

## PRODUCT BULLETIN

Preliminary  
Information concerns  
new products in the  
sampling or pre-  
production phase  
of development.  
Characteristics are  
subject to change  
without notice.

## easyCAN3

- **ARM7TDMI™ ARM® Thumb® Processor core**
  - High Performance 32-bit RISC
  - High-density 16-bit Instruction Set (Thumb®)
  - Leader in MIPS/Watt
  - Embedded ICE (In Circuit Emulation)
- **16 Kbytes Internal RAM**
- **Clock Generator with x5 PLL multiplier**
- **Fully Programmable External Bus Interface (EBI)**
  - Maximum External Address Space of 6 Mbytes
  - Up to 4 Chip Select lines
- **8-level Priority, Vectored Interrupt Controller**
  - Individually maskable
  - 3 External Interrupts including 1 fast interrupt line
- **12 channel Peripheral Data Controller (PDC)**
- **60 Programmable I/O Lines**
- **4x16-bit General Purpose Timers (GPT)**
  - 3 configurable modes : Counter, PWM, Capture
  - 4 External Clock Inputs
  - 3 Multi-purpose I/O Pins per Timer
- **4x16-bit Simple Timers (ST)**
- **4 channel 16-bit Pulse Width Modulation (PWM)**
- **3 CAN controllers 2.0A and 2.0B Full CAN**
  - 2 with 16 buffers
  - 1 with 32 buffers
- **3 USARTs**
  - 6 Peripheral Data Controller (PDC) Channels
  - Support for up to 9-bits Data length
  - Support for J1587 protocol
  - Support for Smart Card error detection feature
  - Support LIN protocol with S/W layer
- **Master/Slave SPI Interface**
  - 2 Peripheral Data Controller (PDC) Channels
  - 8 to 16-bit Programmable Data Length
  - 4 External Slave Chip Selects
- **2x8-channel 10-bit Analog/Digital Converters**
  - 2 Peripheral Data Controller (PDC) Channels
- **2x16-bit Capture modules (CAPT)**
- **Programmable Watch Timer (WT)**
- **Programmable Watchdog (WD)**
- **Power Management Controller (PMC)**
  - 32 kHz oscillator for low power operation
  - CPU and Peripherals can be Deactivated individually
- **Reset controller**
- **Fully Static Operation : 0 Hz to 30 MHz**
  - 2.7 V to 5.5V Operating Voltage Range
  - 2.7V to 3.6V Core, Memory and Analog Voltage Range
  - -40° to +85°C Operating Temperature Range
- **Available in a 176-lead TQFP Package**

## Overview

The easyCAN3 belongs to the easyCAN™ product family. The easyCAN™ is a platform for the development and the implementation of multiple CAN based solutions and applications. The easyCAN™ platform includes :

- a) a development tool based on the ET FCM® concept which allows the emulation, the prototyping and the validation of an ARM® based chip including several CAN modules (1 to 6 modules).
- b) a set of ARM® based chips including several CAN modules such as easyCAN3 which includes three CAN modules.

