

**FCC ID:2ALHY1356NFC-FCC-IC / ISED-C, IC ID: 22592-RS485IC470.**

### **-Overview of Operation-**

This product is a dedicated ISO14443A and ISO15693 RFID transponder read/write device. It is designed for embedded use within customer products and not as a stand-alone desktop type device.

Its purpose is to read data from and write data to widely available NFC transponder cards and tags brought within alignment and close proximity to the integral board antenna. This is achieved on the reader using the NXP Semiconductor Integrated Circuit Chip, PN5180. This is a dedicated RFID/NFC transceiver chip that communicates using close-proximity magnetic induction and the ISO14443A and ISO15693 standard RFID protocols. An integral printed circuit board (PCB) antenna is used along with filtering and tuning with fixed miniature surface-mounted passive electronic components to radiate an alternating magnetic field at 13.56MHz. Magnetic coupling is achieved with a transponder device that is tuned to the same frequency and is operated using the same standard RFID protocols above when this transponder is within a range of up to 100mm from the PCB antenna.

The product has been designed and then tested by an approved FCC and IC laboratory to meet RF emissions requirements. These features enable the product to comply with various regulatory emissions standards worldwide such as those specified by the Federal Communication Commission (FCC) in the USA (FCC Part15 C), ISED Canada (RSS210) and the European Community (CE/ RED).

The board provides a digital communication interface to the host machine via an RJ45 connector. This interface conforms to the industry standard RS485 communication protocol.

The host machine requests of the product the actions of reading a transponder or writing to a transponder by sending commands to it over the RS485 serial bus. These commands are covered in detail in the User Manual accompanying this product.

The board has fixed radio frequency output (RF) setup and cannot be altered in any way by user instruction from the available commands. Therefore, unless the user wilfully alters the antenna circuitry of the board, it will perform in a fixed manner; from an RF perspective; compatible with the board specimens provided for regulatory testing approvals and certification by the various worldwide authorities. The board is not “user adjustable or configurable” for RF performance.

## Photograph Depicting Electrical Connection and showing the Fixed Design of the Product



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