



# **S32K3X4EVB-T172**汽车通用评估板

## **S32K3X4EVB-T172**

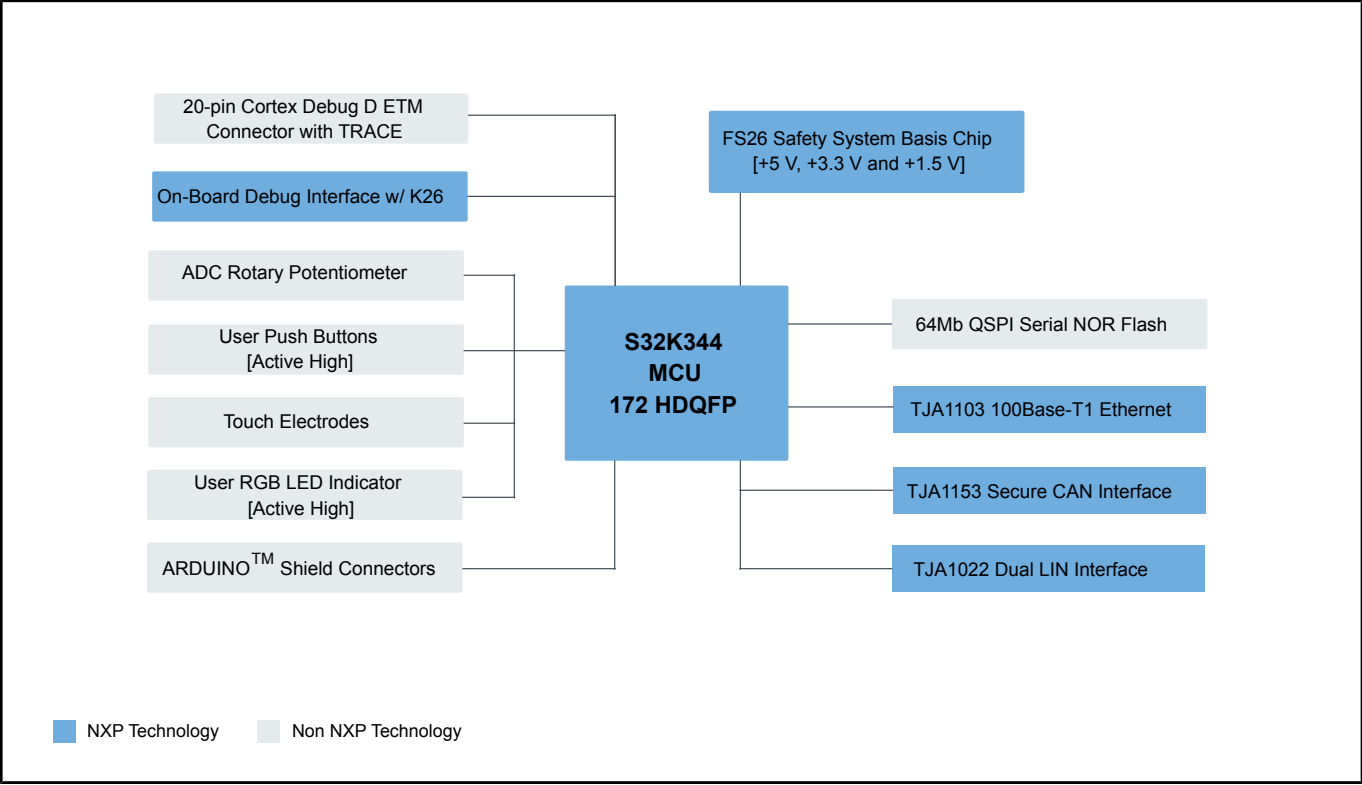
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S32K3X4EVB-T172是一款适用于通用工业和汽车应用的评估和开发板。

S32K3X4EVB-T172基于采用172 32位 Arm® Cortex®-M7 S32K3 MCU，提供以锁步模式配置的双核、ASIL D安全硬件、HSE安全引擎、OTA支持、高级连接和低功耗模式。

