S32K39/37/36 Electrification Microcontrollers Evaluation Board
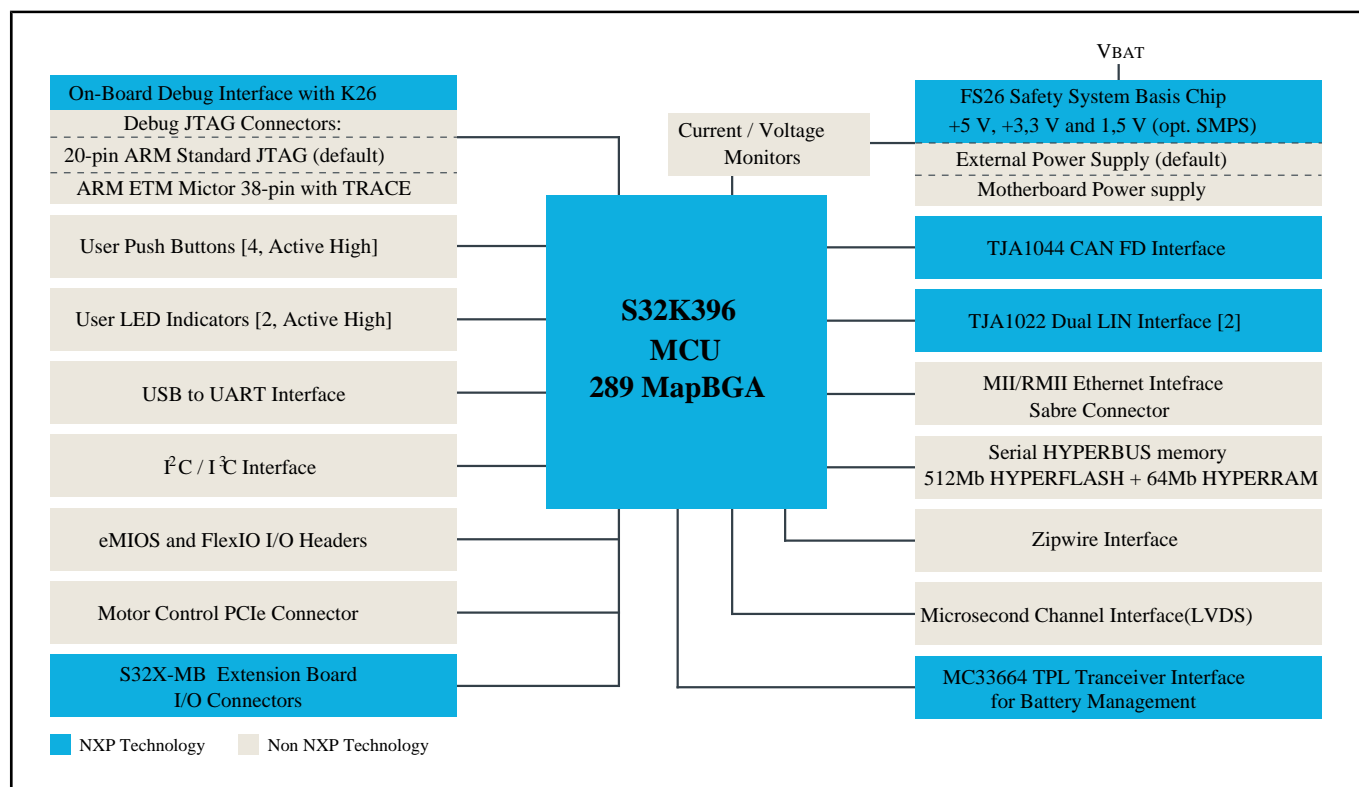
S32K396-BGA-DC1

Last Updated: Jan 7, 2026

The S32K396-BGA-DC1 evaluation board features the ASIL D S32K396 microcontroller unit in a MAPBGA 289 package optimized for developing electrification applications. With onboard debugger, robust communication interfaces, support of automotive Ethernet communication is designed for real-time control applications, especially safety-critical ones like traction drive or torque vectoring.

It can be expanded by the following boards:

- TJA1103 Sabre Development Board for automotive Ethernet support.
- S32X-MB I/O Extension Evaluation Board for Real-Time Domain Control and Actuation for MCU pin expansion and additional 3-phase motor control connector (It can be controlled by two 3-phase motors or one 6 phase motor)

S32K396-BGA-DC1 Evaluation Board Features Block Diagram

V_BAT

| On-Board Debug Interface with K26 |
| Debug JTAG Connectors: |
| 20-pin ARM Standard JTAG (default) |
| ARM ETM Mictor 38-pin with TRACE |

| User Push Buttons [4, Active High] |

| User LED Indicators [2, Active High] |

| USB to UART Interface |

| I²C / I³C Interface |

| eMIOS and FlexIO I/O Headers |

| Motor Control PCIe Connector |

| S32X-MB Extension Board I/O Connectors |

Current / Voltage Monitors

S32K396 MCU 289 MapBGA

| FS26 Safety System Basis Chip +5 V, +3,3 V and 1,5 V (opt. SMPS) |
| External Power Supply (default) |
| Motherboard Power supply |

| TJA1044 CAN FD Interface |

| TJA1022 Dual LIN Interface [2] |

| MII/RMII Ethernet Inteface Sabre Connector |

| Serial HYPERBUS memory 512Mb HYPERFLASH + 64Mb HYPERRAM |

| Zipwire Interface |

| Microsecond Channel Interface(LVDS) |

| MC33664 TPL Tranceiver Interface for Battery Management |

■ NXP Technology   ■ Non NXP Technology

View additional information for S32K39/37/36 Electrification Microcontrollers Evaluation Board.

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