M87P8 Module Evaluation Kit

User Manual V1.0

1. Initial setup

1.1 Powering the Reader

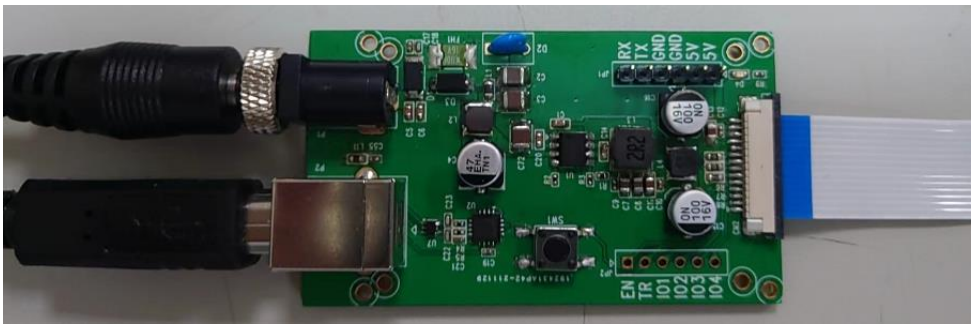
Plug the **power cable** in, with the **indicator light** on & reader is ready. As illustrated below:

1.2 Connecting Antenna to Reader

Connect the antenna with the antenna MMCX port as illustrated below:

1.3 Connecting Data Line to Reader

You can connect the reader to your PC via B type USB, as illustrated below:

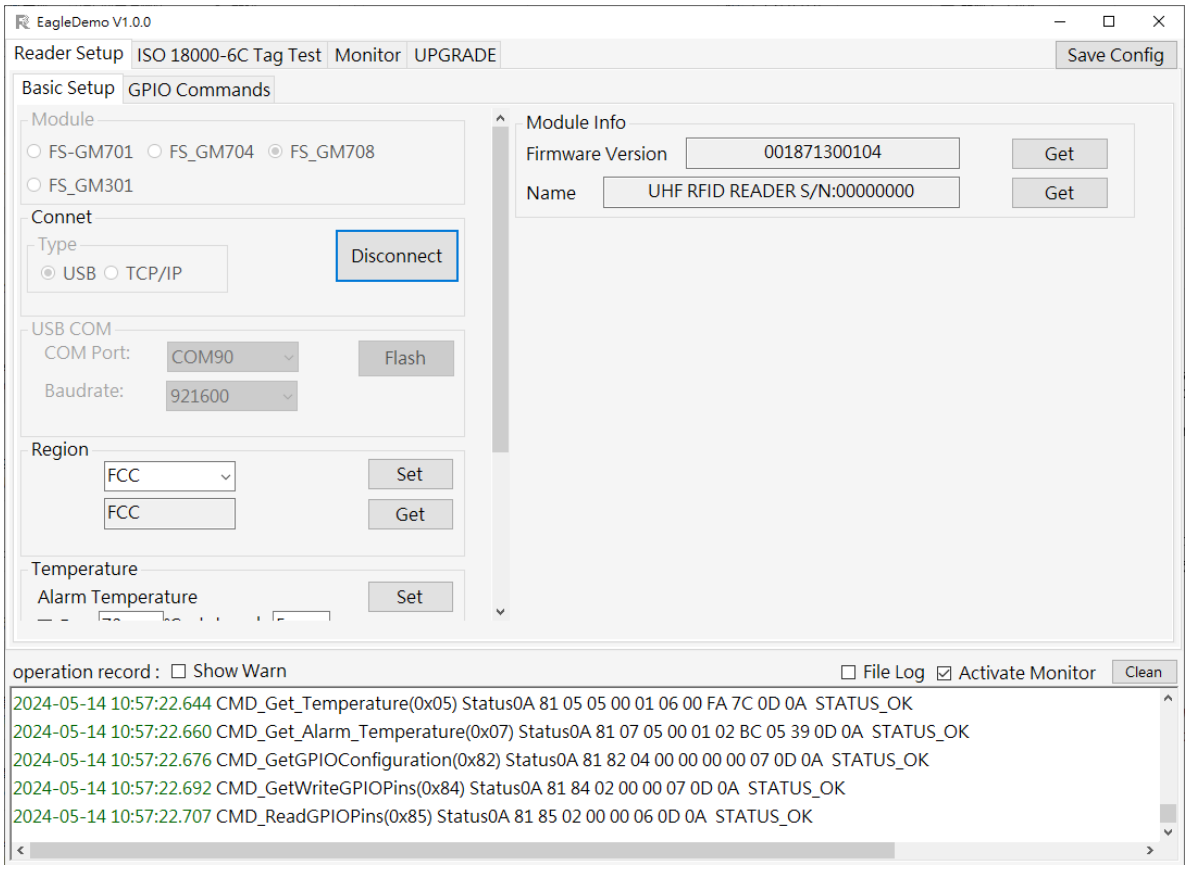


2. Connect DEMO SW

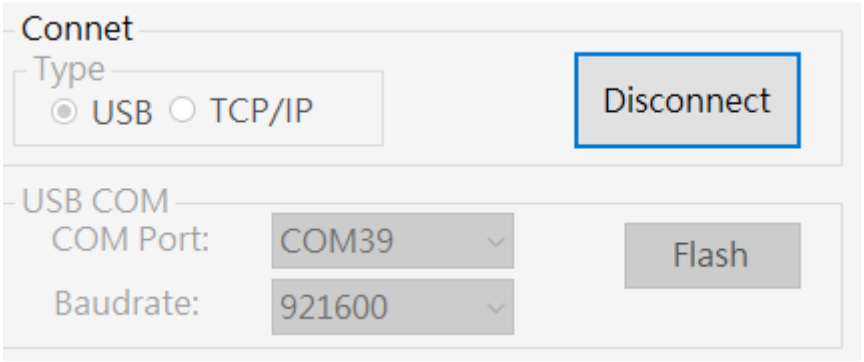
Double-click **EagleDemo.exe** to run the software.

2.1 Connect

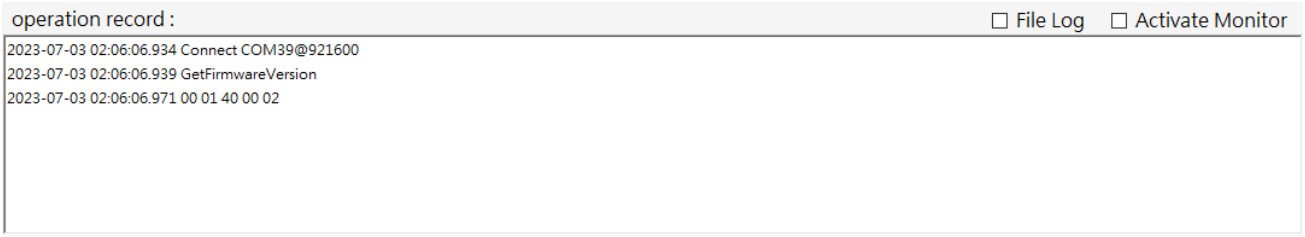
2.1.1 Open the software and it will shows as below:



2.1.2. Please select **USB** as **Connection**, Choose the corresponding **Serial Port** and **Baud Rate** (default baud rate is 921600). As illustrated below:

