Apulsetech A313 Fixed RFID Reader User Manual

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The A313 Fixed RFID Reader is a custom module with an embedded Impinj R2000 RFID engine. It operates on the EPC Cass1 GEN 2 / ISO 18000-6C air interface protocol and has a frequency range of 902~928MHz. The reader has 16 RF ports with a supply voltage of 12V DC and a power range of 27 dBm (Precision, +/- 1dBm). The reading performance is up to 5m depending on the tag and environment, while the writing performance is up to 0.3m depending on the tag and environment. The reader has an operating temperature of -20 ~ 55°C and a storage temperature of -20 ~ 70°C with a storage humidity range of 20% ~ 95% (Relative Humidity). The reader has an anti-collision feature and consumes an average current of 1.4A at 30dBm with a scan mode.

Mechanical Performance

The A313 Fixed RFID Reader has an RJ45/USB-C communication interface and an SMA-male antenna connector. The dimensions of the reader are 193*119*35 mm, and the weight of the antenna is 725g. The body of the reader is made of SUS material.

Installation and Restriction of Antenna

- The antenna must be installed such that 20 cm is maintained between the antenna and users.
- This device must use listed antenna as below.
  - Model Name: a103
  - Antenna Gain: 5.34 dBi
  - Connector Type: TNC type male(RP-TNC)

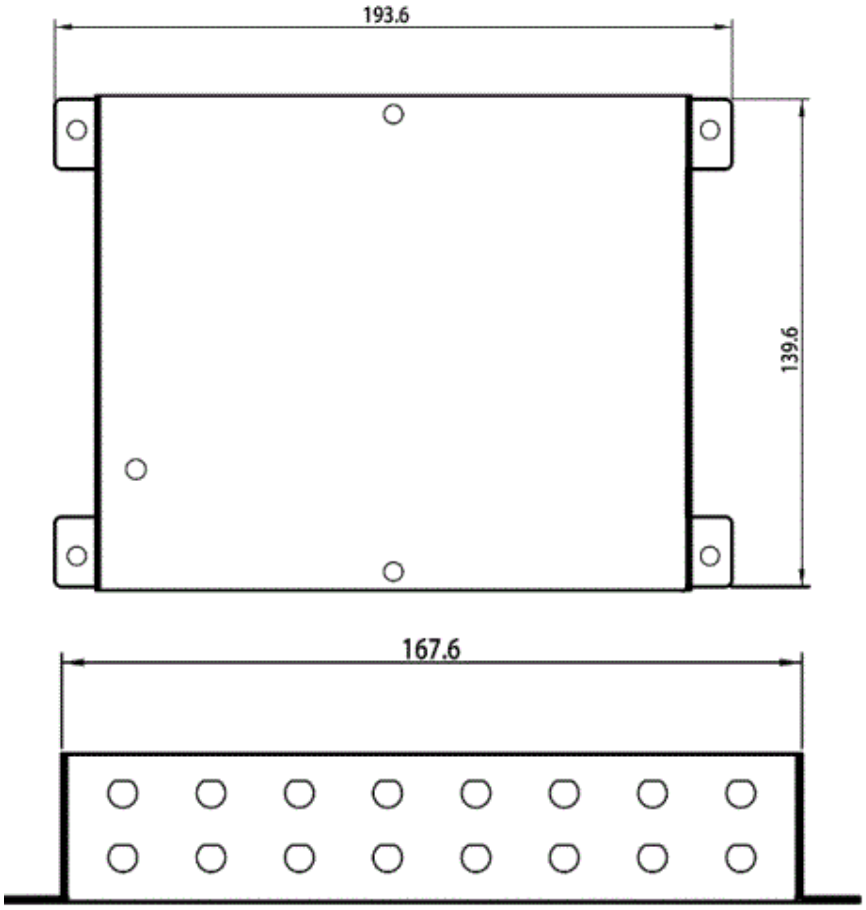
RFID Reader Manual

1. **Running the RFID Program**
   - Double-click SampleModuleWinForm.exe in the DemoModuleWinForm folder to run it.
   - Folder : DemoModuleWinForm -> Release->net461
2. **Connect by Serial**
   1. Enter the number of antenna ports of the terminal.
   2. Set Com. Port and Baud late.
3. **Inventory**
   - Click the Icon to run.
   - Click Icon to start inventory.
   - Click Icon to stop inventory.

FCC RF Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. The antenna used for this transmitter must not transmit simultaneously with any other antenna or transmitter, except in accordance with FCC multitransmitter product procedures. When equipped, the distance between antenna and one’s body surface is 200mm.

