

ATSAMW25H18-MR510PB DESIGN-IN GUIDELINES

The ATSAMW25H18-MR510PB device is a standalone WiFi end point, where a complete small application can be executed on the module by itself. For example – a remote wifi sensor or keypad with a few inputs.

The following connections are required for the proper operation:

- 2.7V – 4.2V VBAT supply to power the WiFi transmitter Power Amplifier and on board voltage regulators.
- 1.8V – 3.6V I/O supply
- RESET signal to the module

When the module is placed on the motherboard, a provision for the antenna must be made. There should be nothing under the portion of the module which contains the antenna. This means the antenna should not be placed directly on top of the motherboard PCB. This can be accomplished by, for example, placing the module at the edge of the board such that the antenna extends beyond the board edge by 6.5mm. Alternatively, a cut out in the motherboard can be provided under the antenna. The cutout should be at least 22mm x 6.5mm. Ground vias spaced 2.5mm apart should be placed all around the perimeter of the cutout. No large components should be placed near the antenna.

Each module has a label with an FCC ID, however the product User Manual must contain the following statement: “This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation”.

The module must be installed into the end product to provide a separation distance of at least 6.7 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

If the module's label is not visible when installed, then an additional permanent label referring to the enclosed module: “Contains Transmitter Module FCC ID: 2ADHKSAMW25” must be installed on the product in a visible location.

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the module/product.
- Increase the separation between the equipment and module/product.
- Consult the dealer or an experienced radio/TV technician for help.

Changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.