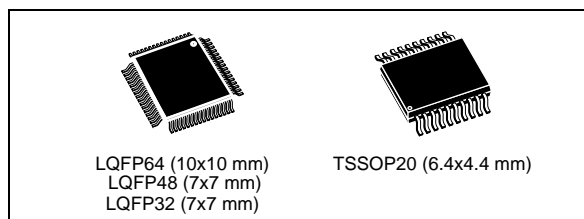


Value-line ARM[®]-based 32-bit MCU with up to 256 KB Flash, timers, ADC, communication interfaces, 2.4-3.6 V operation

Datasheet - production data

Features

- Core: ARM[®] 32-bit Cortex[®]-M0 CPU, frequency up to 48 MHz
- Memories
 - 16 to 256 Kbytes of Flash memory
 - 4 to 32 Kbytes of SRAM with HW parity
- CRC calculation unit
- Reset and power management
 - Digital & I/Os supply: $V_{DD} = 2.4\text{ V to }3.6\text{ V}$
 - Analog supply: $V_{DDA} = V_{DD}$ to 3.6 V
 - Power-on/Power down reset (POR/PDR)
 - Low power modes: Sleep, Stop, Standby
- Clock management
 - 4 to 32 MHz crystal oscillator
 - 32 kHz oscillator for RTC with calibration
 - Internal 8 MHz RC with x6 PLL option
 - Internal 40 kHz RC oscillator
- Up to 55 fast I/Os
 - All mappable on external interrupt vectors
 - Up to 55 I/Os with 5V tolerant capability
- 5-channel DMA controller
- One 12-bit, 1.0 μs ADC (up to 16 channels)
 - Conversion range: 0 to 3.6 V
 - Separate analog supply: 2.4 V to 3.6 V
- Calendar RTC with alarm and periodic wakeup from Stop/Standby
- 11 timers
 - One 16-bit advanced-control timer for six-channel PWM output
 - Up to seven 16-bit timers, with up to four IC/OC, OCN, usable for IR control decoding
 - Independent and system watchdog timers
 - SysTick timer



- Communication interfaces
 - Up to two I²C interfaces
 - Fast Mode Plus (1 Mbit/s) support on one or two I/Fs, with 20 mA current sink
 - SMBus/PMBus support (on single I/F)
 - Up to six USARTs supporting master synchronous SPI and modem control; one with auto baud rate detection
 - Up to two SPIs (18 Mbit/s) with 4 to 16 programmable bit frames
- Serial wire debug (SWD)
- All packages ECOPACK[®] 2

Table 1. Device summary

Reference	Part number
STM32F030x4	STM32F030F4
STM32F030x6	STM32F030C6, STM32F030K6
STM32F030x8	STM32F030C8, STM32F030R8
STM32F030xC	STM32F030CC, STM32F030RC

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