Drawing

(unit : mm)



RFID Specifications

Parameter	Application
Air Interface Protocol	EPC Cass1 GEN 2 / ISO 18000-6C
RFID Engine	Custom module with embedded Impinj R2000
Frequency Range (MHz)	FCC : 902~928MHz
RF Port	16 port (Switch)
Supply Voltage	12V DC
RF Power range	27 dBm (Precision, +/- 1dBm)
Reading Performance	UP to 5m (depending on the tag & Environment)
Writing Performance	UP to 0.3m (depending on the tag & Environment)
Operating temperature	-20℃ ~ 55℃
Storage temperature	-20℃ ~ 70℃
Storage Humidity	20% ~ 95% (Relative Humidity)
Average Current Consumption	Scan Mode : 1.4A @30dBm
Special function	Anti-Collision

Mechanical performance

Parameter	Application
Communication Interface	RJ45/USB-C
Antenna Connector	SMA-male
Dimension(mm)	16port : 193*119*35 mm
Antenna weight(g)	16port : 725g
Body material	SUS

RFID Reader Manual

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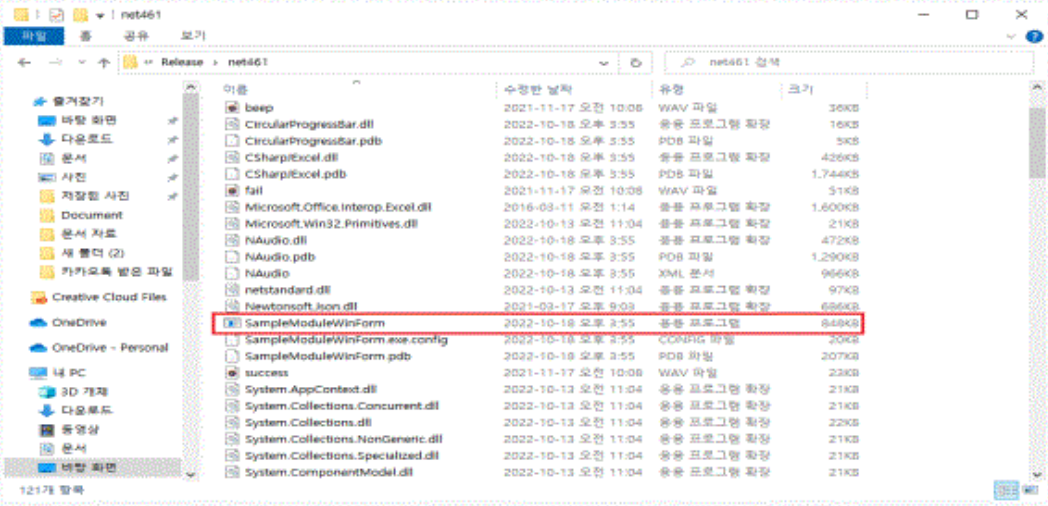
Double-click SampleModuleWinForm.exe in the DemoModuleWinForm folder to run it.

Folder : DemoModuleWinForm -> Release->net461



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- Enter the number of antenna ports of the terminal.
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Click the Icon to run.

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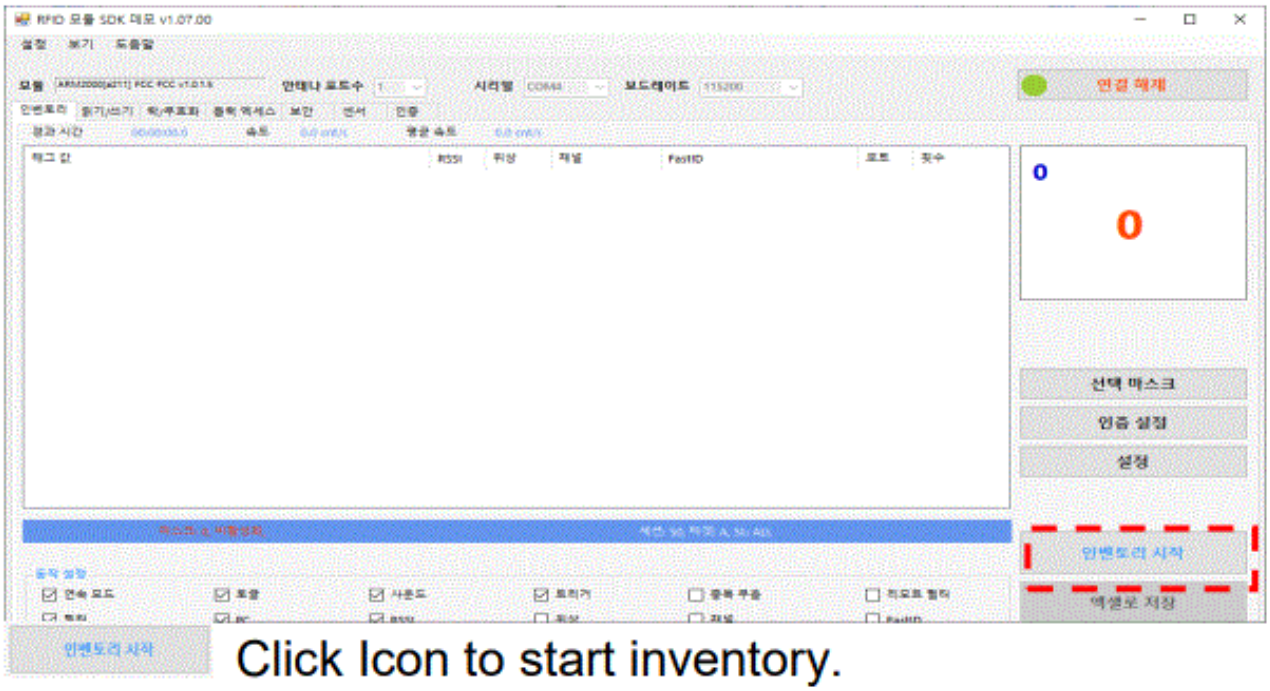

