Wallbox RFID01 Module User Manual

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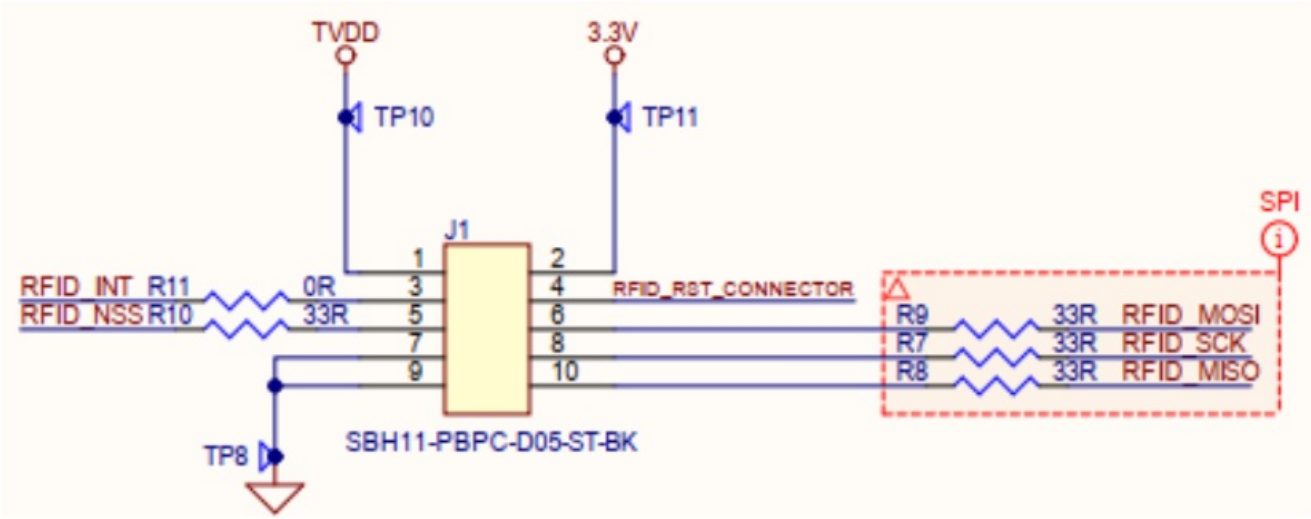
wallbox

Wallbox RFID01 Module

Installation

Essential Instructions and Requirements for Users of this Product and Host Equipment Containing This Product
This product has been approved by the Federal Communications Commission (FCC) and Industry Canada (IC). It is accredited as Modular Approval for radio modules under regulations detailed in 47 CFR 15.225 and RSS-210 issue 10 Annex B6. The product is only for use with a 3V3 dc (+/- 10%) power supply to it via the J1 connector shown in Picture 1 below.



Picture 1

The host power supply to the product should be rated to be able to deliver up to 500 milliamps in a rush current for up to 100 milliseconds and supply a constant current of up to 200 milliamps. This product is only authorised for operation using the integral trace antenna contained in the product. It is not authorised for use with any other antenna.

RF exposure calculation has been provided with the module certification utilising a worst-case 20cm distance to users, RF exposure in the host equipment may need to be re-evaluated. Host equipment incorporating this product must have affixed to it a permanent label stating, “Contains FCC ID: 2BB8L-RFID01” and “Contains IC ID: “31519-RFID01”. The host equipment containing this product must itself be tested and verified that it does not exceed the FCC rules in 47 CFR part 15.225 or RSS-210 Annex B6 including if the host equipment is powered by a mains AC supply, it does not exceed the AC powerline conducted emissions limits specified in the FCC / RSS-GEN test specifications. A host manufacturer has three options available, either:

1. A Class II permissive change (FCC) or a Class IV permissive change (ISED) must be requested Through Wallbox to add the host equipment test evaluation data to the existing certification.
2. The host manufacturer can perform a change in ID followed by a class II permissive change.
3. The host manufacturer can apply for a new FCC ID or IC ID.
4. This product is only authorised for the following rule: Part 47 CFR 15.225 as listed in the Grant of Equipment Authorisation and RSS-210 Annex B6 as listed in the Technical Acceptance Certificate.
5. The host product manufacturer is responsible for compliance with any other FCC and IC rules that apply to the host and are not covered by the modular transmitter Grant of Certification/ acceptance certificate.

Communication interface

Overview

The Reader can be controlled using a simple protocol available over SPI as described in Picture 1. The requirements are specified by NXP for its CLRC663 IC.
This device is an RFID module that operates at 13.56 MHz with a maximum field strength of 64.666 dBuV/m 3m.

Compliance

- The user and host equipment that incorporates this RFID reader module must follow all instructions listed in section 1 of this User Manual.
- Changes or modifications to this product not expressly approved by Wallbox could void the user’s authority to operate the equipment.
- This device complies with Part 15 of the FCC Rules. This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada’s license-exempt RSS(s).
- Operation is subject to the following two conditions:

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

Marking and Labelling of the Product

1. The product shall contain as silkscreen printing the following information
    - The name ‘Wallbox’.
    - The FCC ID “FCC: 2BB8L-RFID01”
    - The ISED number “IC: 31519-RFID01”
2. The Serial Number contained on the label affixed to the product shall be formatted as a nine-digit number

directly printed on the board.

The product shall have affixed to it a Label containing the following:

- ‘V’ for manual visual inspection.
- ‘A’ for Automated Optical Inspection (AOI).
- ‘F’ for functional testing and control.
- ‘ICT’ for In-Circuit-Test applied to ensure the good quality of the design.

The label shall be placed as shown below:

Installation Guide
This page indicates the installation guide for host manufacturers. This installation guide is addressed to expert technicians and it must not be available for end users. Please use the official additional software and documentation to ensure the correct installation
and use of this module.

