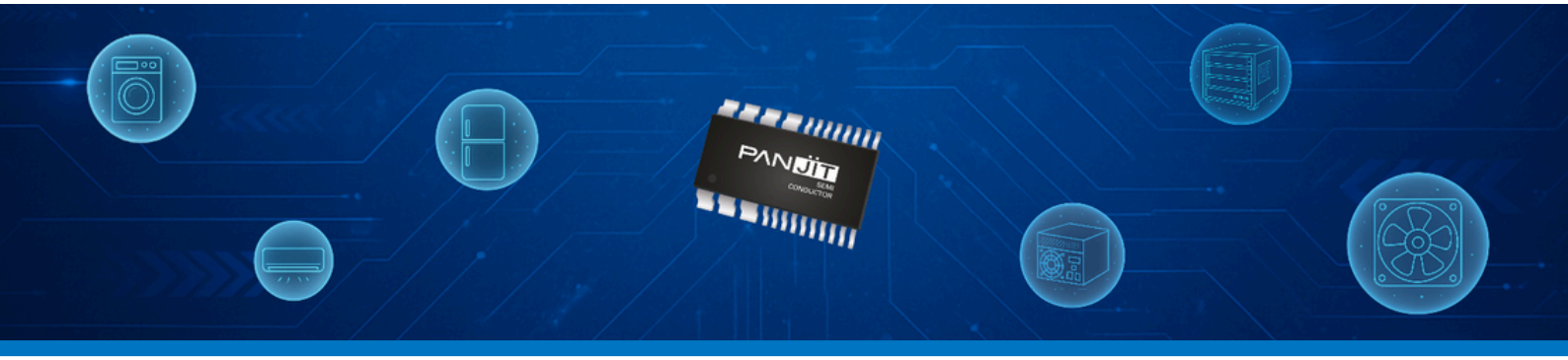
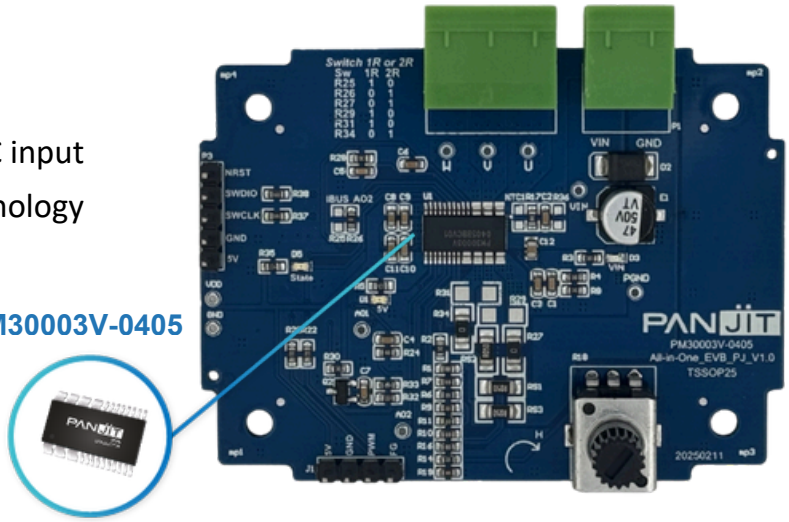
All-in-One BLDC Motor Control Solution

Built-in MCU, Driver, and MOSFET for Compact Thermal and System Designs



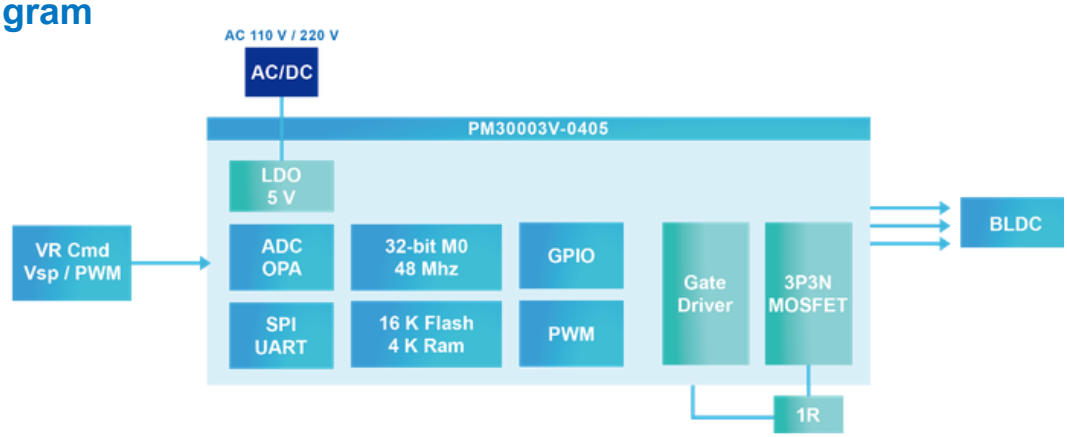
Demo Board Specifications

- 24 V motor control board with 220 V AC input
- Sinewave output with FOC control technology
- Speed control range: 400 to 2,000 RPM
- LRP/ OCP / LPP



