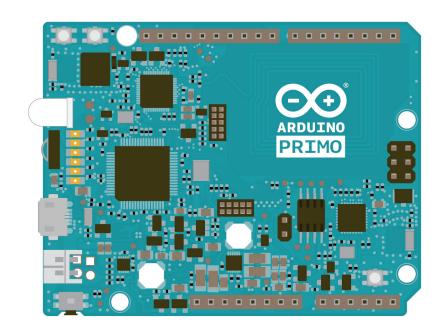
# ARDUINO **NEW PRODUCTS**







# Arduino PRIMO

PRIMO is the first Arduino board featuring a Nordic nRF52 processor with WiFi.

The PRIMO combines the processing power from the Nordic nRF52 processor, an Espressif ESP8266 for WiFi, as well as several on-board functions and a battery charger. The nRF52 includes NFC-A tag (Near Field Communication) and Bluetooth Smart . The board includes one RESET and two USER buttons, LEDs , Buzzer and infrared receiver and transmitter .

INTERMEDIATE















## Arduino PRIMO

#### ARDUINO MICROCONTROLLER

Microcontroller Nordic nRF52 832 ARM®

Cortex®-M4 32-bit processor

with FPU, 64 MHz

Operating Voltage 3.3V
Flash Memory 512 KB
SRAM 64KB
DC Current per I/O 14 mA

Digital I/O Pins 20, with 12 PWM

Analog Input Pins 6

Interfaces 1x I2C, 1xI2S, 1x SPI, 1xUART
Bluetooth Smart (BLE 4.0) TX power up to +4dBm-96dBm sensitivity in BLE mode

#### NFC-A LISTEB MODE OPERATION

13.56 MHz input frequency Bit rate 106 kbps

Wake-on-field low power field detection (SENSE) mode

#### WIFI MICROCONTROLLER

Processor ESP8266

Architecture Tensilica Xtensa LX106 32bit

Flash Memory 4 MB
Operating Voltage 3.3V
Clock Speed 80 MHz

WiFi 802.11 b/g/n 2.4 GHz,

supports WPA/WPA2

Wake up time < 2ms

#### SERVICE MICROCONTROLLER

Microcontroller STM32F103RBT6

Main features: USB/Uart converter

CMSIS-DAP
GPIO expander

Board power management IrDA

#### **GENERAL**

Input Voltage 5 V

Power Consumption 94.4(Max.)~0.936(Min.)mA
Other Features Battery input and charger

PCB size 53 x 68.5 mm

Weight 20 g
Product Code A000135







## Arduino **PRIMO**

allows to communicate via

Wi-Fi with sensors or actuators to create your IoT System.

**USB port** - Used for powering your Arduino, uploading your sketches to your Arduino, and for communicating with your Arduino sketch.

LEDs - ON, L9, USER2, WIFI, BLE and CHG Leds. Also useful for debugging.

ESP B/L button - used to enter the ESP8266 in bootloader mode and upgrade the chip if needed.

Battery Connector -Used for powering the board through the Battery. **User button -** The user button is at user disposal. **STM32** - minor microcontroller. Used to upload the sketch to your Arduino. BLE and the NFC. **Analog in** - Use these pins with analogRead(). WIFI ESP8266 - This chip

**Infrared** - both reception and transmission modules.

Reset button and user button - Resets all the microcontrollers. The user button is at user disposal.

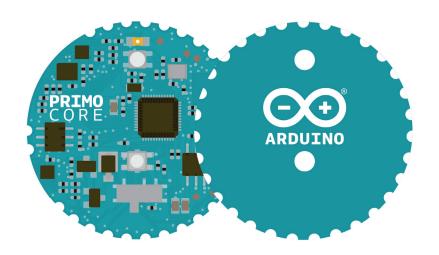
**Buzzer** - Piezoelectric signal generator which produces a buzz or beep.

**nRF52** - The main board microcontroller, managing the

**NFC** tag - Data that can be read by an NFC device.

**Digital pins** - Use these pins for digitalRead(), digitalWrite(), and analogWrite().





# Arduino PRIMO CORE

PRIMO CORE is a low-power coin-sized version of the PRIMO, ideal for wearables.

The PRIMO CORE is a compact device, using a Nordic nrf52832 chip with Bluetooth smart (BLE 4.0) and NFC-A tag functions, and also integrated motion and environmental sensors. The low power consumption permits powering the Primo Core with a coin cell battery. The Arduino PRIMO CORE can be mounted on a breakout board to extend its functionalities.

# INTERMEDIATE











# Arduino PRIMO CORE

### GENERAL

Operating Voltage 3V~3.3V PCB Size 32 x 32mm

Bluetooth Smart (BLE 4.0) TX power up to +4dBm-96dBm

sensitivity in BLE mode

Product Code A000138

#### SENSORS&ACTUATORS

Humidity sensorST HTS221Temperature sensorST HTS2213-axis AccelerometerST LSM6DS3

### NFC-A LISTEB MODE OPERATION

13.56 MHz input frequency

Bit rate 106 kbps

Wake-on-field low power field detection (SENSE) mode

## PRIMO NFC ANTENNA (optional)

PCB Size 32 x 32mm







# Arduino PRIMO CORE



Multifunction 3D digital accelerometer and a 3D digital gyroscope.

#### NFC Connector -

You can connect the external NFC Antenna through this connector.

**Sensor -** Temperature and Humidity sensor.

**Battery Connector** - The connector on the back of your board is used for powering it through a coin Battery.

**RGB LED -** RGB Light Emitting Diodes (LEDs). Diode that illuminates when electricity passes through it.

**nRF52** - The main board microcontroller, managing the BLE and the NFC.

**SWD Connector** - You can use it to program and debug the board with an Arduino PRIMO or another external programmer.

**Reset Button -** Resets the nRF52 microcontroller.

**Power Switch -** Used for powering your Arduino board.

# MORE INFORMATION AT ARDUINO.CC & ARDUINO.ORG

