

FCC AND ISED MODULE INTEGRATION INSTRUCTIONS

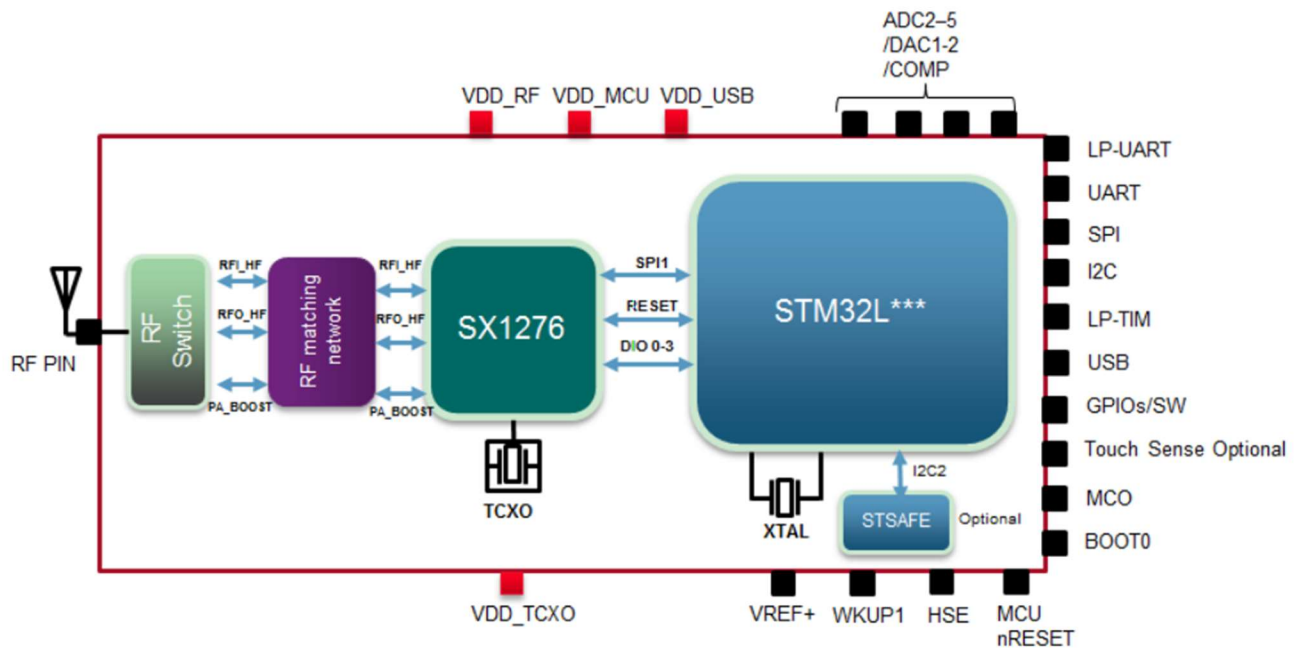
LoRa module:

FCC ID: 2AVL60001101
ISED ID: 26726-0001101
PMN: SteamIQ
HVIN: 2101

Features:

Interfaces: I2C, UART, USB, SPI
Main ICs: STM32L082, SX1276
Reference Clocks: Integrated 32MHz clock (TCXO with frequency error= ± 2 ppm)
and 32.768KHz clock (frequency error= ± 20 ppm)
Supported Frequencies: 915 MHz (902.3 – 914.9 MHz)
Module Size: 12.5 mm x 11.6 mm x 1.76 mm (Max)
Package: Metal Shield can

Block Diagram:



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Specific operational conditions:

Applicable FCC rules: CFR 47 Part 15, Subpart C (15.247)

Applicable ISED rules: RSS-247

Limited module considerations: The module is limited to OEM installation ONLY.

The OEM integrator is responsible for ensuring that the end-user has no manual instruction to remove or install the module.

The final host product must be submitted to SteamIQ for confirmation that the host+module complies with the regulations of the USA (FCC) and Canada (ISED).

Antennas:

The Lora module is for use with external antennas ONLY.

The antenna is Monopole Antenna and maximum gain is 1.04 dBi.

Trace antenna design: not applicable

This module has been approved by FCC to operate with the antenna types with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device. Specifically, if an antenna other than the model documented in the filing is used, a Class 2 Permissive Change must be filed with the FCC.

Additional testing, Part 15 Subpart B disclaimer

The modular transmitter is only FCC authorized for the specific rule parts listed on the grant, and that the 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. If the grantee markets their product as being Part 15 Subpart B compliant (when it also contains unintentional-radiator digital circuitry), then additional Part 15 Subpart B compliance testing is required for the final host product with the modular transmitter installed.

FCC AND ISED MODULE INTEGRATION INSTRUCTIONS

FCC Regulatory Statements for this module

FCC Statements

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.

Note: This product 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 product 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 product 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.

Changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure considerations:

This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

Label considerations:

When the FCC ID is not visible when after installation 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 be use wording: "Contains transmitter module FCC ID: 2AVL60001101" or "Contains FCC ID: 2AVL60001101".

FCC AND ISED MODULE INTEGRATION INSTRUCTIONS

ISED Regulatory Statements for this module

ISED (Canada) Statements

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Under ISED Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by ISED Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

When the Industry Canada certification 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 be use wording "Contains transmitter module IC: 26726-0001101" or "Contains IC: 26726-0001101".