



Your Partner in Growth

Elektronika Sales Pvt Ltd

Solution support

Automotive Connect & Electric Traction

[2Wlr & 3Wlr BLDC]

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Traction Motor control [Automotive]

NXP S32K based scalable motor control AEC-Q100 qualified 32-bit solution
Design targeted for automotive & high reliability motor control application

Scalable Hardware & software with multiple performance feature
Integrated solution / Ultra-low power / Best performance / Software Support

Modular design 1KW to 10KW customizable
FOC & Hall based trapezoidal capability
Interface for absolute position sensor
Multilevel programmable throttle map
Forward Reverse Rotation
Flux Weakening to support 2x rated speed of motor at same power level
Programmable regeneration capability upto 40A DC bus current.
Programmable throttle map to calibrate to vehicle specifications
DC bus current limiting to offer economy mode of operation
Speed limiting feature to limit maximum speed of operation
CAN 2.0 A/B with UDS and Bootloader

Rated power 1.5 KW / Peak Power 2.5 KW
Rated DC bus current 30 A / Peak DC bus current 60 A
Operational Voltage: 40V to 56V
Dimensions [150mm x 100mm x 80mm] / Weight 0.8Kg
Quiescent operation current 20 ~ 40 mA



S32K1 Arm Cortex MCUs



S32K116	S32K118	Common Features		S32K142	S32K144	S32K146	S32K148
Arm® Cortex®-M0+ @ 48 MHz				Cortex-M4F @ up to 112 MHz			
up to 43 I/Os	up to 58 I/Os			up to 89 I/Os	up to 128 I/Os	up to 156 I/Os	
4-channel eDMA				16-channel eDMA			
1x FlexCAN with 1x FD				2 x FlexCAN with 1 x FD	3 x FlexCAN with 1 x FD	3 x FlexCAN with 2 x FD	3 x FlexCAN with 3 x FD
1x 13-ch. 12-bit ADC	1x 16-ch. 12-bit ADC			2 x 16-ch. 12-bit ADC		2 x 24-ch. 12-bit ADC	
						2 x 32-ch. 12-bit ADC	
		AEC-Q100					
		Security Module (CSEc)					
		ASIL B Compliant					
		Low Power					
		FlexIO					
		MPU					
		FlexTimer					
				ENET			
				Quad SPI			
				ETM Trace			
				SAI			

Connectivity

FlexCAN

- Support CAN FD and standard CAN
- 64-byte CAN FD at 8 Mbit/s

FlexIO

- Emulation of UART, SPI, I²C, I²S, LCD RGB

QUADSPI

- Interface to external flash device
- Support SDR and HyperRAM modes

Ethernet & Audio Interface

- 10/100 Mbit/s MAC
- IEEE® 802.3-2002
- AVB
- IEEE-1588 timestamping

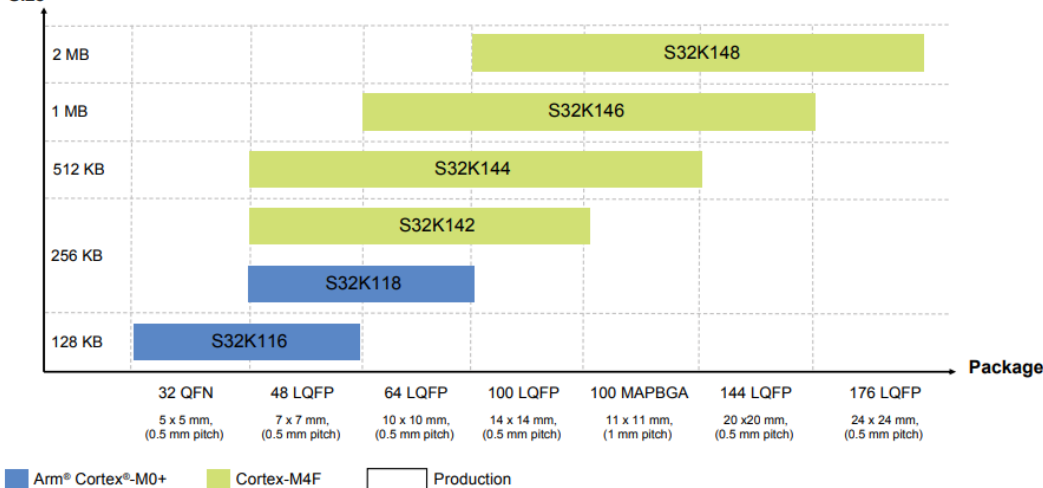
Safety

- ISO26262 ASIL B
- ECC on flash and SRAM MPU; CRC watchdog
- Core self-test library
- FMEDA
- Safety manual
- Technical support

Scalability

- Memory range from 128 KB to 2 MB
- Pin count from 32 to 176 pins
- QFN, LQFP, MAPBGA packages
- IP compatibility across family

Memory Size



Product Longevity

AEC-Q100
Grade 1

Target Applications

- Two-Wheeler Traction motor
- Three -Wheeler Traction motor
- Industrial Motor Drive
- Aircon
- Refrigerator

Peak power 2.4 kw Continuous power 1.2 kw.