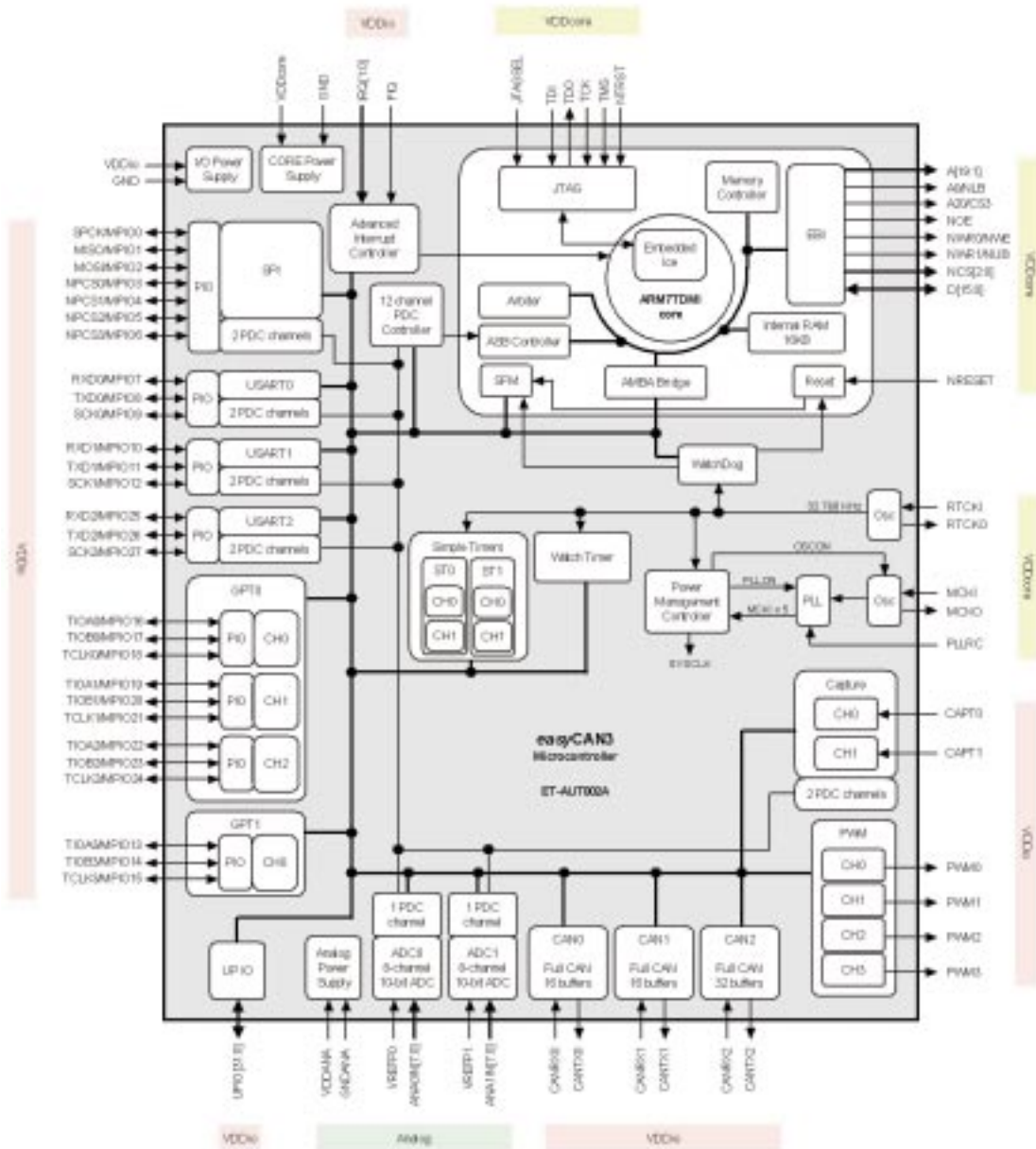
easyCAN3 is based on the ARM7TDMI™ embedded processor. This processor has a high-performance 32-bit RISC architecture with a high-density 16-bit instruction set and very low power consumption.

In addition, a large number of internally banked registers result in very fast exception handling, making the device ideal for real-time control applications.

The easyCAN3 has a direct connection to off-chip memory, including Flash, through the fully programmable External Bus Interface.

An eight-level priority vectored Interrupt Controller in conjunction with the Peripheral Data Controller significantly improves the real time performance of the device. The device is manufactured using high-density CMOS technology. By combining the ARM7TDMI™ microcontroller core with an on-chip RAM and a wide range of peripheral functions on a monolithic chip, the Europe Technologies easyCAN™ is a powerful microcontroller that provides a flexible, cost-effective solution to many compute-intensive embedded control applications in the automotive and industrial world.

# Block Diagram



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