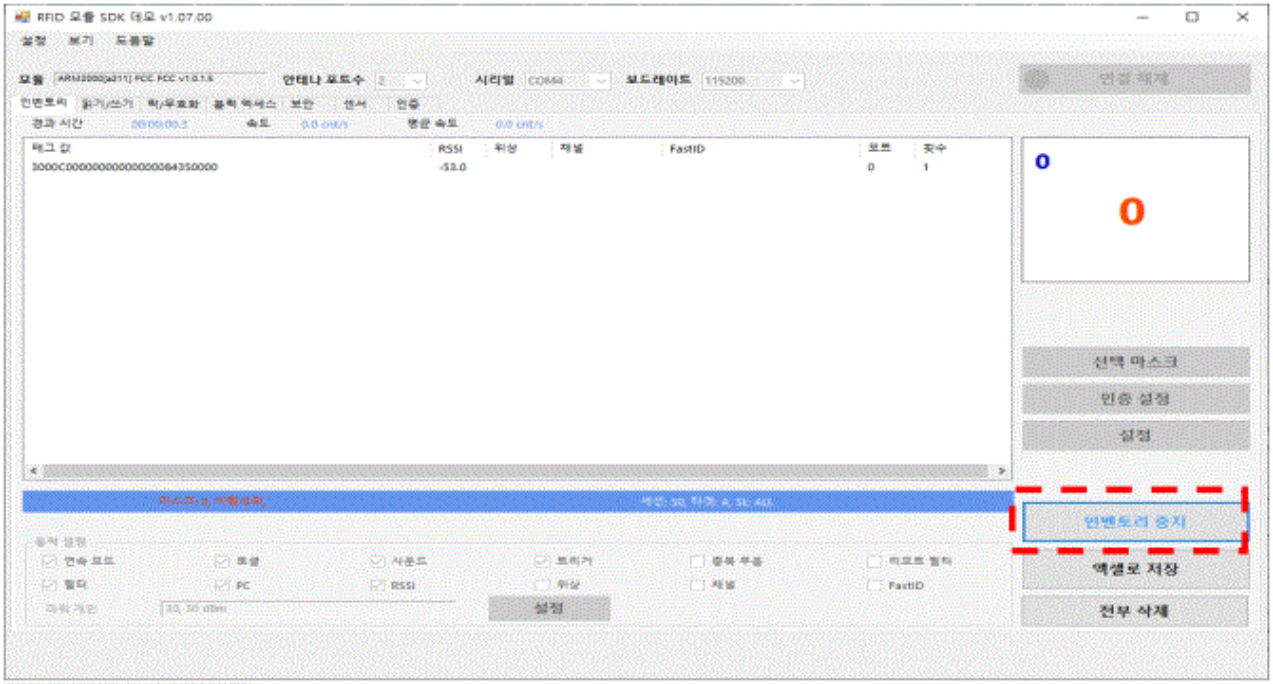

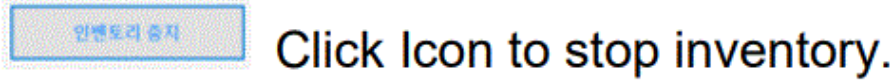

Certification and Safety Approvals FCC Compliance Statement

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. 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 on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antennae
- Increase the separation between the equipment and the 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.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate this equipment.

FCC RF Exposure Statement
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. The antenna used for this transmitter must not transmit simultaneously with any other antenna or transmitter, except in accordance with FCC multi- transmitter product procedures. When equipped, the distance between antenna and one’s body surface is 200mm.

Installation and restriction of Antenna

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Documents / Resources

	**Apulsetech A313 Fixed RFID Reader** [pdf] User Manual 2AWMDA313, 2AWMDA313, a313, A313 Fixed RFID Reader, A313, Fixed RFID Reader, RFID Reader, Reader