STM32G030x6/x8

Arm® Cortex®-M0+ 32-bit MCU, up to 64 KB Flash, 8 KB RAM, 2x USART, timers, ADC, comm. I/Fs, 2.0-3.6V

Datasheet - production data

Features

- Core: Arm® 32-bit Cortex®-M0+ CPU, frequency up to 64 MHz
- -40°C to 85°C operating temperature
- Memories
  - Up to 64 Kbytes of Flash memory with protection
  - 8 Kbytes of SRAM with HW parity check
- CRC calculation unit
- Reset and power management
  - Voltage range: 2.0 V to 3.6 V
  - Power-on/Power-down reset (POR/PDR)
  - Low-power modes: Sleep, Stop, Standby
  - V_{BAT} supply for RTC and backup registers
- Clock management
  - 4 to 48 MHz crystal oscillator
  - 32 kHz crystal oscillator with calibration
  - Internal 16 MHz RC with PLL option
  - Internal 32 kHz RC oscillator (±5 %)
- Up to 44 fast I/Os
  - All mappable on external interrupt vectors
  - Multiple 5 V-tolerant I/Os
- 5-channel DMA controller with flexible mapping
- 12-bit, 0.4 µs ADC (up to 16 ext. channels)
  - Up to 16-bit with hardware oversampling
  - Conversion range: 0 to 3.6V
- 8 timers: 16-bit for advanced motor control, four 16-bit general-purpose, two watchdogs, SysTick timer
- Calendar RTC with alarm and periodic wakeup from Stop/Standby

- Communication interfaces
  - Two I^2C-bus interfaces supporting Fast-mode Plus (1 Mbit/s) with extra current sink, one supporting SMBus/PMBus and wakeup from Stop mode
  - Two USARTs with master/slave synchronous SPI; one supporting ISO7816 interface, LIN, IrDA capability, auto baud rate detection and wakeup feature
  - Two SPIs (32 Mbit/s) with 4- to 16-bit programmable bitframe, one multiplexed with I^2S interface
- Development support: serial wire debug (SWD)
- All packages ECOPACK 2 compliant

Table 1. Device summary

Reference	Part number
STM32G030x6	STM32G030C6, STM32G030F6, STM32G030J6, STM32G030K6
STM32G030x8	STM32G030C8, STM32G030K8

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