CAN Newsletter Online

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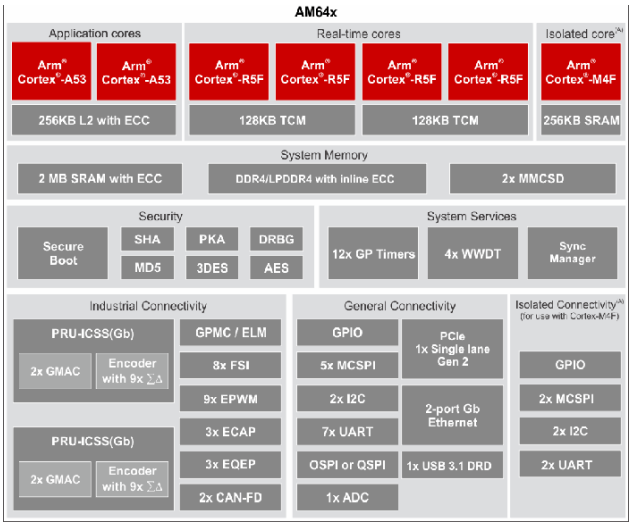
Industrial SOC and automotive MCU

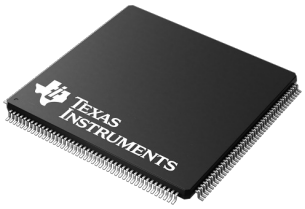
Texas Instruments shows the CAN FD connectable Sitara AM6442 SOC (system on chip) and TMS320F28386D MCU (micro-controller unit) at the digital Embedded World 2021.

AM6442 is dedicated for motor drives, programmable logic controllers, and functional safety applications (Source: Texas Instruments)

The AM6442 combines two Sitara 1-Gbit/s PRUs (programmable real-time unit) with up to two Arm 64-bit Cortex-A53 cores (1 GHz) for web-services, up to four Cortex-R5F MCUs (800 MHz) for real-time computing, and a Cortex-M4F MCU (400 MHz). Two CAN modules with or without CAN FD support are available. Integrated Ethernet switch, PCI-Express controller, and USB 3.1 port are on-chip. The SOC is built for industrial applications, such as motor drives and programmable logic controllers (PLCs). The chip is also targeted for functional safety applications. It supports security and cryptographic functions as well.



AM6442 block diagram (Source: Texas Instruments)



TMS320F28386D automotive MCU (Source: Texas Instruments)

The 32-bit TMS320F28386D automotive MCU is a member of the C2000 micro-controller family. The chip is designed for powertrain systems in electric vehicles. It includes two TMS320C28x 32-bit CPUs (200 MHz) with a 512 KiB flash and a 44-KiB local RAM each. A 128 KiB RAM is shared between the two central processing units. An Arm Cortex-M4 processor (125 MHz) with a 512-KiB flash and a 96-KiB RAM includes Classical CAN and CAN FD as well as Ethernet interfaces. Additionally, the chip supports two CAN (FD) modules (pin-bootable) and a variety of further interfaces. The micro-controller is available for junction (option S) or ambient (option Q) temperatures from -40 °C to +125 °C.

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