

Description of the program execution steps

1. The program starts after the device exits deep sleep mode or after software is loaded onto the device
2. Basic initializations are performed:
 - Power management initialization
 - Flash memory initialization
3. The program checks for a saved state:
 - If a saved state exists, the program checks what state it is. After that, it transitions to the saved program state
4. If there is no saved state, the program determines whether the current launch is the first boot:
 - If this is the first boot, the program executes the first function block characteristic for the first program boot. "First boot" is considered to be loading immediately after software upload or after a daily data collection cycle has been completed, data has been sent over the network, and the storage has been cleared. In other words, the first boot function block represents actions performed during the first boot of a daily cycle.
 - The first boot block includes modem initialization and time synchronization.
 - Optionally, a battery status report and initialization message are sent
5. After executing the first boot block or if the current launch is not the first boot, the program proceeds to the measurement stage:
 - Bluetooth initialization
 - Collection of measurements from temperature and humidity sensors
 - Data saving
6. Next, the program checks if it's time to send the data:
 - If the sending time has come (here you can set the amount of collected data or the time for data transmission), the data sending block is executed
 - The data sending block includes modem initialization, HTTP client initialization, and data transmission
7. After sending the data or if it's not yet time to send data, the program proceeds to the preparation stage for deep sleep mode:
 - Bluetooth deinitialization
 - Modem deinitialization (if it was initialized)
8. The program completes its operation cycle by transitioning to deep sleep mode.