Product brief
The processor for the future of driving

Exynos Auto T5123

Highlights

First 5G-capable modem made for the automotive industry
Real-time information access with download speed of up to 4.55Gbps
High-performance, low-power LPDDR4x memory for high-speed information processing

Samsung's first automotive 5G solution

In 2018, Samsung produced the world's first 5G automotive processor, the Exynos Auto T. The new unit, the Exynos Auto T5123, uses Samsung's cutting-edge innovations to unlock the power of ultra-fast cellular network connectivity to enhance your drive.

Fast and seamless 5G connectivity

The 5G-capable processor brings together key technologies, connects external networks to onboard electronics systems, and provides critical real-time information to drivers in a range of situations. The Exynos Auto T5123 is a 3GPP Rel. 15 telematics control unit (TCU) specifically designed to enable fast and seamless 5G connectivity in both standalone (SA) and non-standalone (NSA) mode to the next generation of connected cars.

Down essential information in real-time

The Exynos Auto T5123 delivers essential information to the vehicle in real-time via high-speed download of up to 4.55Gbps, and allows passengers to enjoy services like high-definition content streaming and video calls on the go.

Fast data processing and reduced power use

The Exynos Auto T5123 supports a high-speed PCIe (PCI Express) interface and uses a low-power, high-performance LPDDR4x mobile DRAM. In addition, the unit comes with two Cortex®-A55 cores and a built-in GNSS to help reduce the use of external ICs.

Meeting stringent requirements for automotive component quality

The Exynos Auto T5123 is engineered to meet OEM quality requirements, and is qualified by AEC-Q100. This means the Exynos Auto T5123 has passed important stress tests and is certified to have a certain level of quality and reliability.

Specifications

	Exynos Auto T5123
CPU	Dual-core Cortex®-A55 application processor
Audio	A-BOX Cortex®-A7
Cellular Modem	5G NR Sub-6GHz DL 4.55Gbps LTE / 3G / 2G networks
Location/Satellite Systems	Quad GNSS (L1+L5) including GPS, GLONASS, BeiDou, and Galileo
Memory	LPDDR4x 2133MHz, x16-bit 1ch
High Speed I/F	PCIe Gen.4 2-Lane w/ bifurcation/Ethernet (RGMII)/eMMC, UART/SPI/I2C/SDIO
AEC-100 Qualification	Grade 3

* All product specifications reflect internal test results and are subject to variations by user's system configuration. Actual performance may vary depending on use conditions and environment.
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