



# S32K344 Motor Control Development Kit for High-Power 48 V Applications

**MC\_XTM4CK344** NEW

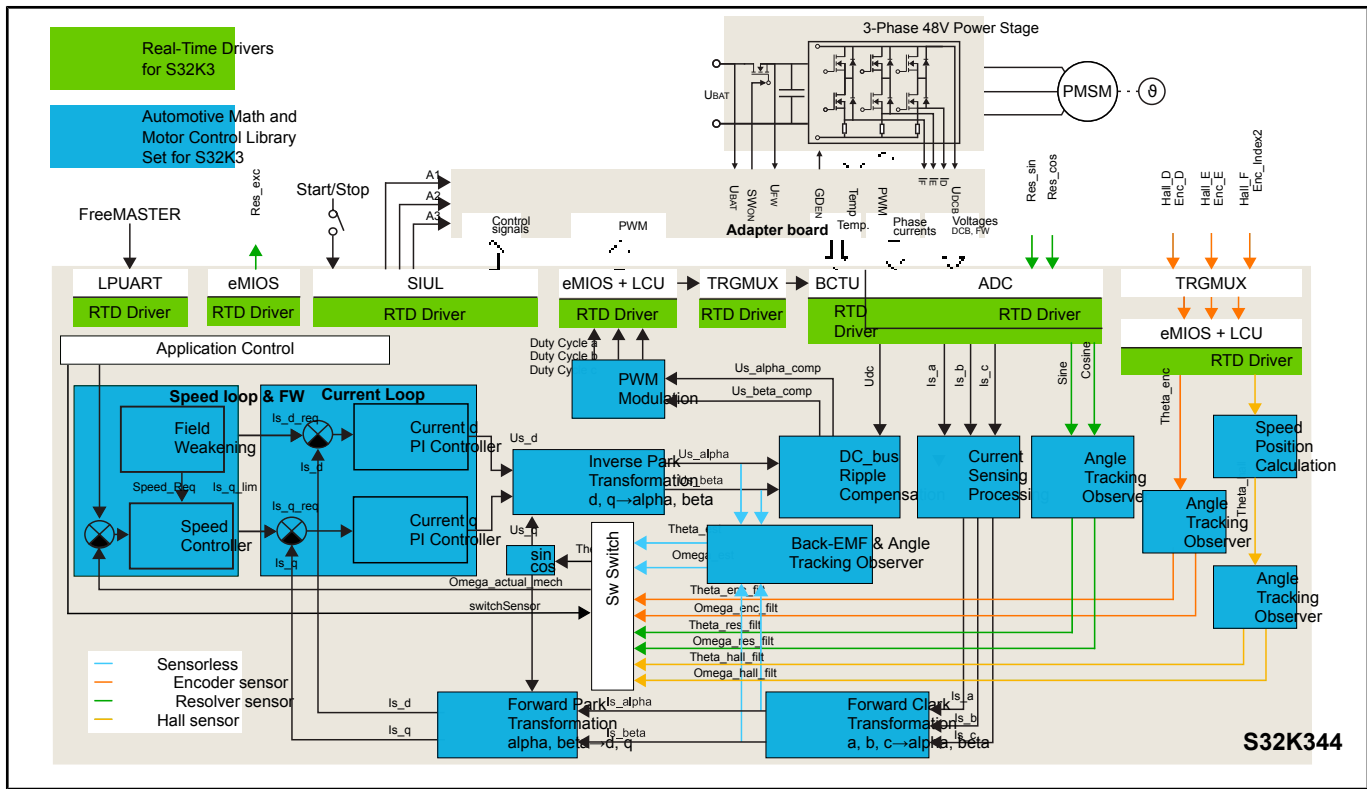
Last Updated: Jan 29, 2026

The MCSXTM4CK344 and MCDXTM4CK344 are motor control development kits for rapid prototyping and evaluation of high-power 48 V applications.

