

Bug Advisory

Title	Bug Advisory on Updating Software Drivers for ESP32-H2 Chips in Low-Temperature Scenarios
Issue Date	2025/02/25
Advisory Number	AR2024-012
Serial Number	NA
Version	V1.0

Issue Summary

For certain ESP32-H2 chips, the PLL (Phase-Locked Loop) clock occasionally fails to start in low-temperature conditions, leading to chip malfunction.

Impact Analysis

Affected Product Series:

ESP32-H2

ESP-IDF Affected Versions:

ESP-IDF Branch	Affected Commit IDs	Affected ESP-IDF Versions
release/v5.4	All commits before 023d772d (excluded)	No related release
release/v5.3	All commits before bfe4d479 (excluded)	v5.3 - v5.3.2
release/v5.2	All commits before 1fc6ee67 (excluded)	v5.2 - v5.2.3
release/v5.1	All commits before 7312ba8b (excluded)	v5.1 - v5.1.5

Mitigation

If the ESP32-H2 product is used in low-temperature operating scenarios, and the ESP-IDF version in use is among the affected versions, be sure to upgrade to the fixed ESP-IDF version (as shown in the table below).

ESP-IDF Patched Versions:

ESP-IDF Branch	Fixed Commit ID	Fixed ESP-IDF Versions
release/v5.4	023d772d	v5.4
release/v5.3	bfe4d479	v5.3.3
release/v5.2	1fc6ee67	v5.2.4
release/v5.1	7312ba8b	v5.1.6

Recommendations for Application Developers

If the ESP32-H2 chip is used in low-temperature operating scenarios, and the ESP-IDF version in use is among the affected versions, it is recommended to upgrade to the fixed ESP-IDF version (see the table above). If you encounter any issues 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.