

ABK100 User Manual

Version 1.01



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ABK100 General Description

ABK100 advanced Bluetooth Low Energy (BLE) 5.3 beacon is a robust and versatile tracking solution built on the high-efficiency GR5331 chipset. All Assistant Telematics units support ABK100. Designed for longevity and reliability, it offers a perfect balance between long-range signal transmission and ultra-low power consumption.

Whether for indoor navigation, asset tracking, identification or proximity marketing, this device provides industrial-grade performance in a compact form factor.

Dual-Mode Security (AES-128)

One of the standout features of this device is its flexible security layer. It can operate in two modes:

- Encrypted Mode: Utilizes AES-128-bit encryption to protect data integrity and prevent unauthorized signal spoofing or cloning (contact Assistant Telematics team).
- Open Mode: Standard non-encrypted broadcasting for maximum compatibility with public proximity applications.

ABK100 Technical Specifications

Parameter	Specification
BLE Module	GR5331
BLE Version	BLE 5.3
Battery Type	CR2032 — 240 mAh
Operating Voltage	1.8V ~ 3.6V
Operating Temperature	-20°C ~ +60°C
Transmission Distance	Up to 80 meters (configurable)
Transmission Interval	100 ms ~ 5000 ms
Default Interval	1 second
Battery Life	~500 days standby @ 1 s interval
Low Battery Alarm	< 2.6V (15%)

Key Description

Power ON/OFF:

Power ON: Press button >2 sec, the LED will flash for 2 seconds in white color.

Power OFF: Press button >6 sec, the LED white light blinks 4 times quickly.

Battery Level:

Press 0–2 sec - Solid light, Red or Green (indicates battery level)

LED Descriptions:

Red LED – Battery <15% (voltage < 2600mV)

Green Led – Battery ≥ 15% (voltage ≥ 2600mV)

White Led - Power ON / OFF indicator

ABK100 Firmware Upgrade

Preparation

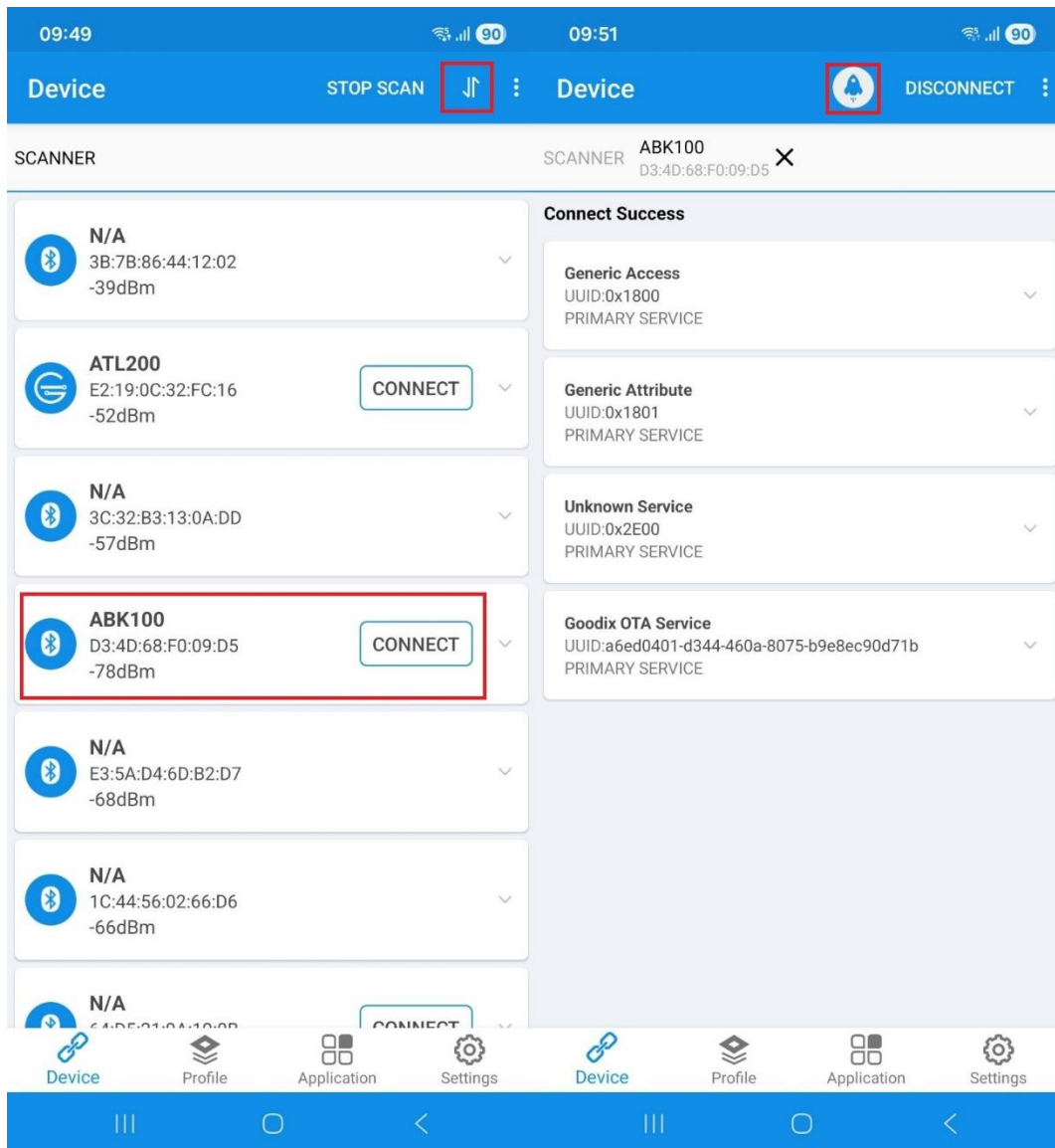
- ABK100: Ensure the device can broadcast and be discovered by the phone; it is better to know the device's Bluetooth address.
- Software: Install the GRToolbox App.

