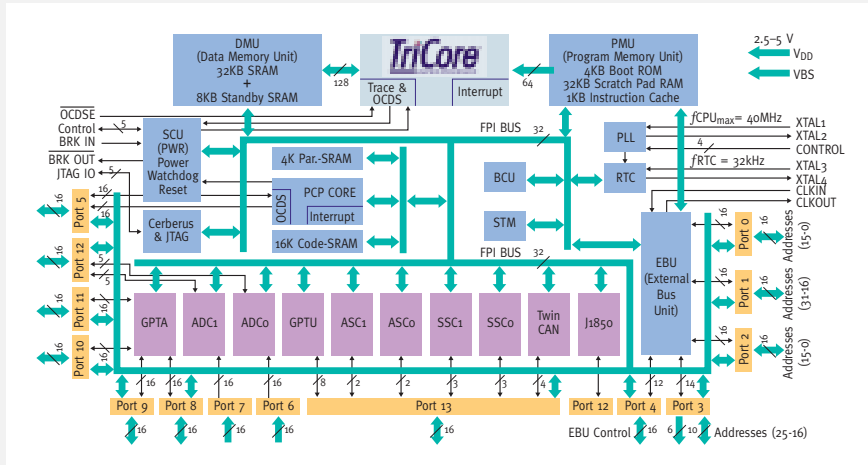


## Features

- 32-bit super-scalar TriCore™ main CPU
  - Hardware supported context switch
  - 1-, 8-, 16-, 32- & 64-bit data format
  - Powerful integrated DSP capabilities
  - Bit logical operations
  - Concurrent 16-/32-bit instruction set
- 32-bit I/O processor (PCP):
  - Data move between any memory or I/O location
  - Read-modify-write
  - Arithmetic and logical operations
- On-chip memories
  - 32-KB scratch-pad memory
  - 1-KB code cache, optionally locable
  - 4-KB boot ROM
  - 40-KB TriCore™ data memory
  - 16-KB PCP code memory
  - 4-KB PCP data memory
- 32-bit multi-master on-chip FPI bus (Flexible Peripheral Interface)
- More than 100 interrupt request nodes
- 2 service request arbitration units: TriCore™, PCP
- TwinCAN™
  - 2 CAN nodes, V2.0 part B (active)
  - Standard frames (11-bit) or extended frames (29-bit)
  - 32 independent message objects flexibly assignable to each of the two CAN nodes
  - Configurable gateway functionality
  - Dedicated control register per channel
  - Advanced acceptance filtering

TC 1775 BLOCK DIAGRAM



- J1850 (SDLM)
- GPTA®
  - 6 filter and pre-scaler cells for input signal filtering and pre-scaling
  - 2 phase discrimination units for direction indication
  - 4 duty cycle measurement cells e.g. for speed analysis
  - 1 digital PLL: Flexible and accurate clock signal generation with high resolution
  - 32 global timer cells (24-bit wide) for input signal capture and output signal generation based on two 24-bit wide global timers
  - 64 local timer cells (16-bit wide) for PWM signal treatment
  - Flexible assignment of input and output signals to pins
- GPTU
  - 3 independently operating 32-bit timers
  - 32-bit timers can be split into 8- and 16-bit sub-timers
- System timer
- Real Time Clock (RTC)
- 2 ADCs:
  - 5 V input
  - 16 channels, each ADC
  - Selectable resolution: 8-, 10-, 12-bit
  - 5 microsecond conversion time at 10-bit resolution
  - Multiple conversion request modes, includes equidistant sampling
  - Optional synchronization
- 2 high-speed Synchronous Serial Interface (SSC)
- 2 Asynchronous/Synchronous Serial Interface (ASC)
- Debug interface (OCDS levels 1 & 2)
- 32-bit wide external memory interface
  - Glueless interface to wide range of memories
  - Burst mode memory support
- 40 MHz, automotive temperature range
- P-BGA-329

Note: For details please refer to applicable User Manual

How to reach us:  
<http://www.infineon.com>

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 Group Communications  
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