Arduino nano 33 IOT

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This small, robust and powerful board has WiFi and Bluetooth connectivity

that combined with its low power architecture makes it a practical and cost effective solution for your connected projects.

Arduino Nano 33 IoT is fully compatible with the Arduino IoT Cloud and supports full TLS secure transport:

the ATECC608A cryptochip stores the cryptographic keys in hardware, offering a very high level of security for this class of products.

he integration with the Arduino IoT Cloud offers also a very efficient way of setting up online dashboards with little coding and minimal effort .

In the same iconic size of the Arduino Nano,

the Arduino Nano 33 IoT hosts an Arm Cortex-M0+ SAMD21 processor,

a WiFi and Bluetooth module based on ESP32,

a 6 axis Inertial Measurement Unit (IMU) and a crypto chip which can securely store certificates and pre shared keys.

The board can either be used in a breadboard (when mounting pin headers), or as a SMT module,

directly soldering it via the castellated pads.

Please note: Arduino Nano 33 IoT only supports 3.3V I/Os and is NOT 5V tolerant so

please make sure you are not directly connecting 5V signals to this board or it will be damaged.

Also, as opposed to Arduino Nano boards that support 5V operation,

the 5V pin does NOT supply voltage but is rather connected, through a jumper,

to the USB power input. To avoid such risk with existing projects,

where you should be able to pull out a Nano and replace it with the new Nano 33 IoT,

we have the 5V pin on the header, positioned between RST and A7 that is not connected as default factory setting.

This means that if you have a design that takes 5V from that pin,

it won't work immediately, as a precaution we put in place to draw your attention to the 3.3V compliance on digital and analog inputs.

5V on that pin is available only when two conditions are met:

you make a solder bridge on the two pads marked as VUSB and you power the NANO 33 IoT through the USB port.

If you power the board from the VIN pin, you won't get any regulated 5V and therefore even if you do the solder bridge,

othing will come out of that 5V pin. The 3.3V, on the other hand, is always available and supports enough current to drive your sensors.

Please make your designs so that sensors and actuators are driven with 3.3V and work with 3.3V digital IO levels.

5V is now an option for many modules and 3.3V is becoming the standard voltage for electronic ICs.

The communication on WiFi and Bluetooth is managed by a NINA W102 ESP32 based module.