GEBRABIT ATMEGA32A

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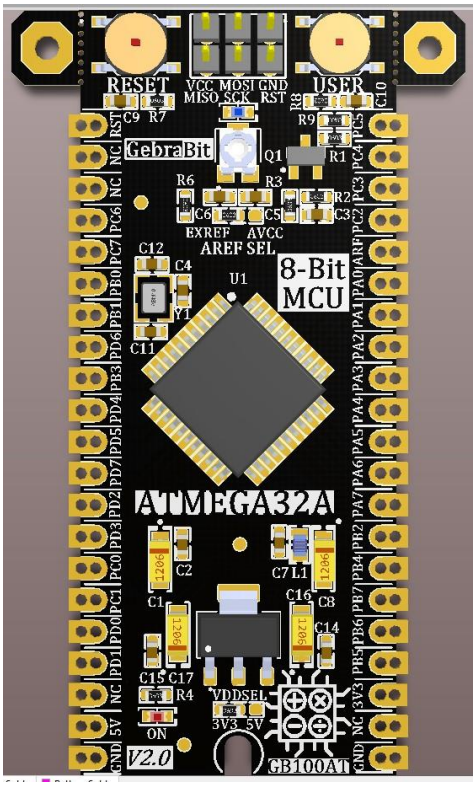

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OVERVIEW

GebraBit ATMEGA32A is a CMOS 8-bit microcontroller based on the AVR® enhanced RISC architecture Module.

GebraBit ATMEGA32A operates with 3V3 or 5V Supply Voltages that users can easily select with the Considered onboard jumper selector. This feature helps to use a wide range of sensors and IC for interfacing with this module.

Because of the integrated 3V3 regulator, just 5V input voltage is sufficient for powering the module on. Users can also program the microcontroller through the ICSP (In-Circuit Serial Programming) header.

One of the important points about **GebraBit ATMEGA32A** is the capability of AREF (ADC Analog Reference) voltage selection due to the “AREF SEL” jumper selector. User can choose AREF voltage among AVCC, Internal reference voltages of

nominally 2.56V, and external voltage from Considered on-board potentiometer or ARF pin.

Thanks to the embedded USER&RESET button, USER LED, and access to all pins of the **ATMEGA32A** microcontroller, **GebraBit ATMEGA32A** will be the best choice for developing any kind of project, In addition, if you know it can be developed in Arduino environment so easy!

Finally don't forget that this module is Pin Compatible with GEBRABUS , Such that all alternate function like I2C, SPI,… is exactly pin compatible with GEBRABUS. As a result, all **GebraBit Module** (Sensors, Interface,..) can sit on **GebraBit ATMEGA32A** and get ready to be initialized.

As its clear, the module core is, ATMEGA32A, A low power, CMOS 8-bit microcontroller based on the AVR® enhanced RISC architecture. The ATmega32A is a 40/44-pin device with 32 KB Flash, 2 KB SRAM and 1 KB EEPROM. By executing instructions in a single clock cycle, the devices achieve CPU throughput approaching one million instructions per second (MIPS) per megahertz, allowing the system designer to optimize power consumption versus processing speed.

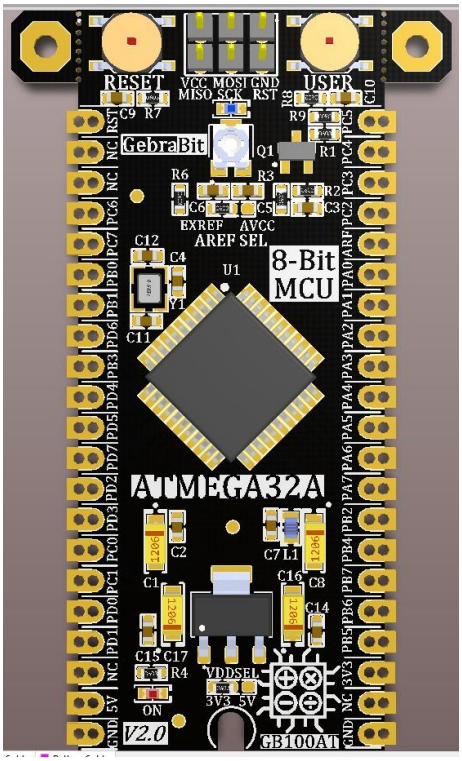
WARNING: FOR ACCURATE INFORMATION ABOUT ICs ABSOLUTE MAXIMUM RATINGS AND ITS PRECIOUS CHARACTERISTICS RANGES, USERS MUST CERTAINLY REFER TO ICs MANUFACTURE DATASHEET.

Key Features

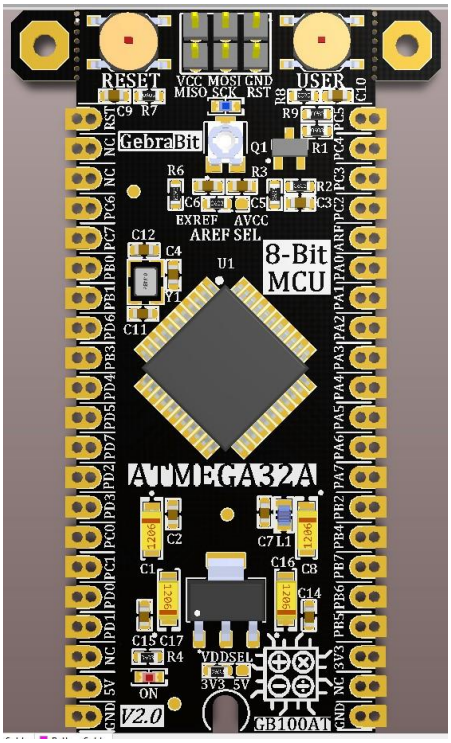
- Access to all pins of **ATMEGA32A** microcontroller
- User selectable module power supply voltage between 3V3 and 5V
- User selectable ADC Analog Reference AREF(Potentiometer, Internal, AVCC, ARF Pin)
- 3V3 Voltage Regulator
- 3V3 Output Voltage
- ON/OFF LED indicator
- 1 USER LED
- 1 USER BUTTON
- RESET BUTTON
- ICSP (In-Circuit Serial Programming) Header
- 8 Mhz CERAMIC SMD CRYSTAL
- GebraBit Pin Compatible with GEBRABUS
- GebraBit Large package

- It can be used as a Motherboard of GebraBit Modules
- Featuring Castellated pad (Assembled as SMD Part)
- Separatable screw parts to reduce the size of the board

Pinout diagram



Parts and Dimension



Documents Link

Schematic (.pdf)

Module Layout (.pdf)

ATMEGA32A Datasheet

Wiki Link (Source Code and Tutorial)