



## Product Brief

# TC26xD – AURIX™ family

## Performance meets safety

AURIX™ is Infineon's brand new family of microcontrollers serving exactly the needs of the automotive industry in terms of performance and safety. Its innovative multicore architecture, based on up to three independent 32-bit TriCore™ CPUs, has been designed to meet the highest safety standards while significantly increasing performance at the same time.

Using the AURIX™ platform, automotive developers will be able to control powertrain, body, safety and ADAS applications with one single MCU platform. Customers are now able to cut down their MCU safety development significantly. By the same token, a performance surplus of 50 percent up to 100 percent allows for more functionality and offers a sufficient resource buffer for future requirements, keeping the power consumption on the single-core microcontroller level.

### System benefits

- > Superior real-time performance
- > Two high performance 32-bit super-scalar TriCore™ V1.6.1 CPUs with 6/4 stage pipeline
- > Lockstep architecture with extensive set of safety features
- > Up to 200 MHz at full automotive temperature range
- > Dedicated closely coupled memory areas per core
- > High performance multi parallel Shared Resource Interface (SRI) crossbar
- > Strong bit handling
- > Integrated DSP capabilities
- > Hot package options for extended temperature
- > Innovative single voltage supply with integrated 8-bit standby controller for ultra low power modes supporting e.g. long term parking of electrical vehicles

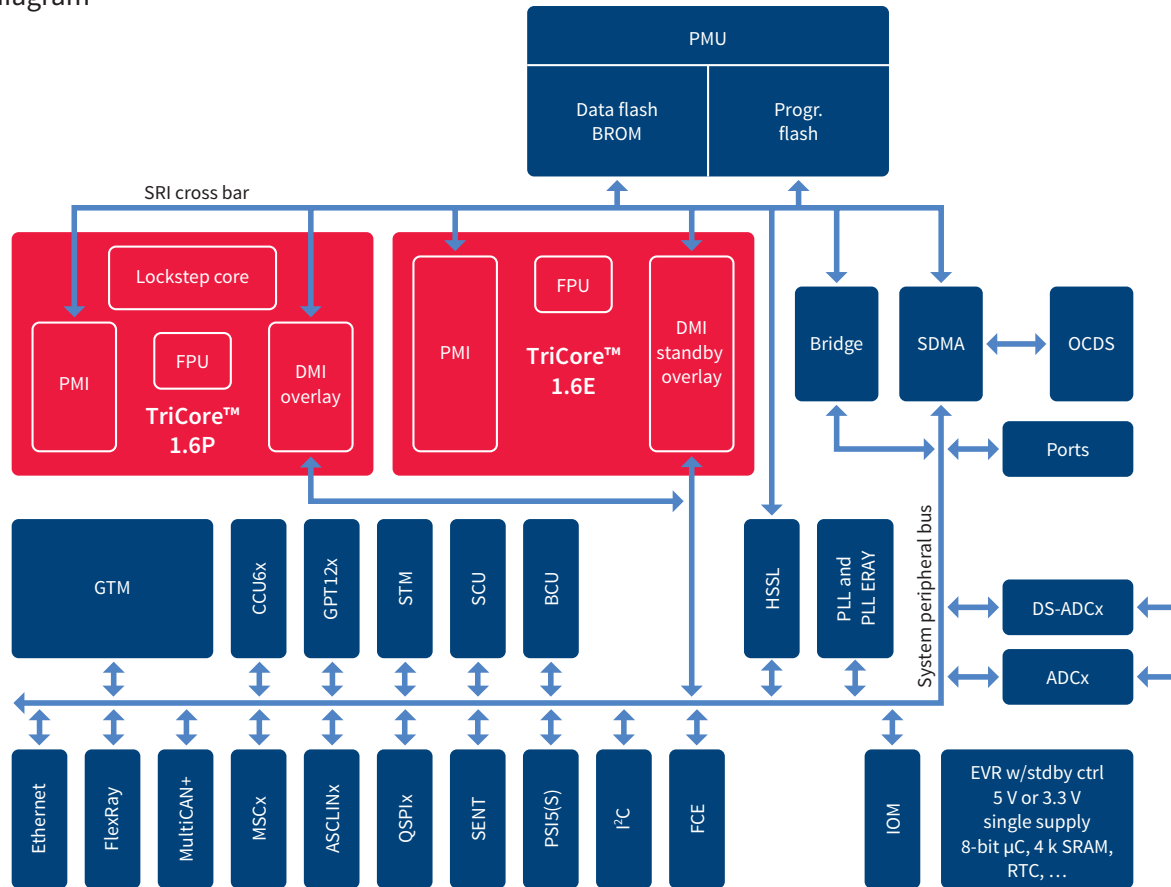
### Main features

- > Memory
  - 2.5 MB embedded program flash with ECC
  - 240 KB on-chip SRAM
- > Innovative general timer module
- > Additional legacy Capture Compare Units (CCU) and General Purpose Timer (GPT)
- > Delta-sigma analog-to-digital converters for fast and accurate measurements
- > 12-bit SAR analog-to-digital converter (5/3.3 V)
- > Sensor interfaces (SENT/PSI5/PSI5S)
- > High-speed serial Interface for inter-processor communication
- > Ethernet 100 Mbit
- > FlexRay module with 2 channels
- > Micro Second bus Interface (MSC)
- > Asynchronous/synchronous serial interfaces (ASC, QSPI, I<sup>2</sup>C)
- > On-chip Multi Core Debug Support (MCDS)
- > Embedded voltage regulator with integrated standby controller
- > Full automotive temperature range -40° to +125°C
- > LQFP-144 package
- > LQFP-176 package
- > LFBGA-292
- > Bare die

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## Block diagram



## Product summary

Type	eFlash [MB]	Data flash [KB]	Frequency [MHz]	SRAM [KB]	Package	Temp. range [°C]
SAL-TC260D-40F200	2.5	16 <sup>1)</sup>	200	240	Bare die	-40 ... +170
SAK-TC264D-40F200W	2.5	16 <sup>1)</sup>	200	240	LQFP-144	-40 ... +125 <sup>2)</sup>
SAK-TC265D-40F200W	2.5	16 <sup>1)</sup>	200	240	LQFP-176	-40 ... +125 <sup>2)</sup>
SAK-TC267D-40F200S	2.5	16 <sup>1)</sup>	200	192	LFPGA-292	-40 ... +125 <sup>2)</sup>

1) EEPROM emulation (up to 500 k w/e cycles)

2) Hot package options with T<sub>p</sub> = 150°C are available on request

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