

VILOC STABIL2 / B2B MANUAL

English language version 1.0.1

Please consult the latest version of this manual online.

It can be downloaded from our github manuals repository accessible through the following URL:

<https://github.com/VilocNV/manuals>

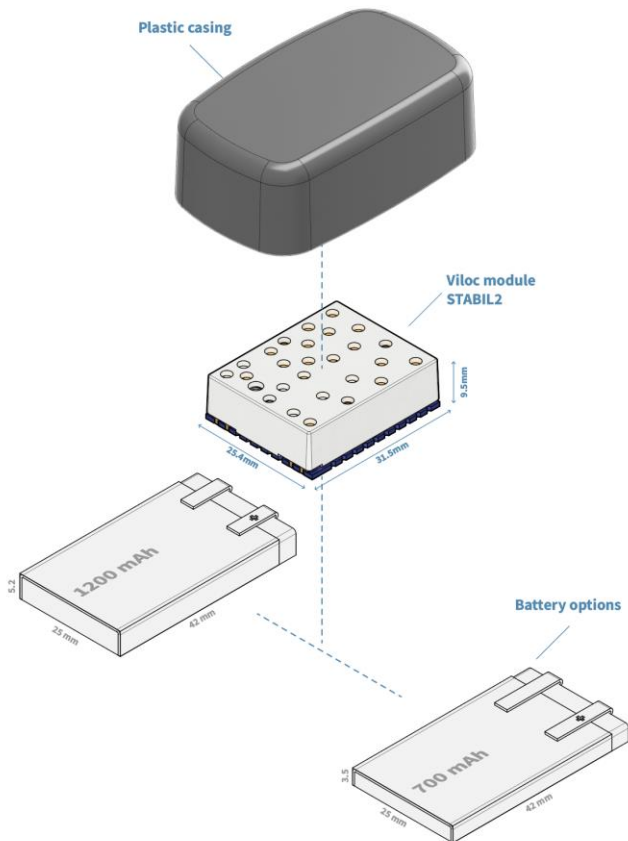
Please contact Viloc if you need authorisation to access this webpage.

MODULE

Each STABIL2 module consists of :

- PCBA with shielded radio frontends
- SMT antenna
- [3V primary lithium battery]
- [Plastic Casing + PU potting material]

All components are soldered together and non-replaceable once assembled as end-product.



STOCK MODE & INSTALLATION

The Viloc tag is delivered in a battery saving stock mode. Once installed, the tag can be identified and activated using Viloc's Activation app, available for every recent BLE enabled Android and iOS phone. On activation, the information of the tag is displayed in the app, including any available certification labels (e.g. E-label for FCC ID). The Activation app does not require a network connection and synchronizes if one is available.

PRODUCT SPECIFICATION

Technical specification

- Storage temperature: -20° to +40° Celsius.
- Recommended operating temperature -20° to +60° Celsius.
- Dimensions e.g. ST2-1200-A01: 50 x 33 x 18 mm
- Weight: e.g. ST2-1200-A01= 35 grams (incl. battery+casing)

Battery Specification:

Non-rechargeable Lithium Polymer battery. Battery is non-toxic and non-hazardous. To prevent damage to the battery the tag should not be exposed for longer than 48 hours to temperatures higher than +60° Celsius.

How to dispose of a Viloc Tag

Never Remove a Viloc tag from a device by using external pressure on the tag itself. For example, by removing the Viloc tag with a drill, there is a risk of rupture of the battery inside. The module is to be removed by first carefully removing/unlocking any adhesive or mechanical connections with the asset following the proper procedures. Once removed from the asset, the Viloc tag may not be further damaged.

Waste disposal: batteries should be reused in an environmentally responsible manner. Therefore, do not dispose of Viloc tags or its batteries with other general waste.



FCC regulatory compliance statement

This modular transmitter complies with FCC Rules Part 15C.

Specific operational use conditions

Antenna Change Notice to Host manufacturer

We recommend using the supplied antenna which is already soldered to our module and is certified together as one module. If you desire to increase antenna gain and either change antenna type or use same antenna type certified, a Class II permissive change application is required to be filed by us. You (host manufacturer) can also take responsibility through the change in FCC ID (new application) procedure followed by a Class II permissive change application, based on the new emissions testing. In that case, please perform testing on frequency bands where the antenna gain is highest, worst-case band-edges based on original filing, and only on frequency bands where the antenna gain is highest.

RF exposure compliance instruction

This module is limited to installation in mobile application with a minimum separation distance of at least 20 cm from a person's body, a separate approval is required for all other operating configurations, including portable configurations with respect to §2.1093 and different antenna configurations. Host product manufacturer shall at least provide information of minimum separation distance to end users in RF exposure compliance statement to end users in their end-product manuals.

This module is tested with the following antenna:

Manufacturer: Viloc

Type: SMT antenna directly soldered to PCBA

Model: combined LoRa+WIFI+BLE antenna

SMT antenna	Antenna Gain
LORA	0 dbi
WIFI	Not applicable - receiving only at 0 dBi
BLE	0 dBi

FCC ID: 2AVRJSTABIL2

Manufacturer: Viloc nv, Belgium

Product: STABIL2

Labelling and compliance statement instruction for host product manufacturer

Please notice that if the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains FCC ID: 2AVRJSTABIL2" any similar wording that expresses the same meaning may be used.

§ 15.19 Labelling requirements shall be complied on end user device.

Labelling rules for special device, please refer to §2.925, § 15.19 (a)(5) and relevant KDB publications. For E-label, please refer to §2.935.

FCC regulatory Compliance Statement mentioned in this manual shall be properly included in host product manual per FCC Rules. The host product manufacturer shall be aware not to provide information to the end user on how to install or remove this module in your host product manual.

Guide on test modes and additional testing requirements

Host product manufacturer is ultimately responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, additional transmitter(s) in the host, etc.).

Test software access to different test modes:

Viloc gives the host product manufacturer access to specific software they can program on the module with an over-the-air firmware update from hardware the host manufacturer has available. This contains the full software used for both FCC and CE tests in each mode previously tested.

It is however important to note that because the module has an internal battery only and cannot be powered externally or connected over wires (e.g. UART) once in the end-product. As the battery consumption by the tests is significant it will make the module inside the end-device out-of-spec (specifically the battery lifetime) once the test is finished.

Disclaimer on additional testing, Part 15 Subpart B compliance of Host Product

This modular transmitter is only FCC authorized for the specific rule parts listed on our grant, host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification.

Host manufacturer in any case shall ensure host product which is installed and operating with the module is in compliant with Part 15B requirements. Please note that For a Class B or Class A digital device or peripheral, the instructions furnished the user manual of the end-user product shall include statement set out in §15.105 *Information to the user* or such similar statement and place it in a prominent location of host product manual. Original texts from FCC Rules are as following you may refer to:

For Class B

Note: 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 receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

For Class A

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC regulatory compliance statement for this module

§15.19 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.

§15.21 Information to user

Warning: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure compliance statement

This module complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.