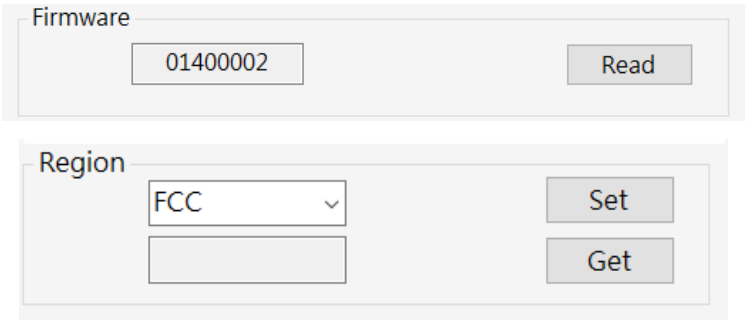


2.1.3. Click **Connect**, if it is connected successfully, the **FW version** will display as below:



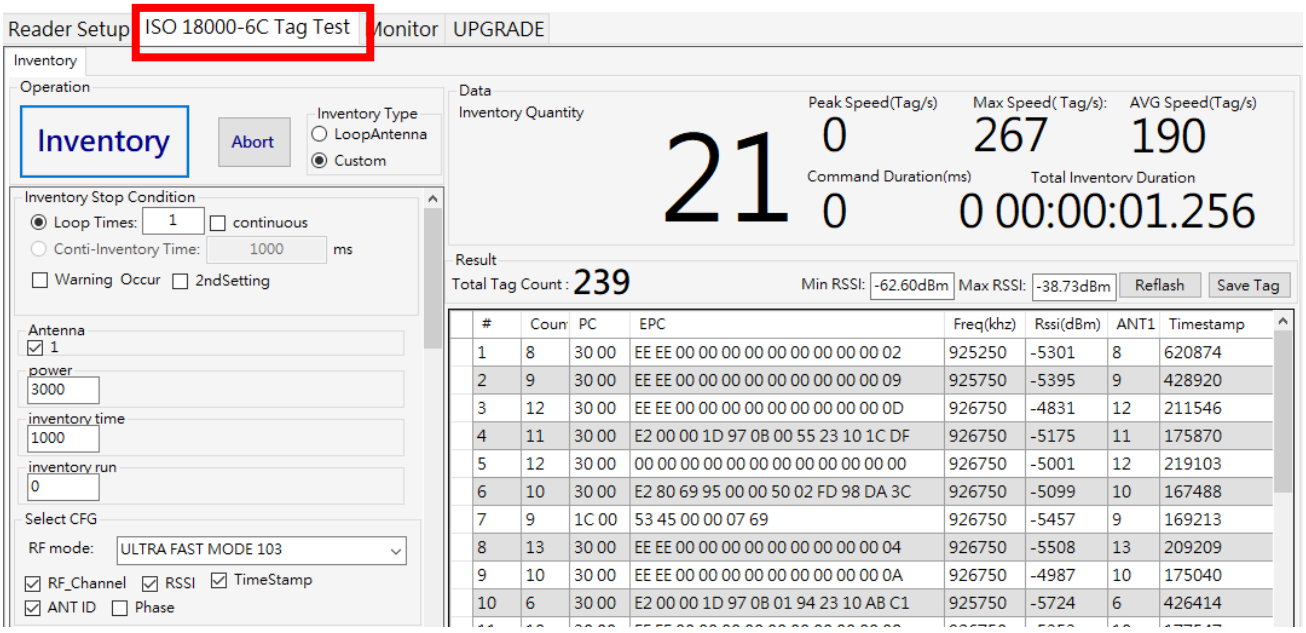
2.1.4. Text communication with the reader:

Click on **Get** in Firmware Version or in Reader Region, the following screen displays:



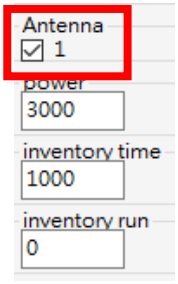
3. Run Inventory function

After connecting the reader with PC, we can start go Inventory Run function. Please select **ISO 18000-6C tag test** as illustrated below:



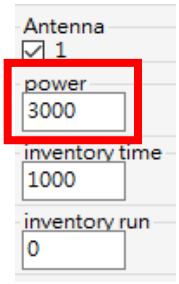
3.1 Setp1: Enable ANT 1

Check mark the ANT1.



3.2 Setp2: Setting RF Output Power

RF Output Power is the strength of RF output signal from antenna port whose unit is dBm.



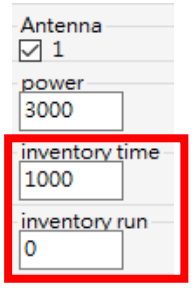
The output power range is 0 - 33dBm. Default RF output power is 30dBm .

3.3 Setp2: Setting Inventory time & Run

Setting Inventory time is mean the running time when start inventory command.

Setting Inventory Run is mean the running once when start inventory command.

Inventory stop if which time or run up to the setting value

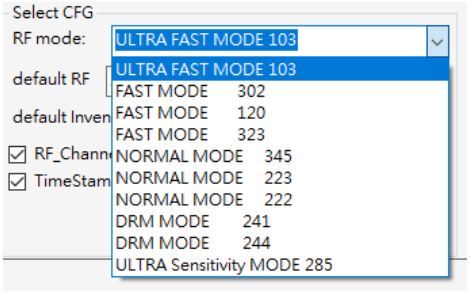


The default inventory time is 1000ms.

The default inventory run is 0, which mean “don`t care”.

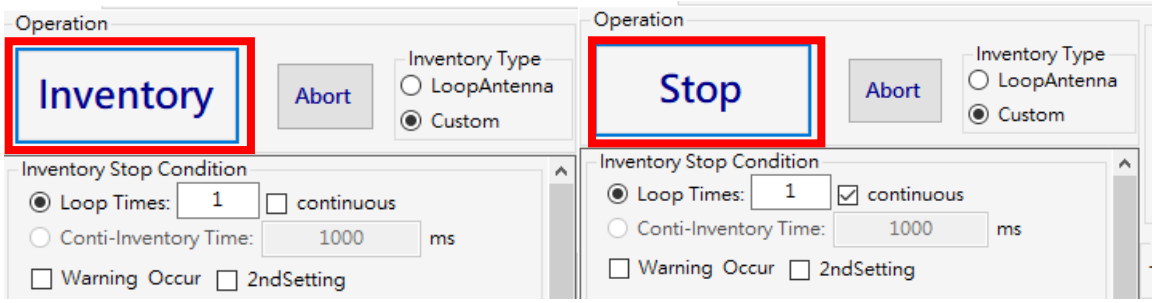
3.4 Setp3: Setting RF-link mode

There is different read speed & sensitivity in different RF-link mode. To more detail, please check the **RF-link profile** of datasheet.



