ARM-based 32-bit MCU with 16 or 32 KB Flash, USB, CAN, 6 timers, 2 ADCs, 6 com. interfaces

Features

• ARM 32-bit Cortex™-M3 CPU Core
- 72 MHz maximum frequency, 1.25 DMIPS/MHz (Dhrystone 2.1) performance at 0 wait state memory access
- Single-cycle multiplication and hardware division

• Memories
- 16 or 32 Kbytes of Flash memory
- 6 or 10 Kbytes of SRAM

• Clock, reset and supply management
- 2.0 to 3.6 V application supply and I/Os
- POR, PDR, and programmable voltage detector (PVD)
- 4-to-16 MHz crystal oscillator – Internal 8 MHz factory-trimmed RC
- Internal 40 kHz RC
- PLL for CPU clock
- 32 kHz oscillator for RTC with calibration

• Low power
- Sleep, Stop and Standby modes
- VBAT supply for RTC and backup registers

• 2 x 12-bit, 1 µs A/D converters (up to 16 channels)
- Conversion range: 0 to 3.6 V – Dual-sample and hold capability – Temperature sensor

• DMA
- 7-channel DMA controller
- Peripherals supported: timers, ADC, SPIs, I2Cs and USARTs

• Up to 51 fast I/O ports
- 26/37/51 I/Os, all mappable on 16 external interrupt vectors and almost all 5 V-tolerant

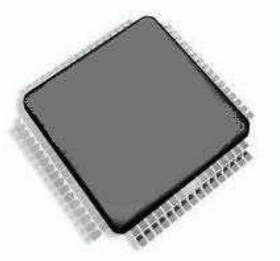
• Debug mode
- Serial wire debug (SWD) & JTAG interfaces

• 6 timers
- Two 16-bit timers, each with up to 4 IC/OC/PWM or pulse counter and quadrature (incremental) encoder input
- 16-bit, motor control PWM timer with dead-time generation and emergency stop
- 2 watchdog timers (Independent and Window)
- SysTick timer 24-bit downcounter

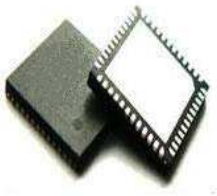
• 6 communication interfaces
- 1 x I2C interface (SMBus/PMBus)
- 2 × USARTs (ISO 7816 interface, LIN, IrDA capability, modem control)
- 1 × SPI (18 Mbit/s)
- CAN interface (2.0B Active)
- USB 2.0 full-speed interface

• CRC calculation unit, 96-bit unique ID

• Packages



LQFP48（7X7）



QFN48（7X7）

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