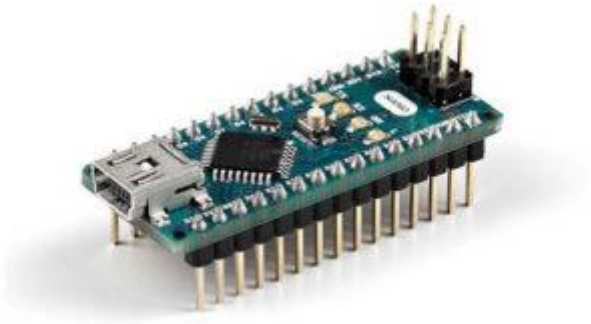
Плата Arduino Nano



Nano – одна из самых миниатюрных плат Ардуино. Она является полным аналогом Arduino Uno – так же работает на чипе **ATmega328P (хотя можно еще встретить варианты с ATmega168)**, но с меньшим форм-фактором. Из-за своих габаритных размеров плата часто используется в проектах, в которых важна компактность. На плате отсутствует вынесенное гнездо внешнего питания, Ардуино работает через USB (miniUSB или microUSB). В остальном параметры совпадают с моделью Arduino Uno.

Технические характеристики Arduino Nano:

- Напряжение питания 5В;
- Входное питание 7-12В (рекомендованное);
- Количество цифровых пинов – 14, из них 6 могут использоваться в качестве выходов ШИМ;
- 8 аналоговых входов;
- Максимальный ток цифрового выхода 40 мА;
- Флэш- память 16 Кб или 32 Кб, в зависимости от чипа;
- ОЗУ 1 Кб или 2 Кб, в зависимости от чипа;
- EEPROM 512 байт или 1 Кб;
- Частота 16 МГц;
- Размеры 19 х 42 мм;
- Вес 7 г.

STM32F030C6T6

Mainstream Arm Cortex-M0 Value line MCU with 32 Kbytes of Flash memory, 48 MHz CPU

ACTIVE

Unit Price for 10kU (US$) **: 0.8345**

LQFP 48 7x7x1.4 mm

Product is in mass production

The STM32F030x4/x6/x8/xC microcontrollers incorporate the high-performance Arm® Cortex®-M0 32-bit RISC core operating at a 48 MHz frequency, high-speed embedded memories (up to 256 Kbytes of Flash memory and up to 32 Kbytes of SRAM), and an extensive range of enhanced peripherals and I/Os. All devices offer standard communication interfaces (up to two I^2Cs, up to two SPIs and up to six USARTs), one 12-bit ADC, seven general-purpose 16-bit timers and an advanced-control PWM timer.

The STM32F030x4/x6/x8/xC microcontrollers operate in the -40 to +85 °C temperature range from a 2.4 to 3.6V power supply. A comprehensive set of power-saving modes allows the design of low-power applications.

The STM32F030x4/x6/x8/xC microcontrollers include devices in four different packages ranging from 20 pins to 64 pins. Depending on the device chosen, different sets of peripherals are included. The description below provides an overview of the complete range of STM32F030x4/x6/x8/xC peripherals proposed.

These features make the STM32F030x4/x6/x8/xC microcontrollers suitable for a wide range of applications such as application control and user interfaces, handheld equipment, A/V receivers and digital TV, PC peripherals, gaming and GPS platforms, industrial applications, PLCs, inverters, printers, scanners, alarm systems, video intercoms, and HVACs.

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 V to 3.6 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 I^2C interfaces
  - 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
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