Before installing the module ensure the following

- The product where the module is to be installed must be compatible with WALLBOX RFID01. Update the device, to ensure that this module is fully compatible with the final product, maybe necessary.
- The only necessary tool to install this product is a screwdriver. Additional tools can be useful to help in the process of installing the module in the final product.
    1. Unpack the module and attach the supplied cables if necessary.
    2. Dismount the final product and prepare it to assemble the module.
    3. Ensure that there is enough space on the device to ease the installation and to avoid any nondesired effect on the rest of the electronics of the final device.
    4. Install the module inside the host device and ensure that the position of the module is the final one (the module should be fixed on the host device to ensure a defined antenna location).
    5. Connect the pins or cables following the below indication:

- Take the following considerations:
- Make sure this device can fit within the final product without interference with any other electronic.
- The module should be installed with the cables provided if this connection is not available on your product contact customer service for support.
- WALLBOX RFID01 module must be powered by a 3V3 dc supply.
- Do not cover the PCB antenna with conductive material.

Integration instructions for host product manufacturers according to KDB 996369 D03 OEM Manual v01

LIST OF APPLICABLE FCC RULES
Compliance with §15.225 regulation

SPECIFIC OPERATIONAL USE CONDITIONS
The module is typically used in industrial, household and general office / ITE and audio & video, EV charging system end-products. The product must not be co-located or operating in conjunction with any other antenna or transmitters.

TRACE ANTENNA DESIGNS
The module was designed with the fixed PCB print antenna, any changes or modifications by the OEM integrator will require additional testing and evaluation. Change in antenna type or maximum gain increase requires C2PC.

RF EXPOSURE CONSIDERATIONS

The module has been evaluated and shown compliant with the FCC RF Exposure limits under fixed exposure conditions. OEM integrator shall equip the antenna to compliance with antenna requirements parts 15.203& 15.204 and must not be co-located or operating in conjunction with any other antenna or transmitters, otherwise, a Class II Permissive Change (C2PC) must be filed with the FCC must be applied. RF exposure calculation has been provided with the module certification with worst case 20cm distance to users, RF exposure in the host equipment may need to be re-evaluated. A distance of 20cm shall be respected from the module to users.

ANTENNAS
The antenna of the module was designed as PCB printed on the PCBA board and the best gain is -3.90dBi. Modification of the antenna design may need additional testing and evaluation. Change in antenna type or maximum gain increase requires C2PC.

LABEL AND COMPLIANCE INFORMATION
The end product must be labelled in a visible area with the following “Contains FCC ID: 2BB8L-RFID01” or “Contains Module FCC ID: 2BB8L-RFID01”. If the size of the end product is smaller than 8x10cm, then an additional FCC part 15.19 statement is required to be available in the users’ manual: 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.

A user’s manual for the finished product should include one of the following statements: For a Class A digital device or peripheral, the instructions furnished to the user shall include the following or a similar statement, placed in a prominent location in the text of the manual: This equipment has been tested and found to comply with the limits for a Class A digital device, under 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 by 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.

For a Class B digital device or peripheral, the instructions furnished to the user shall include the following or a similar statement, placed in a prominent location in the text of the manual: This equipment has been tested and found to comply with the limits for a Class B digital device, under 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 by 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 the receiver.
- Connect the equipment to 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.

The User’s Manual for The finished product should include the following statements: Any changes or modifications to this equipment not expressly approved by the OEM/Integrator may cause harmful interference and void the user’s authority to operate this equipment.

INFORMATION ON TEST MODES AND ADDITIONAL TESTING REQUIREMENTS
The data transfer module demo board can control the EUT work in RF test mode at specified conditions. This radio module must not be installed to co-locate and operate simultaneously with other radios in the host system except by FCC multi-transmitter product procedures. Additional testing and equipment authorization may be required to operate simultaneously with other radios.

ADDITIONAL TESTING, PART 15 SUBPART B DISCLAIMER
The host product manufacturer is responsible for compliance with any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. The final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed.

General Statements
The module is intended only for OEM integrators. The OEM integrator is responsible for ensuring that the end-user has no manual instruction to remove or install the module. The OEM integrator is still responsible for testing their end product for any additional compliance requirements required with this module installed OEM integrator shall not modify and change the fixed designed PCB print antenna, and must not be co-located or operating in

conjunction with any other antenna or transmitters, otherwise, a Class II Permissive Change (C2PC) must be filed with the FCC and/or a new FCC authorization must be applied. The product is typically used in industrial, household and general office / ITE and audio & video, EV charging system end-products.

ADDITIONAL TESTING, ISED COMPLIANCE STATEMENT
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:

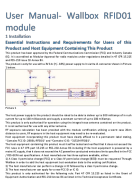
1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

RF exposure is compliant with a distance equal to or above 20cm from EUT. Users must maintain a safety distance of 20cm with the device.

ISED MODULAR DISCLAIMER
The transmitter of this system is a class B digital device that complies with Canadian ICES-003. The transmitter must not be located or operating in conjunction with any other. The device is a module. When the module is installed in the host device, RF features may vary because of the installation. To be compliant with ISED host must ensure that Host products and associated modules (i.e. final product) shall meet all applicable requirements set out in RSS-Gen, including the radio frequency (RF) exposure compliance requirements in RSS-102.

The ISED certification label of a module shall be visible at all times when installed in the host product; otherwise, the host product must be labelled to display the ISED certification number for the module, preceded by the word "Contains" or similar wording expressing the same meaning, as follows:
Contains IC: 31519-RFID01

Documents / Resources

	Wallbox RFID01 Module [pdf] User Manual RFID01, RFID01 Module, Module

References

- User Manual