

Bug Advisory

Title	Bug Advisory Concerning Applications Using Auto Light Sleep on ESP32-C6 with Certain ESP-IDF Versions
Issue Date	2024/08/30
Advisory Number	AR2024-006
Serial Number	NA
Version	V1.0

Issue Summary

Issue 1: On ESP32-C6 chips (chip revision v0.1 and above), for applications using both Wi-Fi and Bluetooth LE modules with auto light sleep mode enabled, there may be Wi-Fi communication exceptions or beacon timeout issues due to incorrect software configuration of slow clock sources in the MODEM PWR domain.

Issue 2: On ESP32-C6 chips, after initializing the Wi-Fi module (without starting it) and enabling auto light sleep mode, the system may experience a TGO_WDT_HPSYS reset due to the retention clock of the Wi-Fi module not being enabled.

Impact Analysis

Affected Product Series:

Issue 1 affects ESP32-C6 chip revision v0.1 and above for applications using both Wi-Fi and Bluetooth LE modules with auto light sleep mode enabled. This issue does not influence chip revision v0.0. Issue 2 occurs when the system enters sleep mode after the application initializes Wi-Fi but does not start it.

For how to identify chip revisions, please refer to [ESP32-C6 Series SoC Errata](#).

ESP-IDF Affected Versions:

Issue 1:

ESP-IDF Branch	Affected Commit IDs	Affected ESP-IDF Versions
master	Commits before e14eadf9 (excluded)	NA
release/v5.3	Commits before c56b21bb (excluded)	v5.3-beta1 ~ v5.3-beta2
release/v5.2	Commits before 4fa32cff (excluded)	v5.2 ~ v5.2.2
release/v5.1	6ec52679 - 44ed05a5 (excluded)	V5.1.1 ~ v5.1.4

Issue 2:

ESP-IDF Branch	Affected Commit IDs	Affected ESP-IDF Versions
master	Commits before 3ec68b90 (excluded)	NA
release/v5.3	Commits before 5feffad9 (excluded)	v5.3-beta1 ~ v5.3-beta2
release/v5.2	Commits before a5acd57d (excluded)	v5.2 ~ v5.2.2
release/v5.1	Commits before 67ee7eea (excluded)	v5.1 ~ v5.1.4

Mitigation

ESP-IDF Patched Versions:

Issue 1:

ESP-IDF Branch	Fixed Commit IDs	Fixed ESP-IDF Versions
master	a7721235 and e14eadf9	NA
release/v5.3	1aaae85a and c56b21bb	v5.3
release/v5.2	5ff245f7 and 4fa32cff	Expected in v5.2.3
release/v5.1	47418a88 and 44ed05a5	Expected in v5.1.5

Issue 2:

ESP-IDF Branch	Fixed Commit IDs	Fixed ESP-IDF Versions
master	3ec68b90	NA
release/v5.3	5feffad9	v5.3



release/v5.2	a5acd57d	Expected in v5.2.3
release/v5.1	67ee7eea	Expected in v5.1.5

Recommendations for Application Developers

If your application involves both the coexistence of Wi-Fi and Bluetooth and auto sleep mode, and you are using an effected ESP-IDF version, it is recommended to use fixed ESP-IDF versions mentioned above or versions after the fixed commit. If you encounter problems during the upgrade process, please provide the ESP-IDF version or Commit ID to [Espressif](#). We will confirm and handle related matters as soon as possible.