MCU	OPA	MOSFET	LDO	Algorithm	Shunt	Command/ Feedback	Protections
ARM® Cortex®-M0	2 rail-to-rail OPAs	3P+3N 50 mΩ	5 V	FOC Sensor-less	2 R	VR Speed, PWM, FG out	LR, OC, LP

Block Diagram



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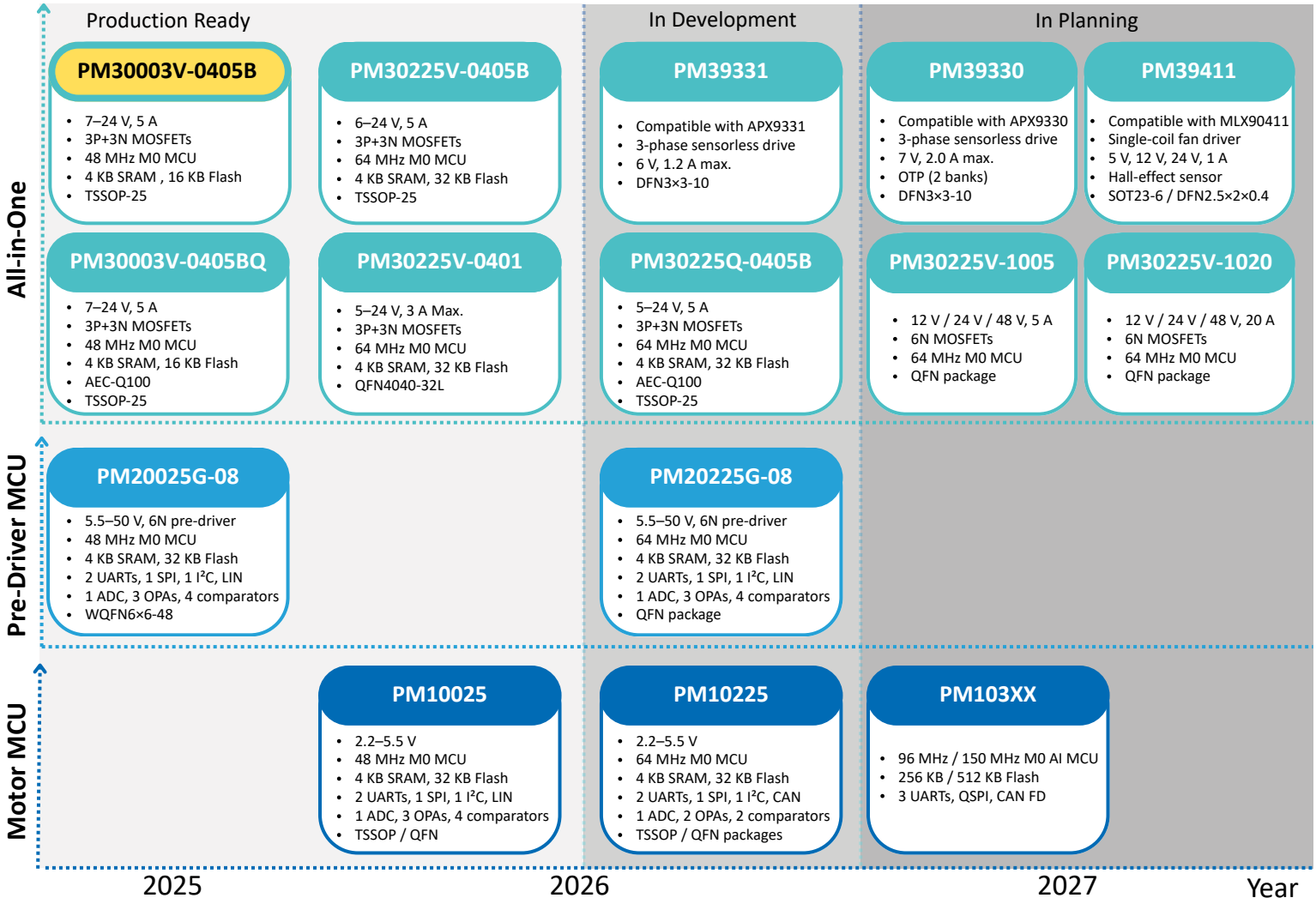
PM30003V-0405 Key Features

- ARM® Cortex®-M0 , 48 MHz
- Operating voltage: 7 V to 24 V
- Configure built-in pass-through prevention function
- Integrated PN architecture three-phase brushless gate driver and MOSFET array
- 16 KB Flash, 4 KB SRAM
- 2 x UART, 1 x I^2C, 1 x SPI
- 2 x 16-bit general-purpose timers (HTU)
- 1 x 12-bit, 1 MSPS ADC, supporting differential pair inputs
- Configure the built-in 500 ns time of dead-zone
- Configure the built-in LDO with 5 V/ 50 mA
- P+N MOSFET, $R_{DS(on)}$ < 70 mΩ
- MCU Voltage：2.4 V to 5.5 V
- 10 x GPIO, all of which can be used as external terminal inputs
- 1 x 16-bit advanced PWM timer (ATU)
- 2 x low-offset OPA
- Operating temperature: -40°C to +105°C

Motor Product Roadmap



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