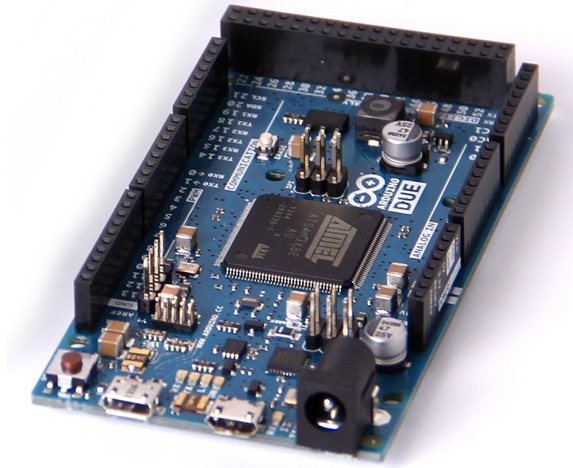


# Arduino DUE 2012 R3 ORG



## Description:

The Arduino Due is a microcontroller board based on the Atmel SAM3X8E ARM Cortex-M3 CPU (datasheet). It is the first Arduino board based on a 32-bit ARM core microcontroller. It has 54 digital input/output pins (of which 12 can be used as PWM outputs), 12 analog inputs, 4 UARTs (hardware serial ports), a 84 MHz clock, an USB OTG capable connection, 2 DAC (digital to analog), 2 TWI, a power jack, an SPI header, a JTAG header, a reset button and an erase button.

**Warning: Unlike other Arduino boards, the Arduino Due board runs at 3.3V. The maximum voltage that the I/O pins can tolerate is 3.3V. Providing higher voltages, like 5V to an I/O pin could damage the board.**

The board contains everything needed to support the microcontroller; simply connect it to a computer with a micro-USB cable or power it with a AC-to-DC adapter or battery to get started. The Due is compatible with all Arduino shields that work at 3.3V and are compliant with the 1.0 Arduino pinout.

The Due follows the 1.0 pinout:

- TWI: SDA and SCL pins that are near to the AREF pin.
- The IOREF pin which allows an attached shield with the proper configuration to adapt to the voltage provided by the board. This enables shield compatibility with a 3.3V board like the Due and AVR-based boards which operate at 5V.
- An unconnected pin, reserved for future use.

The Due has a dedicated forum for discussing the board.

## ARM Core benefits:

The Due has a 32-bit ARM core that can outperform typical 8-bit microcontroller boards. The most significant differences are:

- A 32-bit core, that allows operations on 4 bytes wide data within a single CPU clock.
- CPU Clock at 84Mhz.
- 96 KBytes of SRAM.
- 512 KBytes of Flash memory for code.
- a DMA controller, that can relieve the CPU from doing memory intensive tasks.

### Summary:

Microcontroller	AT91SAM3X8E
Operating Voltage	3.3V
Input Voltage (recommended)	7-12V
Input Voltage (limits)	6-16V
Digital I/O Pins	54 (of which 12 provide PWM output)
Analog Input Pins	12
Analog Outputs Pins	2 (DAC)
Total DC Output Current on all I/O lines	130 mA
Current for 3.3V Pin	800 mA
Current for 5V Pin	800 mA
Flash Memory	512 KB all available for the user applications
SRAM	96 KB (two banks: 64KB and 32KB)
Clock Speed	84 MHz

*Made in Italy*