# ARTERY AT-Link+ to Support AT32WB415 Bluetooth Module

AT-Link Family consists of AT-Link, AT-Link-Pro, AT-Link-ISO and AT-Link-EZ. They are debugger/programmers for the AT32 microcontrollers and used to facilitate development of applications based on AT32 microcontrollers.

AT-Link Family is constantly updated and iterated to meet the demands of users in optimizing product programming, improving AT32 MCU usability and expanding product ecosystem. For this, the AT-Link is replaced with AT-Link+ which supports programming AT32WB415 Bluetooth module. The AT-Link-ISO is upgraded to the AT-Link-ISO+, while the new edition of AT-Link-Pro firmware will soon come out as well. The enhanced edition of debugger/programmer is expected to provide better experience for development of applications based on AT32 MCUs.
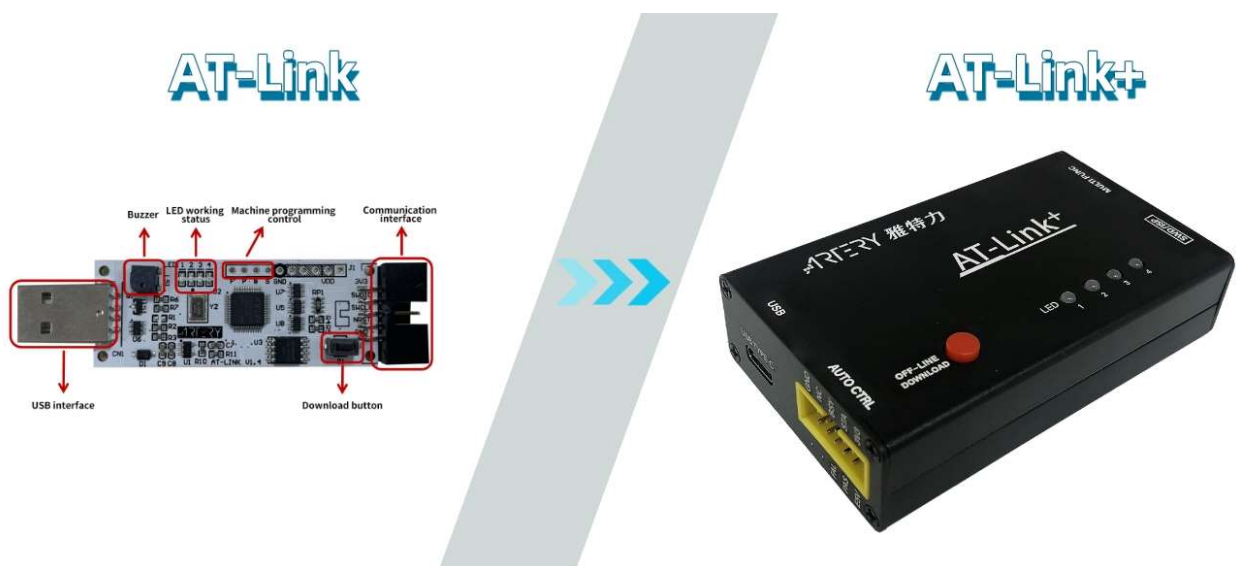
AT-Link+

With the expansion of ARTERY product lines, the ecosystem development toolchain keeps going further. In May 2022, the AT32WB415 series Bluetooth 5.0 MCU was launched as the first wireless Bluetooth microcontroller of AT32 MCU Family. To support Bluetooth-enabled and other microcontrollers, a brand-new debugger/programmer AT-Link+ is open to the market.
The AT-Link+, which is an enhanced version of AT-Link, contains two additional multifunctional interface group connected to the target board for online/offline programming through ISP or ICP tool. They include a set of SPI interfaces (MOSI/MISO/SCK/CS) and multifunctional peripheral interfaces (used as I2C or CAN, depending on the configuration). Among these, the USB side of the peripheral interfaces adopts CDC communication protocol and is recognized as the AT-Link-Bridge device by PC, supporting the download of AT32 microcontrollers via peripherals including I2C and CAN.