Starting torque 17 N

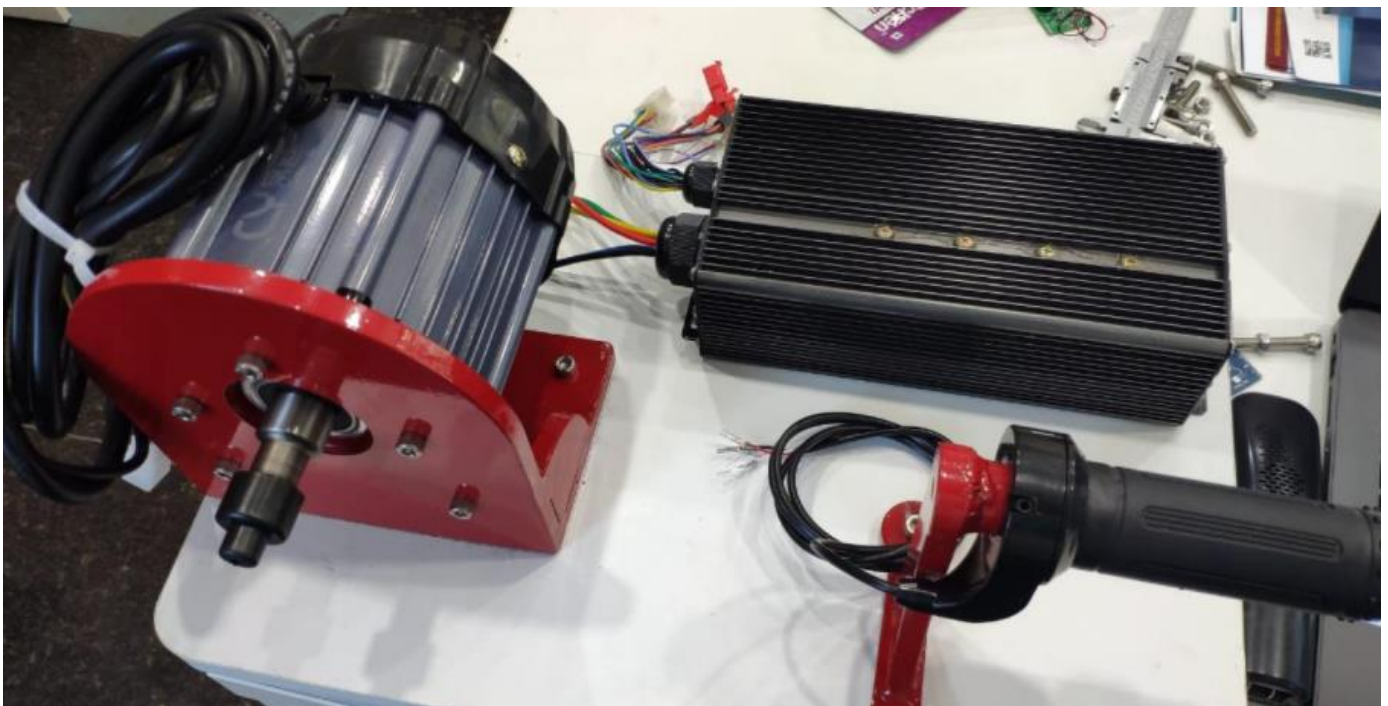
Rated speed 3500 RPM

Rated torque 3.2 Nm

Absolute encoder for rotor position sensing

Diameter: 135 mm Length: 120 mm

Weight: 6Kg



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Our value Added Services



TECHNICAL
SUPPORT



Vendor-Managed
Inventory



- ❖ World class warehouse facility / VMI & Logistic program

Key OEM - Dedicated warehouse allocation

- ❖ Complete regional resource

Accessibility / Flexibility Support

- ❖ Quote center - BOM Cost Optimization service

- ❖ USD & INR supply chain

- ❖ Design solution - FAE & Product team



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