Bug Advisory

Title	Bug Advisory Concerning Some Android Phones Being Unable to Scan the Advertising PDUs Sent by ESP32 Bluetooth LE
Issue Date	2024/05/10
Advisory Number	AR2024-001
Serial Number	NA
Version	V1.1

Issue Summary

For ESP32 in the Wi-Fi and Bluetooth coexistence mode, when Wi-Fi is operated in the HT40 mode, it affects the configuration of Bluetooth LE, preventing some Android phones receiving the SCAN_RSP PDU sent by Bluetooth LE. As Android phones report advertising PDUs and SCAN_RSP PDU together, only receiving the advertising PDUs would lead to the packet to be discarded directly. Therefore, the mentioned issue can result in some Android phone applications being unable to scan the advertising PDUs sent by ESP32 Bluetooth LE.

Impact Analysis

The occurrence of this issue requires the simultaneous fulfillment of the following two conditions:
1. In Wi-Fi and Bluetooth coexistence mode
2. Wi-Fi is configured in HT40 mode, or in HT20/HT40 automatic mode and connected to an AP in HT40 mode.

ESP-IDF Affected Versions:

ESP-IDF Branch	Affected Commit IDs	Affected ESP-IDF Versions
master	12fcc66 - b02c669 (excluded)	NA
release/v5.2	12fcc66 - c4d3d74 (excluded)	v5.2-beta1 ~ v5.2-beta2
release/v5.1	d4e0de8 - 17752f9 (excluded)	v5.1.1 ~ v5.1.2
release/v5.0	49f02b3 - 36c57c0 (excluded)	v5.0.4 ~ v5.0.5

| release/v4.4 | 4b2972c - 54ba0f8 (excluded) | v4.4.6 |
| release/v4.3 | 7e817bb - c8144ba (excluded) | v4.3.6 |

ESP-IDF Patched Versions:

ESP-IDF Branch	Fixed Commit ID	Fixed ESP-IDF Version
master	b02c669	NA
release/v5.2	c4d3d74	v5.2-rc1
release/v5.1	17752f9	v5.1.3
release/v5.0	36c57c0	v5.0.6
release/v4.4	54ba0f8	v4.4.7
release/v4.3 [1]	c8144ba	v4.3.7

[1] ESP-IDF v4.3 has officially reached the end of maintenance. Espressif will no longer provide support for adding new features, fixing bugs, or addressing security issues in this version.

Recommendations for Application Developers

If there is a coexistence of Wi-Fi and Bluetooth in the application, and the ESP-IDF version used is among the affected versions, 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 IDF version or Commit ID to Espressif. We will confirm and handle related matters as soon as possible.

Revision History

Date	Version	Release notes
2024/05/10	V1.1	Updated *Fixed ESP-IDF Version* description.
2024/02/07	V1.0	Initial release.