https://www.goodix.com/en/software_tool/grtoolbox

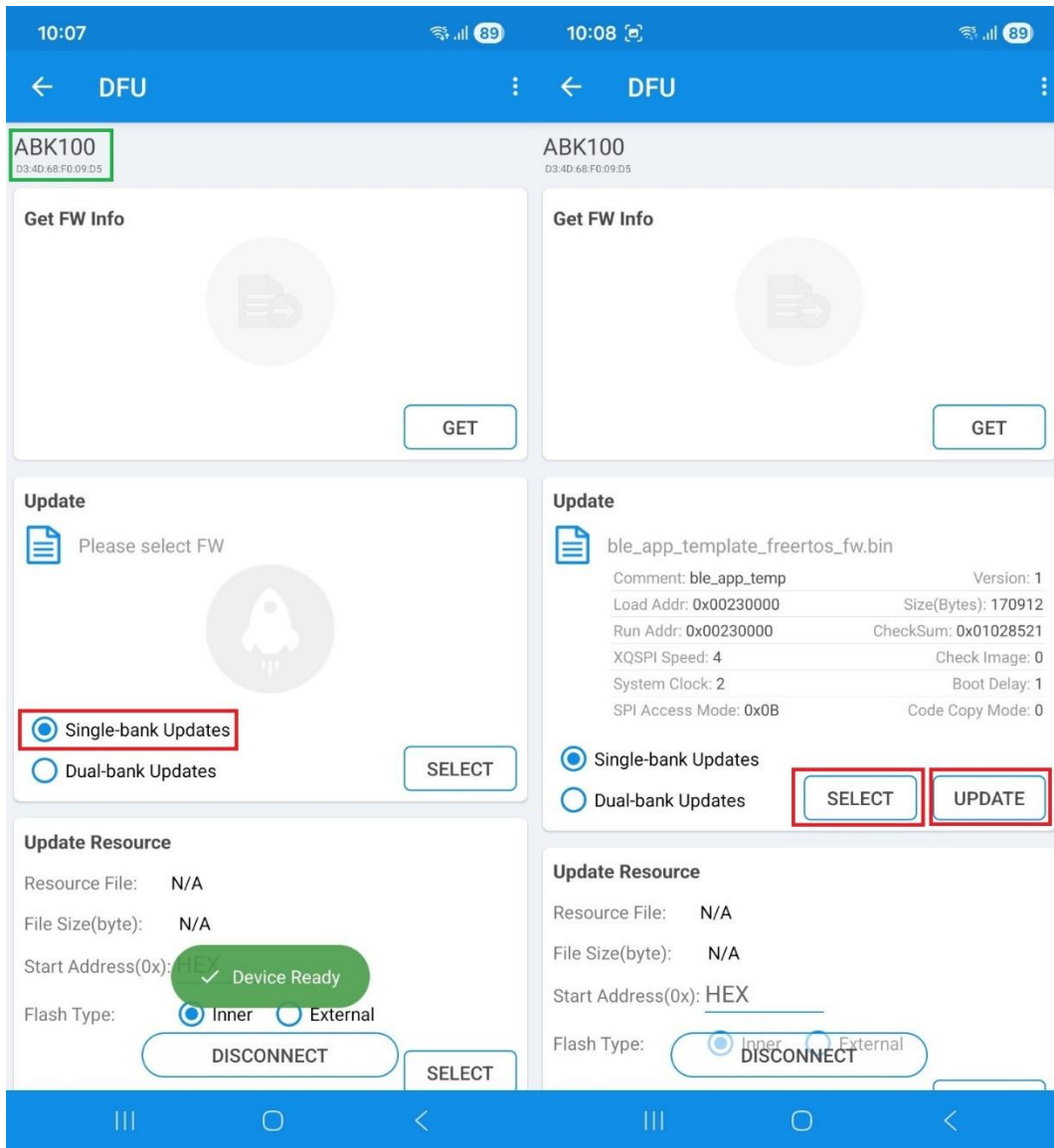
- Firmware: Contact support@iot-at.com to get the latest firmware *.bin file, save it into your mobile phone.

Upgrade Procedure

- 1.1 Open the App and enable Bluetooth permissions on your phone.
- 1.2 Find the target device to be upgraded by its Bluetooth address or device name, and click "Connect".
- 1.3 Filter a successful connection, click the rocket icon to enter the upgrade interface.



1.4 Choose the **Single-bank** update mode, and then select fw file *.BIN and press Update.



1.5 Firmware Update success.

