セーフティとセキュリティ機能を兼ね備えた理想的なプラットフォーム
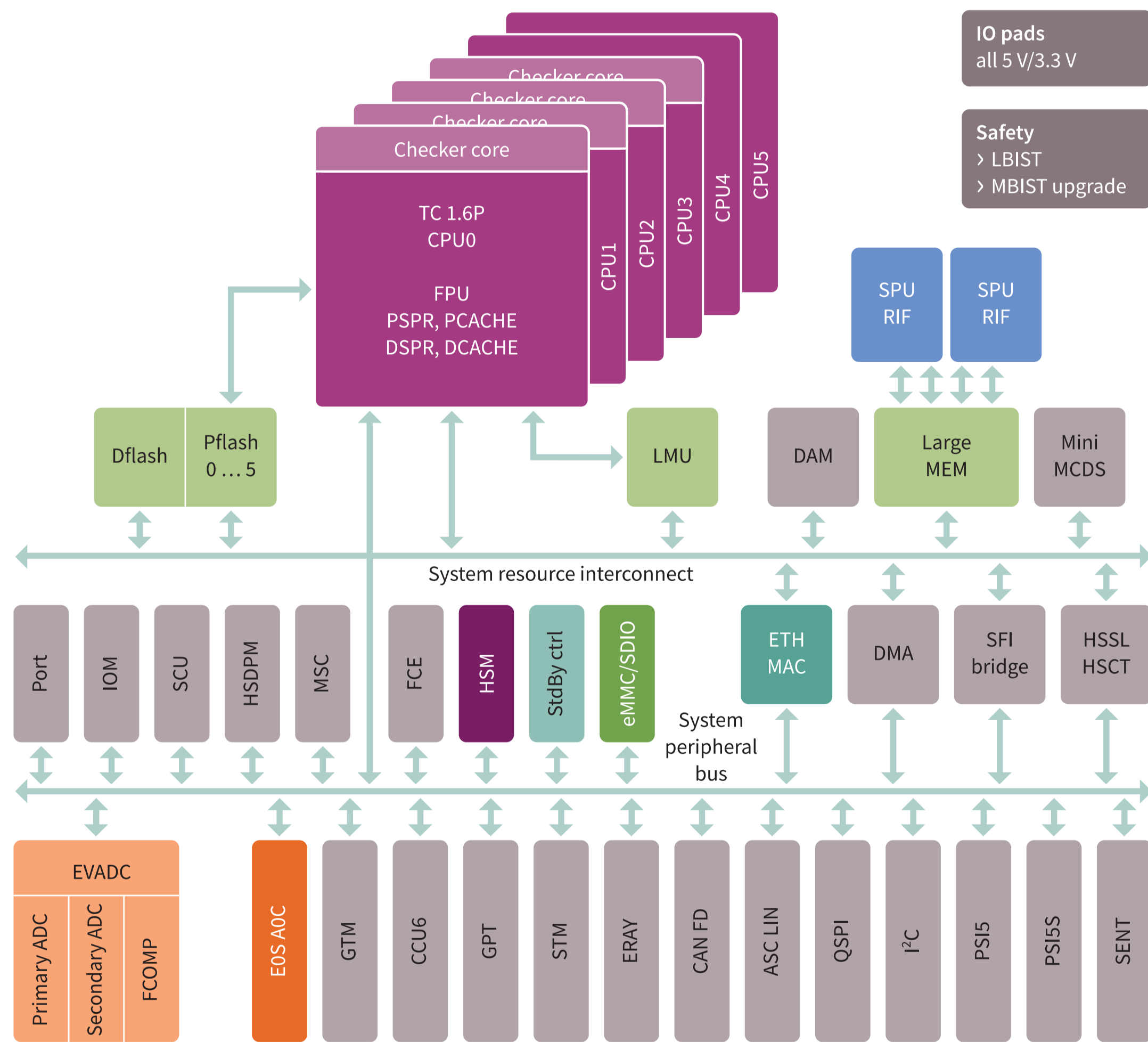
AURIX™ with its embedded safety and security features is the ideal platform for a wide range of automotive

