ESP32-H2 Revision v0.1 Sample Notes

Espressif's ESP32-H2, the latest Bluetooth 5 (LE) + Thread/Zigbee (802.15.4) SoC, has entered the engineering sample stage. Thank you for your trust in Espressif and our products. We are honored to provide you with ESP32-H2 **revision v0.1** samples for functional testing and solution validation.

Please note that the revision v0.1 samples we currently provide are different from the mass production version. Please pay attention to the following points during the testing process.

1. The ADC on current samples is not calibrated and the ADC channel 4 is unavailable yet, so the ADC calibration functionality is not available yet. The ADC will be calibrated on chips for mass production orders.
2. If the external antenna is used for ESP32-H2's Chip on Board design, it is recommended to reserve some space for the TVS tube solder pad near the IPEX connector to enhance ESD protection.
3. Code for Light-sleep and Deep-sleep modes will be merged into the ESP-IDF master branch later. To get software support for measuring current consumption in sleep modes, please update ESP-IDF to the last version every now and then.
4. ESP RainMaker Cloud platform will support ESP32-H2. If you are interested in it, please contact Espressif's customer support team.
5. To obtain ESP-IDF, please refer to Appendix: *Notes on ESP-IDF for ESP32-H2* on Page 2.

Note: Please check the software compatibility between the mass production version and the current sample before your end products enter the mass production stage. To stay informed of the software compatibility status, you are welcome to contact Espressif customer support team by writing to sales@espressif.com, or scanning the QR code below to register your contact information. Then the software compatibility information will be sent to you via email by our customer support team.

If you encounter any problems during the test, please do not hesitate to contact us. We are always on standby to assist you. Thank you again for your support to Espressif.

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Appendix: Notes on ESP-IDF for ESP32-H2

The master branch of ESP-IDF (https://github.com/espressif/esp-idf) already contains preview support for ESP32-H2 revision v0.1. We suggest updating the master branch every now and then to get the latest ESP-IDF feature support and bug fixes.

If this is your first exposure to ESP-IDF, then please get familiar with the software development environment for ESP32-C3 and the documentation first:

https://docs.espressif.com/projects/esp-idf/en/latest/esp32c3/get-started/index.html

ESP-IDF v5.1, currently in development, will include initial support for the ESP32-H2 chip. For ESP32-H2 features to be supported in ESP-IDF v5.1 and their support status on master branch, please refer to this link (https://github.com/espressif/esp-idf/issues/11038).

Notice:

1. Please run the following command to set the project target to ESP32-H2:
   `idf.py --preview set-target esp32h2`

   The `--preview` option can be removed once the ESP32-H2 IDF is officially released.

2. The mass production version of the chip is different from the current chip sample. Therefore, it might be necessary to **update ESP-IDF to the latest version and rebuild firmware** before applying the software designed for chip revision v0.1 to the mass production version. **Please check the software compatibility between the mass production version and the current sample before your end products enter the mass production stage.** To stay informed of the software compatibility status, you are welcome to contact Espressif customer support team by writing to sales@espressif.com, or scanning the QR code in the first page to register your contact information. Then the software compatibility information will be sent to you via email by our customer support team.

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