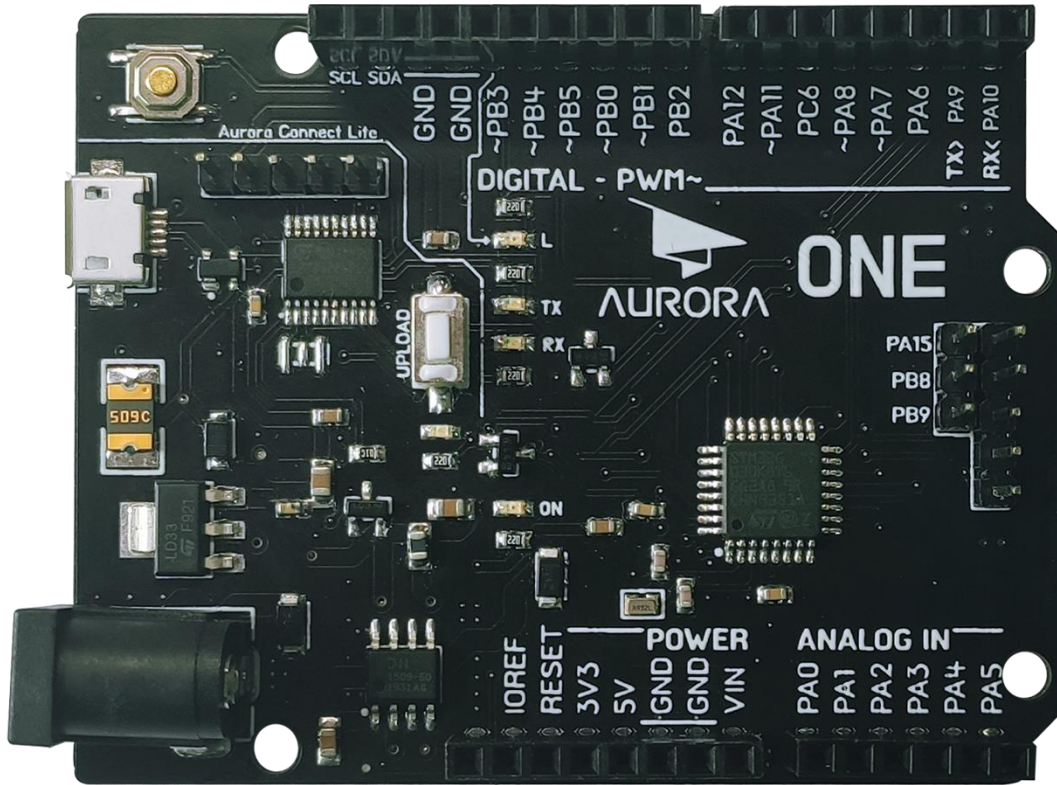


AURORA

Aurora One

Aurora Series Gen1

About Aurora One



¹Aurora One is high-performance microcontroller board. This board is developed base on STM32G030K8. The microcontroller features Arm 32-bit Cortex-M0+ core, it works at speeds up to 64MHz. This board have 25 I/O pins, micro USB connection, external power jack, reset button, etc. This board also includes Aurora Connect Lite which helps uploading programs and communication with PC.

¹ Picture may differ from actual product.