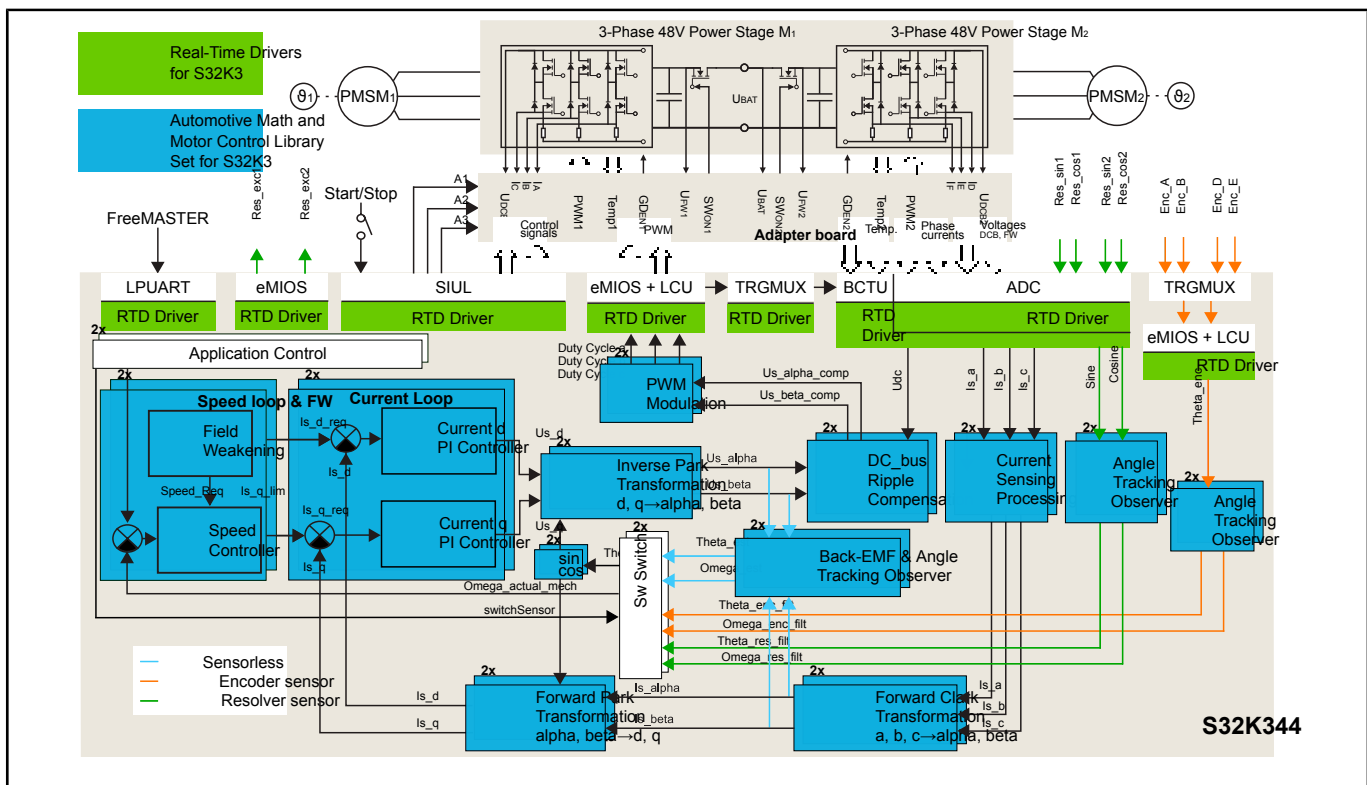
Based on the 32-bit Arm® Cortex®-M7 S32K3 microcontroller, the MCSXTM4CK344 kit controls one 3-phase permanent magnet synchronous motor (PMSM) or brushless direct current (BLDC) motor, while the MCDXTM4CK344 development kit may control either two 3-phase motors or one 6-phase PMSM/BLDC motor.

The 48 V development kit can be used directly by automotive manufacturers, suppliers and software ecosystem partners to accelerate development for a shorter time to market in 48 V applications like starter generators, eTurbo, eCompressors or small traction drives for eBikes, e-Scooters and rickshaws.

## S32K3 Single Field-Oriented Control (FOC) Block Diagram



## S32K3 Dual Field-Oriented Control (FOC) Block Diagram



View additional information for [S32K344 Motor Control Development Kit for High-Power 48 V Applications](#).

**Note:** The information on this document is subject to change without notice.

---

**www.nxp.com**

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2026 NXP B.V.