Connection diagram for Programming BLE module of AT32WB415
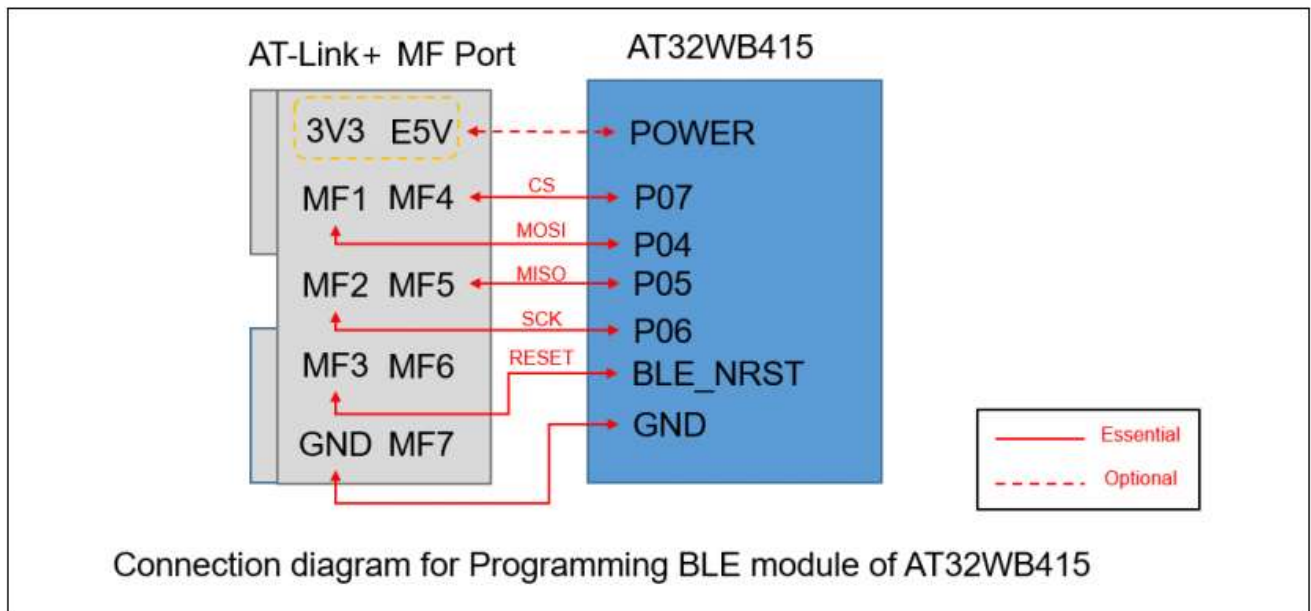
MULTI FUNC interface connection for AT32WB415 BLE module

In addition to functional upgrade, the AT-Link+ takes on a new look. It has a black matte body (outer case) that feels better and more convenient to use. The AT-Link+ also enjoys the advantages of powerful compatibility, strong human-computer interaction ability, multiple download modes and excellent expansion function.

AT-Link+ is an enhanced debugger and programmer that supports online/offline programming, IDE online debugging, USB to serial interface and other functions. Its hardware configuration includes: USB interface connected to PC, status LEDs, buzzer, buttons, machine programming control interface, communication interfaces (such as SWD, SWO, serial port, MULTI FUNC, NRST and BOOT0) and power interfaces (3V3 and E5V).

AT-Link-ISO+

AT-Link-ISO+ literally refers to the AT-Link+ with isolation protection feature. Thus it has the exact same function as that of AT-Link+, with almost no difference when used in regular scenarios compared to AT-Link.

AT-Link-ISO+ comes with enhanced isolation protection to ensure it is capable of isolating 1500V power supply and signals. Such design also makes it the best choice for the application development under strong interference environment such as motors, high-power supplies and high voltage.

It has a blue matte body (outer case) that is more pleasing to the eye. More importantly, it boasts high reliability and stability, making it easier for engineers to operate. Just as the AT-Link+, the AT-Link-ISO+ also supports programming AT32WB415 Bluetooth module.

AT-Link-Pro

The AT-Link-Pro comes with the most fashionable Type-C interface which allows faster data transfer and better compatibility. Also, its operation interfaces have been fully updated through the user-friendly UI design, thus making it more efficient to perform debugging/programming operations.

The AT-Link Pro is a professional debugger and programmer that supports IDE online debugging, online/offline programming, VDD output voltage regulation, offline parameter settings, USB to serial interface and other functions. Its hardware configuration includes: USB interface connected to PC, LCD display, status LEDs, buzzer, buttons, machine programming control interface, communication interfaces (such as SWD, SWO, serial port, NRST and BOOT0) and power interfaces (VDD and E5V).

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Project Name:	Null	
Config num: Unlimit		Port: Null
Used num:	0	
Success num:	0	Null
SN to be burned:		-
VDD voltage:		3.29V

Button free   OFF

🔴
00:00.0

Idle State

Project   Return

LED1   LED2

AT-Link-Pro

LED1   LED2

AT-Link-Pro