

MICRO-CONTROLLER

## Automotive MCUs with security functions

Infineon launched the Traveo II body micro-controller family for vehicle electronic systems. The chips offer up to eight CAN FD interfaces.



Traveo II body micro-controller family  
(Source: Infineon)

The multi-core MCUs are based on ARM Cortex-M7 and Cortex-M4 cores with up to 8 MiB of embedded flash. Compliance to ISO 26262 ASIL B (automotive safety integrity level) ensures a safe operation for ambient temperatures up to +125 °C. Featured peripherals include CAN FD, Ethernet, CXPI (clock extension peripheral interface), and Flexray. The family provides power consumption down to 5 µA and security features (Evita-Full) for connected cars. Firmware-over-the-air support allows remote updates of application and security software without interruption of service.

The micro-controllers are backed by Autosar (automotive open system architecture) 4.2 software. The supported ARM-based tools and software range from various IDE (integrated development environment) tools and debugger to real time operating systems. The components embed the Eshel (enhanced secure hardware extension), an HSM (hardware security module), a hardware-accelerated cryptography engine, a function for secure JTAG debugging, as well as units for memory and peripheral protection. The chips also support the error correction code (ECC) for memory, monitoring for power supply voltage, watchdogs, and self-test libraries.

The ICs (integrated circuits) address automotive applications, including body control modules, door, window, sunroof and seat control units, as well as in-cabin smartphone terminals, and wireless charging units. The Cypress Semiconductor Corporation, which was recently acquired by Infineon, developed the product family. The family comprises four series of entry devices and two series of high-end devices. First entry devices are available for mass production. The entire product family will be available by the second quarter of 2021.

[of](#)

System Control	Core Block			
Regulators	SWD/JTAG/Trace	SRAM	Code Flash	Arm® Cortex® M0+
LVD / BOD	Arm® Cortex® - M7 (Single / Dual) FPU	I - Cache	Work Flash	
RC Oscillators		D - Cache	Boot ROM	Crypto
PLL / FLL	MPU	PPU	DMA	eFuse
Reset	Peripheral			
WDT / CSV	IRQ / NMI	GPIO Smart I/O	PS / TDM	8-ch CAN FD
Real Time Clock	32-bit TCPWM	16-bit Motor TCPWM	16-bit TCPWM	
Event Generation Timer	eMMC	SMIF	Ethernet	
Power Mode Management	72-ch 12-bit ADC (3 x SAR ADC)	16-ch LIN / UART	11-ch SCB PC / UART / SPI	

For example, the Traveo II CYT3BB and CYT4BB series MCUs offer up to eight CAN FD interfaces. (Source: Infineon)