

Evaluation Kit for SPC58 Gateway enhanced by Telemaco3P ASIL-B Processor



Features

Secure Automotive Microcontroller SPC58NH92C5 (Chorus)

- Up to ISO26262 ASIL-D SEooCTriple e200z4d core up to 200 MHz
- 10 MB embedded Flash (with HW A/B context swap capability), 1.28 MB embedded RAM
- eMMC and OctalBus (Hyberbus, Hyperbus, dual-QSPI, Octabus, etc.) interfaces (for Flash and RAM expansion respectively)
- 1x Ethernet Gigabit with AVB, 1x Ethernet 100 M
- CAN FD (16x), LIN (24x), FlexRay
- Advanced PWM Timer capabilities for BCM
- Embedded Hardware Security Module up to EVITA Full class

Secure Automotive Microprocessor STA1385 (Telemaco3P)

- ISO26262 ASIL-B SEooC
- Dual Arm[®] Cortex[®]-A7 at 600 MHz
- Arm[®] Cortex[®]-M3 at 200 MHz
- 2x RMII/RGMII Ethernet AVB MAC
- SD/SDIO up to 96 MHz 4-bit
- Memory interfaces:
 - eMMC - MultiMedia Card 5.1
 - 16-bit DDR3L-1066 (533 MHz)
 - 16-bit LPDDR2-800 (400 MHz)
 - SQI NOR
 - 8-bit Parallel NAND (1 chip select)
- Embedded Hardware Security Module for symmetric and asymmetric cryptography

ST33G1M2A Secure Element

- EAL5+ Tamper resistant vault for secure data and key storage
- TCG-certified Trusted Platform Module
- Single wire protocol (SWP) interface for communications with NFC router
- Industrialized Key Provisioning, Keys Generation, and off-line personalization

In-vehicle Network Interfaces

- FlexRay (1x)
- LIN (1x), LIN CMOS (5x)
- CAN FD (4x), CAN FD CMOS (6x)
- 100BASE-T1 (5x) and 1000BASE-T1 (1x), via a secure automotive ethernet switch

Product status link

[SGP-TC-EVK](#)

Product summary

Order code	SGP-TC-EVK
Reference	SGP-TC-EVK (Smart Gateway Platform)

Application

- Automotive OTA Gateway
- Automotive Smart Gateway and BCM
- Automotive Domain Controllers
- Predictive Maintenance Solutions

Description

The SGP-TC-EVK (Smart Gateway Platform) evaluation kit provides an easy-to-use development and prototyping platform for advanced automotive gateway and domain controller applications.

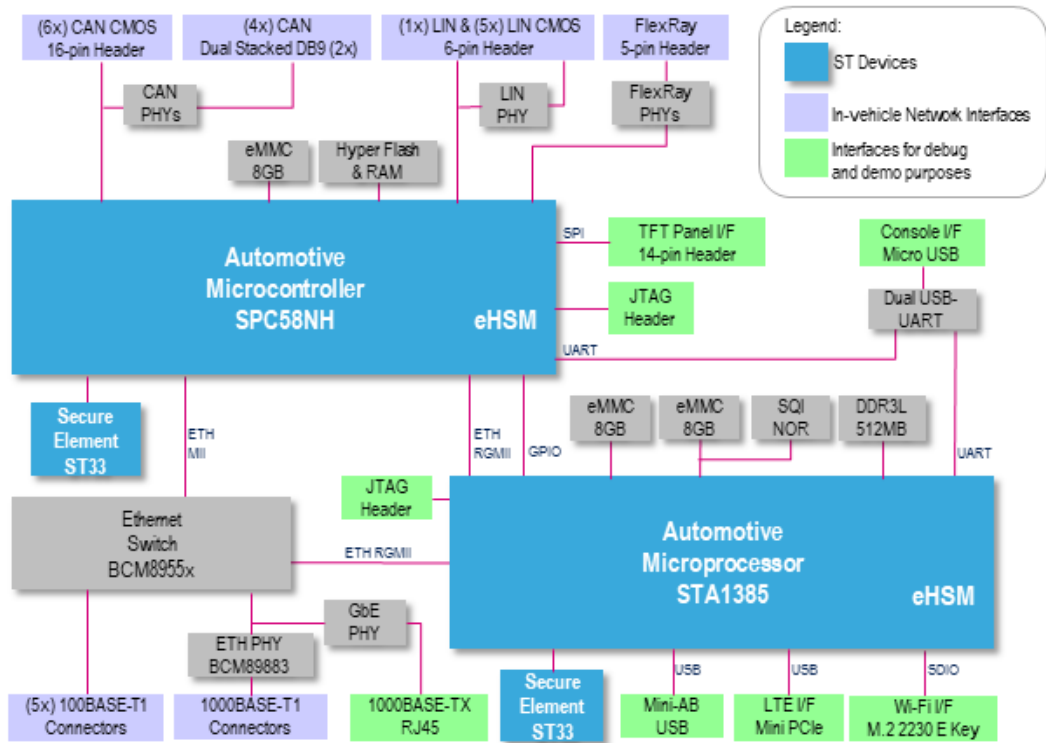
Designed around ST's secure automotive system on chips, a SPC58NHx microcontroller and a STA1385 microprocessor, the SGP offers high levels of processing and security capabilities, as well as real-time network performances required for use cases such as OTA management, ethernet packet inspection, fast wake-up response, secure data routing CAN-to-CAN and CAN-to-Ethernet, low-power Body Control Management, intrusion detection and predictive maintenance.

Featuring a rich set of in-vehicle network interfaces, the platform offers a complete environment for prototyping various automotive gateway and domain controller use cases; additionally, onboard M.2 and Mini PCIe expansion connectors for Wi-Fi and LTE modules bring cloud connectivity convenience.

The SGP-TC-EVK is delivered with a comprehensive Starter Package which includes everything required for the users to get started quickly, e.g., hardware design files, hardware/software documentation, software utilities and sample application software.

1 Block diagram

Figure 1. SGP-TC-EVK Block diagram



Revision history

Table 1. Document revision history

Date	Version	Changes
04-Mar-2020	1	Initial release.

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