Specification

AURORA ONE

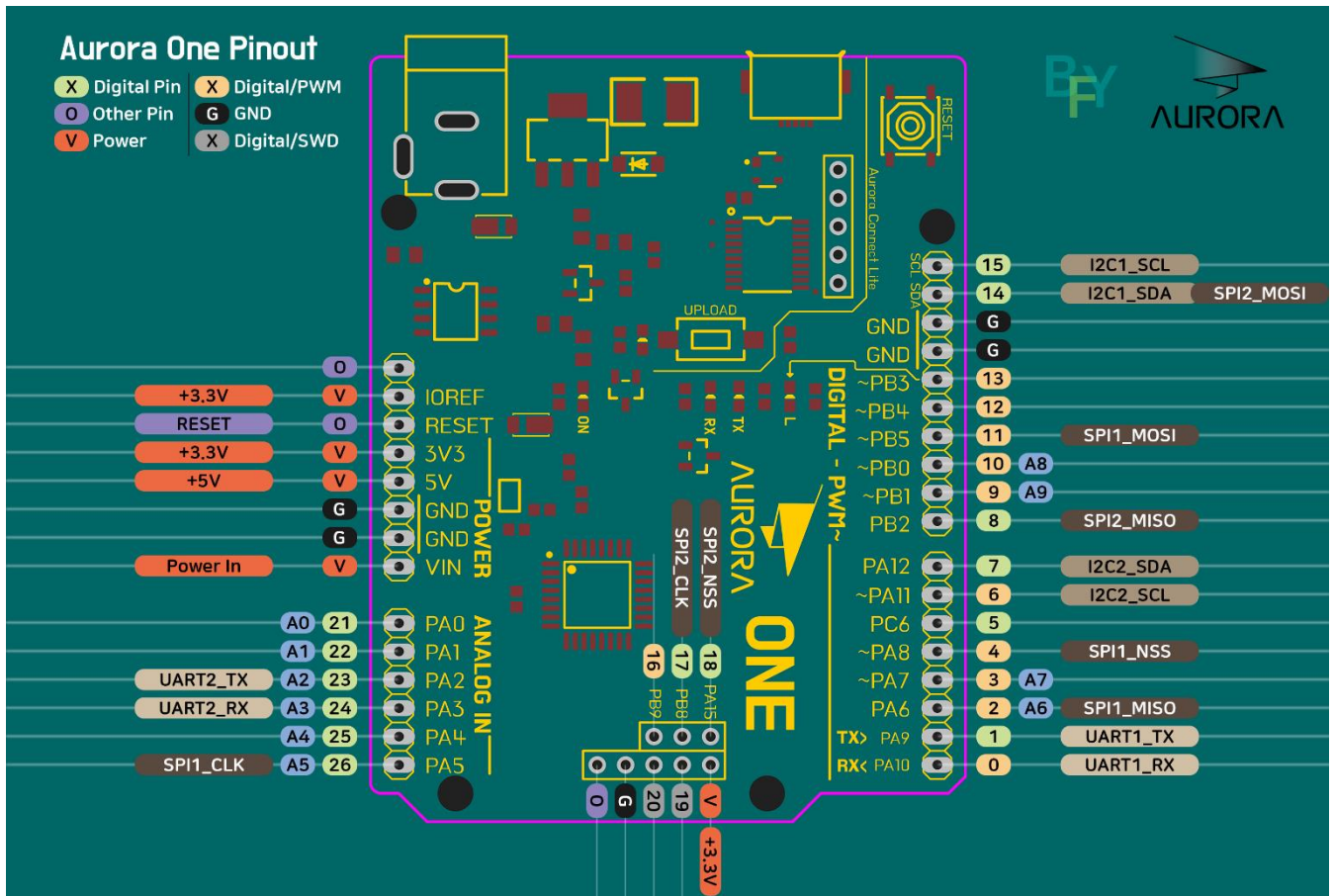
MCU	STM32G030K8T6
FREQUENCY	Up to 64MHz
OPERATING VOLTAGE	3.3V
INPUT VOLTAGE	7V~13V (Recommended)
I/O PINS	25 (up to 27) ²
PWM PINS	11
3.3V MAX CURRENT	1A
5V MAX CURRENT	1A ³
USB MAX CURRENT	0.5A
ANALOG IN PINS	6 (up to 10) ⁴
FLASH MEMORY	64Kbytes
SRAM	8Kbytes with parity
LED_BUILTIN	PB3
LENGTH	68.6mm
WIDTH	53.4mm
WEIGHT	19g

² PA13, PA14 pin can be used by I/O pin but it's NOT RECOMMENDED.

³ It includes current usage of 3.3V power except current usage from USB.

⁴ PA6, PA7, PB0, PB1 pin can be used as A6~A9.

Pinout⁵



⁵ Design of the board, position of the parts, etc. can be changed without notice.

About Aurora Connect Lite

Aurora Connect Lite helps uploading programs and communication with PC. STM32F0 MCU provided with a built-in firmware that works as USB To Serial and allows you to easily upload programs to the main chip.

Aurora Connect Lite can be used by connecting to a computer via USB. Aurora Connect Lite's UART port is connected to the main chip's PA9 and PA10. The content sent from the computer is transferred to the main chip, the content sent from the main chip is transferred to the computer. And you can easily check the communication with the main chip using the serial port monitor program.

In addition, Aurora Connect Lite is equipped with an upload button, so you can easily upload programs by pressing the upload button. (Please refer to the website for more information)

It is not recommended to arbitrarily modify the firmware of Aurora Connect Lite. In addition, we are not responsible for any problems caused by attempting to modify the firmware arbitrarily.

Precautions

- Do not apply a current load larger than the maximum current. The board may be damaged.
- Aurora One has a built-in polyfuse to protect the USB port. The fuse blows when the current load applied via USB is greater than 0.5A. If you want to use a current of 0.5A or more, please use an external power supply.
- If a current exceeding the allowable current of the USB port is used through USB (especially when connecting to a PC), the USB port may be damaged.
- Do not disassemble or modify the board arbitrarily.
- This board runs at 3.3V. All pins except PA9, PA10⁶ have 5V tolerant, applying 5V to the I/O pins of the MCU need caution.⁷
- The output through the I/O pin of the MCU has a very low maximum current. Be careful when driving motors, LEDs, etc.⁸
- Use the board at room temperature. Operation is not guaranteed in extremely hot or cold environments.

Please read the above precautions carefully. We are not responsible for any problems caused by the user's negligence.

⁶ PA9, PA10 pins are also connected to aurora connect lite, which based on STM32F0 MCU. Applying 5V to the PA9, PA10 pins may damage aurora connect lite.

⁷ About I/O structure and voltage tolerant, see datasheet for more information.

⁸ See datasheet for more information about the maximum current for each pin.

Revision History

Rev 1: Initial Release / 2020-09-03

Rev 2: Change MCU information in 'About Aurora Connect Lite' Section, Change voltage tolerant information in 'Precautions' Section, Change pinout in 'Pinout' Section / 2020-09-07

Rev 3: Add picture in 'About Aurora One' Section, Add weight information in 'Specification' Section, Change voltage tolerant information in 'Precautions' Section, Fix typo in 'Specification' Section / 2020-09-13

Rev 4: Change information in 'Specification' Section due to design change / 2020-09-26

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