S32K3X4EVB-T172提供与Arduino® UNO引脚布局兼容的标准规格，为快速应用原型制作和演示提供了广泛的扩展板选项。

S32K3X4EVB-T172评估板 Block Diagram



S32K3系列概述 Block Diagram

| K311                         | K312             | K314                      | Common Features                                                                                | K322                      | K324                  | K341                           | K342                  | K344                  | K328                    | K338                    | K348                     | K358                                   |
|------------------------------|------------------|---------------------------|------------------------------------------------------------------------------------------------|---------------------------|-----------------------|--------------------------------|-----------------------|-----------------------|-------------------------|-------------------------|--------------------------|----------------------------------------|
| 1 x Arm® Cortex®-M7 @120 MHz |                  | 1x Cortex-M7 @240 MHz     | AEC-Q100, 125 °C, 3.3/5 V                                                                      | 2 x Cortex-M7 @240 MHz    |                       | 1 Lockstep Cortex-M7 @ 240 MHz |                       |                       | 2 x Cortex-M7 @ 240 MHz | 3 x Cortex-M7 @ 240 MHz | 1 LS Cortex-M7 @ 240 MHz | 1 LS Cortex-M7 + 1 Cortex-M7 @ 240 MHz |
| 1 MB Flash                   | 2 MB Flash       | 4 MB Flash                | HSE-B Crypto Security Engine                                                                   | 2 MB Flash                | 4 MB Flash            | 1 MB Flash                     | 2 MB Flash            | 4 MB Flash            | 8 MB Flash              |                         |                          |                                        |
| 128 K SRAM                   | 192 K SRAM       | 512 K SRAM                | FOTA (Firmware Over-the-Air)                                                                   | 256 k SRAM                | 512 k SRAM            | 256 k SRAM                     | 256 k SRAM            | 512 k SRAM            | 1152 KB SRAM            | 1152 KB SRAM            | 1152 KB SRAM             | 1152 KB SRAM                           |
| up to 84 I/Os                | up to 143 I/Os   | up to 218 I/Os            | Low-Power Operating Modes and Peripherals (LP UART, FlexIO)                                    | up to 143 I/Os            | up to 218 I/Os        | up to 143 I/Os                 | up to 143 I/Os        | up to 218 I/Os        | up to 218 I/Os          |                         |                          |                                        |
| 16-ch, eDMA                  |                  | 32-ch, eDMA               | ASIL B/D Safety: (ECC Memories, MPU, CRC, Watchdogs)                                           | 32-ch, eDMA               |                       |                                |                       |                       | 32-ch, eDMA             |                         |                          |                                        |
| 3 x CAN (3 x FD)             | 6 x CAN (6 x FD) |                           | eMIOs Timers, Analogue Comparator, Logic Control Unit, Body Cross Triggering Unit, Trigger Mux | 4 x CAN (4 x FD)          | 6 x CAN (6 x FD)      | 4 x CAN (4 x FD)               | 4 x CAN (4 x FD)      | 6 x CAN (6 x FD)      | 8 x CAN (8 x FD)        | 8 x CAN (8 x FD)        | 8 x CAN (8 x FD)         | 8 x CAN (8 x FD)                       |
|                              |                  | 100 Mbit/s Ethernet (TSN) |                                                                                                | 100 Mbit/s Ethernet (TSN) |                       |                                |                       |                       | 1 Gbit/s Ethernet (TSN) |                         |                          |                                        |
| 2 x I2C                      | 2 x I2C          | 2 x I2C                   | JTAG                                                                                           | 2 x I2C                   | 2 x I2C               | 2 x I2C                        | 2 x I2C               | 2 x I2C               | 2 x I2C                 |                         |                          |                                        |
| 4 x SPI*                     |                  | 6 x SPI*                  | S32 Design Studio IDE                                                                          | 4 x SPI*                  | 6 x SPI*              | 4 x SPI*                       | 4 x SPI*              | 6 x SPI*              | 6 x SPI*                |                         |                          |                                        |
| 2 x 24-ch, 12-bit ADC        |                  | 3 x 24-ch, 12-bit ADC     | Real-Time Drivers (AUTOSAR® and Non-AUTOSAR)                                                   | 2 x 24-ch, 12-bit ADC     | 3 x 24-ch, 12-bit ADC | 2 x 24-ch, 12-bit ADC          | 2 x 24-ch, 12-bit ADC | 3 x 24-ch, 12-bit ADC | 3 x 24-ch, 12-bit ADC   |                         |                          |                                        |
|                              |                  | 2 x SAI (I2S)             |                                                                                                | 2 x SAI (I2S)             |                       |                                |                       |                       | 2 x SAI (I2S)           |                         |                          |                                        |
|                              |                  | Quad SPI                  | Security FW Safety Software Framework Application Software                                     | Quad SPI                  |                       |                                |                       |                       | Quad SPI + SDHC (SDIO)  |                         |                          |                                        |
| LOFP-48                      | HDQFP-172        |                           |                                                                                                | HDQFP-172                 |                       |                                |                       |                       | HDQFP-172               |                         |                          |                                        |
| HDQFP-100                    |                  |                           |                                                                                                | HDQFP-100                 |                       | HDQFP-100                      | HDQFP-100             |                       |                         |                         |                          |                                        |
|                              |                  | MAPBGA-257                |                                                                                                | MAPBGA-257                |                       |                                |                       | MAPBGA-257            | MAPBGA-289              |                         |                          |                                        |

View additional information for [S32K3X4EVB-T172汽车通用评估板](#).

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