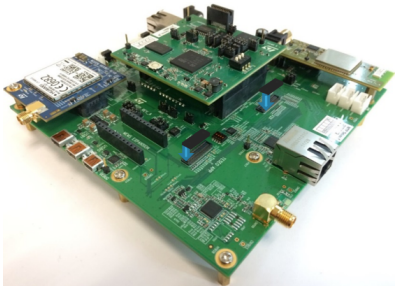
MTP-TC3P-DVK

Data brief

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



Product status link
MTP-TC3P-DVK

Product summary	
Order code	MTP-TC3P-DVK

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

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.

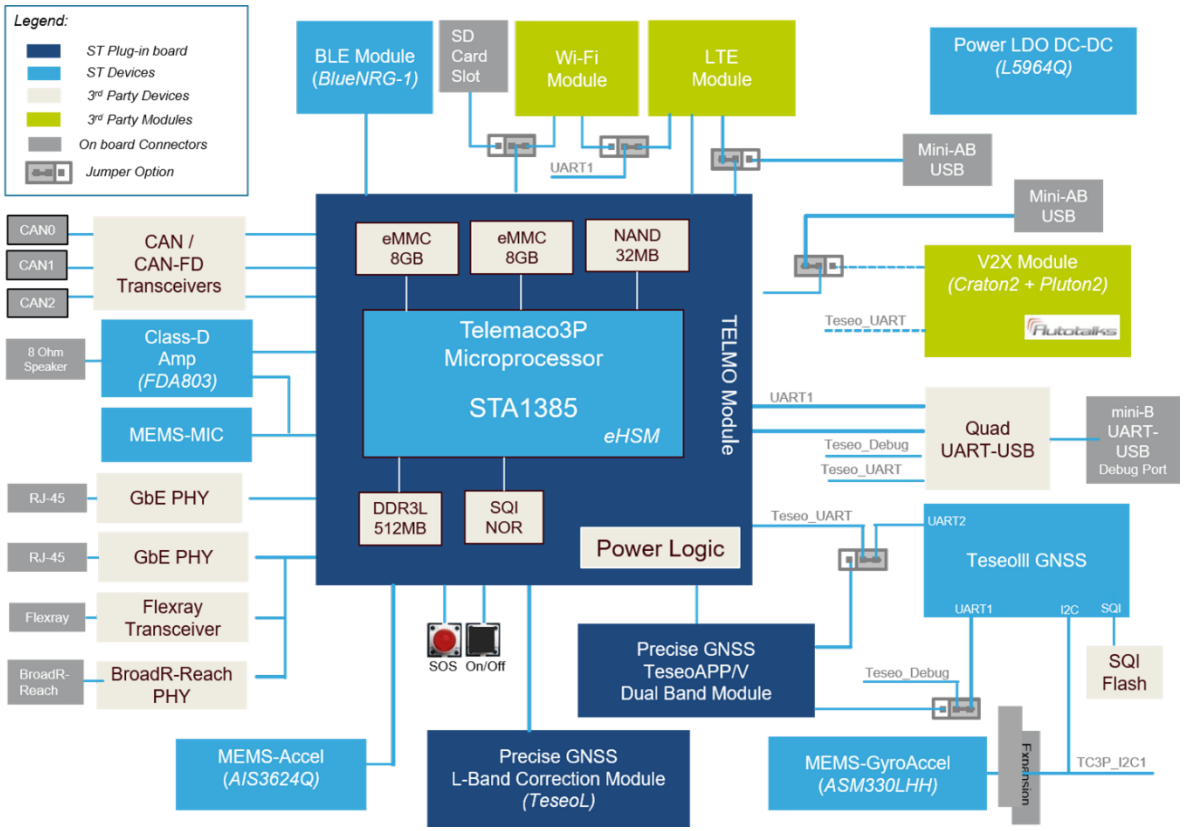
The MTP also integrates ST's automotive-grade multi-constellation GNSS Teseo IC with dead-reckoning sensors and offers expansion connector for optional plug-in TeseoAPP precise positioning module.

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.