32ビットマイクロコントローラ AURIX™ TC3xx ファミリ

AURIX™ 32-bit microcontrollers TC3xx family

AURIX™ TC3xx architecture evolution from TC2xx to TC3xx

IO pads
all 5 V/3.3 V

Safety
> LBIST
> MBIST upgrade

Checker core
Checker core
Checker core
Checker core

TC 1.6P
CPU0

FPU
PSPR, PCACHE
DSPR, DCACHE

CPU1 CPU2 CPU3 CPU4 CPU5

SPU RIF   SPU RIF

Dflash | Pflash 0 … 5 | LMU | DAM | Large MEM | Mini MCDS

System resource interconnect

Port | IOM | SCU | HSDPM | MSC | FCE | HSM | StdBy ctrl | eMMC/SDIO | ETH MAC | DMA | SFI bridge | HSSL HSCT

System peripheral bus

EVADC
Primary ADC | Secondary ADC | FCOMP

EDS AOC

GTM | CCU6 | GPT | STM | ERAY | CAN FD | ASC LIN | QSPI | I²C | PSI5 | PSI5S | SENT

Performance
> New TriCore™ 162 generation
> New instructions
> Up to 6 CPUs at 300 MHz
> New direct flash access path

HSM: Full EVITA compliance
> New accelerators ECC256/SHA256
> Available on all devices

ADAS
> New HW accelerator concept - SPU (Signal Processing Unit)

ADC
> Improvement of existing ADC
> Reduction of capacitive load

Delta-sigma
> Enhanced concept

Memories
> Larger SRAM
> SRAM/flash ratio increased
> Enhanced MPU

Stand-by control unit
> Low-power modes

Ethernet
> 1 Gbit/s ETH
> QoS services
> Remote DMA

eMMC/SDIO
> External NAND flash IF

AURIX™ TC3xx package scalability

		TQFP-80	TQFP-100	LQFP-144 / TQFP-144	BGA-180	LQFP-176	BGA-233	LFBGA-292	LFBGA-516
6x 300 MHz	9xA Series 16 MB							TC397XA 300 MHz	
6x 300 MHz	9x Series 16 MB							TC397X 300 MHz	TC399X 300 MHz
4x 300 MHz	Ex Series 12 MB							TC3E7QX 300 MHz	
4x 300 MHz	8x Series 10 MB							TC387Q 300 MHz	TC389Q 300 MHz
3x 300 MHz	7xX Series 6 MB							TC377TX 300 MHz	
3x 300 MHz	7x Series 6 MB					TC375T 300 MHz		TC377T 300 MHz	
2x 300 MHz	6x Series 4 MB			TC364D 300 MHz	TC366D 300 MHz	TC365D 300 MHz		TC367D 300 MHz	
4x 300 MHz	Ax Series 4 MB						TC3A8Q 300 MHz	TC3A7Q 300 MHz	
3x 300 MHz	5xA Series 4 MB				TC356TA 300 MHz			TC357TA 300 MHz	
2x 300 MHz	3xA Series 2 MB				TC336DA 300 MHz			TC337DA 300 MHz	
1x 200 MHz[1]	3x Series 2 MB	TC332L 200 MHz[1]	TC333L 200 MHz[1]	TC334L 200 MHz[1]	TC336L 200 MHz[1]			TC337L 200 MHz[1]	
1x 160 MHz	2x Series 1 MB	TC322L 160 MHz	TC323L 160 MHz	TC324L 160 MHz				TC327L 160 MHz	

Sense and Compute
Control and Actuate

1) An option of 300 MHz is also available

- Advanced package technologies deliver the best price/performance ratio
- Customers can choose between different devices in the same pin-compatible package