLSPIN9P22, EVLSPIN9P213, and EVLSPIN9P24 for full-bridge drivers.

All half-bridge STSPIN9P ICs are pin-compatible and packaged in 7mm x 7mm QFN. The full bridge variants are also pin-compatible as 9mm x 7mm QFN devices. Pricing starts from \$2.10 for orders of 1000 pieces.

For more information, visit <https://www.st.com/stspin9p>.

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