

Development kit for automotive smart driving applications based on the Telemaco3P ASIL-B processor



Features

- Telemaco3P core processor module with 16x16 LFBGA (0.8 mm pitch) STA1385 Telemaco3P, 64 MB SQI NOR, 2 Gb NAND Flash, 2 8 GB EMMC, 512 MB DDR3L
- Crash detection accelerometers
- Teseo III multi-constellation GNSS system
- 6-axis accelerometer, odometer and rear gear engaged circuit for dead reckoning
- 2 Ethernet, compliant with IEEE-802.3-2002
- 1 user and reset push-buttons
- Backup battery circuit
- MEMS microphone and class-D audio out
- Board connectors:
 - 2 Ethernet RJ45
 - FlexRay and 100Base-T1 headers
 - 3 DB-9 CAN/CAN-FD
 - 2 mini-B USB
 - mini-B USB-UART debug port
 - SD™ card slot
 - RCA amplified audio out
 - SMA external GNSS antenna
 - JTAG connector
- Board expansion connectors:
 - LTE modem module
 - Wi-Fi module
 - V2X module
 - Solder on ST33 e-SIM / HSM
 - Alternative MEMS sensors module
 - Precise positioning with dual-band Teseo-APP and L-Band Teseo –L modules

Product status link

[MTP-TC3P-DVK](#)

Product summary

Order code	MTP-TC3P-DVK
------------	--------------

Application

- Automotive telematics control unit with V2X option
- Smart antenna
- Precise positioning modules

Description

The MTP (modular telematics platform) provides an open development environment for prototyping smart driving applications, including vehicle connectivity to cloud services, to infrastructure and to other vehicles.

At the core of the MTP there is the ST Telmo and a set of module that integrates the ST's Telemaco3P (STA1385) ASIL-B processor for an extended set of the NVM and DDR memories. The STA1385 device is automotive qualified for extended thermal range up to +150 °C junction temperature and includes a dedicated and isolated hardware security module to provide state-of-the-art on-chip security against automotive cyber-attacks.

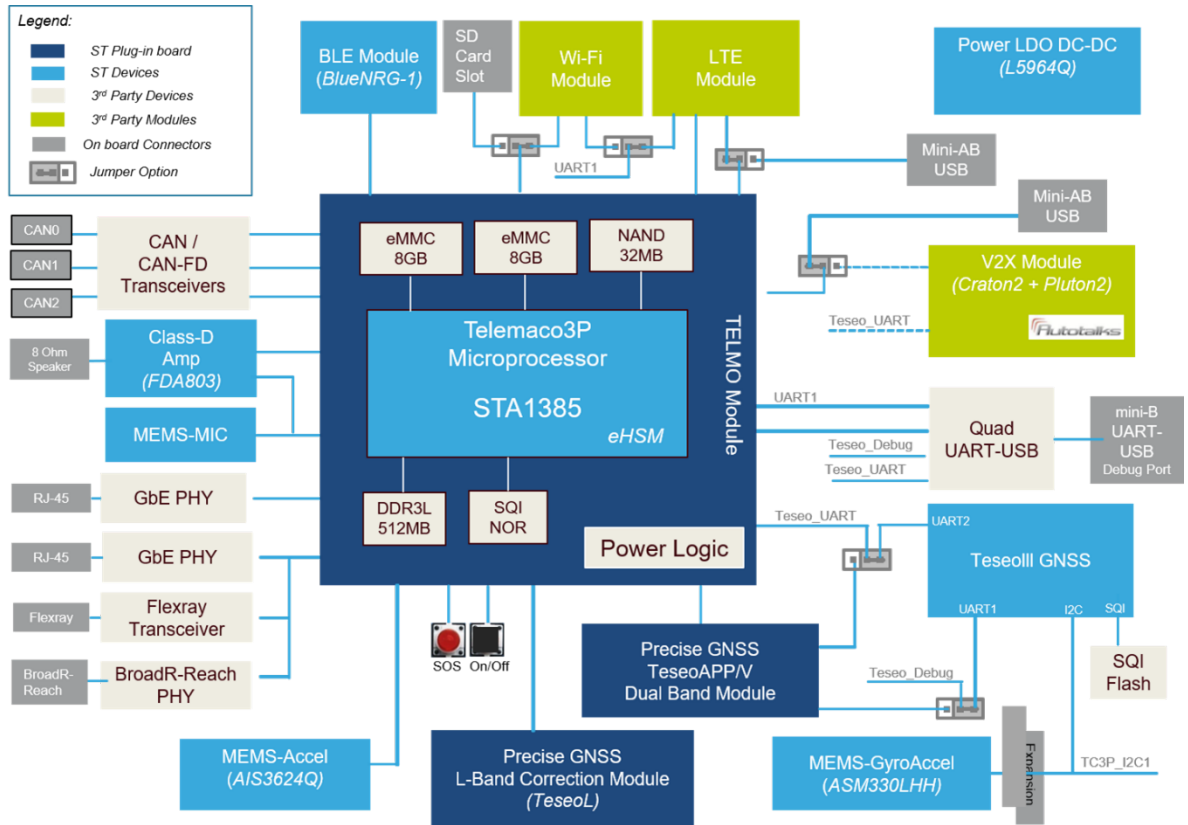
The MTP also integrates ST's automotive-grade multi-constellation GNSS Teseo IC with dead-reckoning sensors and offers expansion connector for optional plug-in [TeseoAPP](#) precise positioning module.

The platform enables the direct connection of automotive buses such as CAN, FlexRay, and BroadR-Reach® (100Base-T1), and features expansion connectors for several wireless connectivity options including BLE, Wi-Fi, LTE modules as well as V2X modules based on Autotalks Craton2 / Pluton2 products.

The MTP is delivered with a comprehensive starter package including everything required for the users to get started quickly, e.g. hardware design files, Linux BSP SW based on Yocto, sample application SW, optimized GNSS firmware and software tools (Teseo Suite, Flash Loader, UART port drivers).

1 Block diagram

Figure 1. Block diagram



Revision history

Table 1. Document revision history

Date	Version	Changes
25-Jan-2021	1	Initial release.

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. For additional information about ST trademarks, please refer to www.st.com/trademarks. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2021 STMicroelectronics – All rights reserved