3.5 Setp4: Run/Stop Inventory

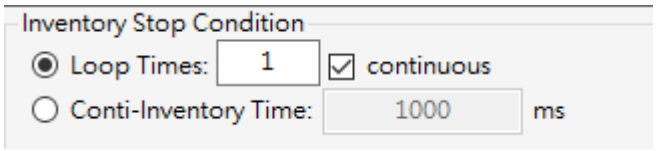
click **Inventory** button to Run Inventory function. click **Stop** button enforce to stop Inventory function.



3.6 Parameter of AUTO Stop Inventory

Loop time	Inventory stop when reach the setting of command count.
Conti-Inventory	Inventory stop when reach the setting of Inventory period.

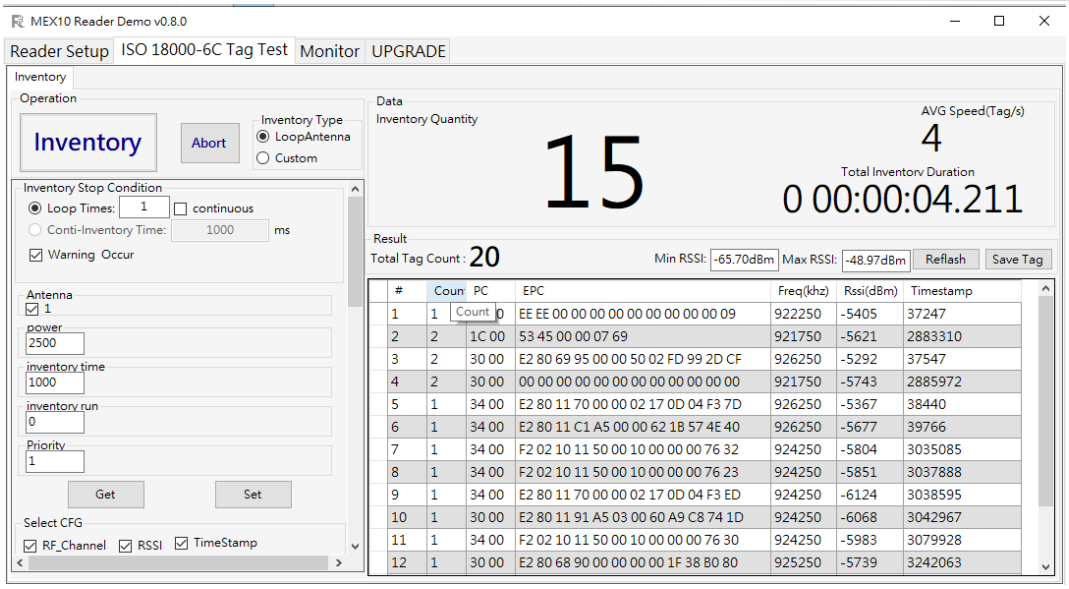
* it will no stop if tick **continuous**



3.7 The parameter of Running Inventory

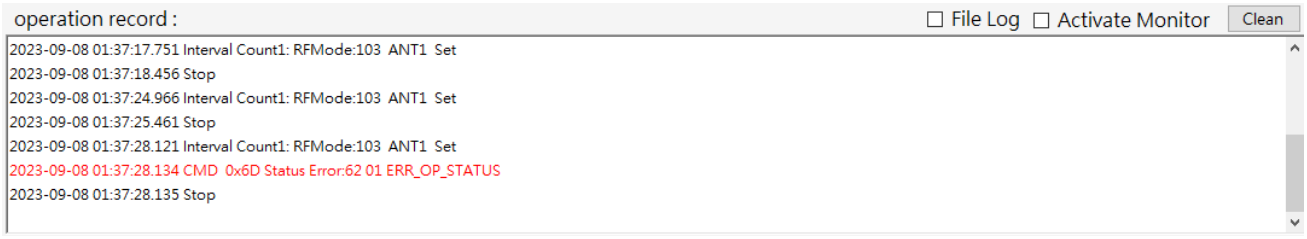
There are 13 parameters when run inventory as shown as following.

Inventoried Quantity	Total number of inventory tags since click **Inventory**.
Peak Speed	Read Speed of Tag for last one inventory command, unit: Tag/s
Max speed	MAX Read Speed of Tag for total inventory period, unit: Tag/s
AVG speed	AVG Read Speed of Tag for total inventory period, unit: Tag/s
Command Duration	Time between Inventory Command to command, unit: ms
Total Inventory Duration	Total inventory period when click **Inventory**, unit: ms.
Total Tag Count	Total tags when start Inventory period.
Count	Tag count
EPC	EPC data of tag.
PC	PC data
CRC	CRC data
RSSI	The Tag signal strength at the last inventory command.
Carrier Frequency	Carrier Frequency of tag at the last time.



4. Error Display

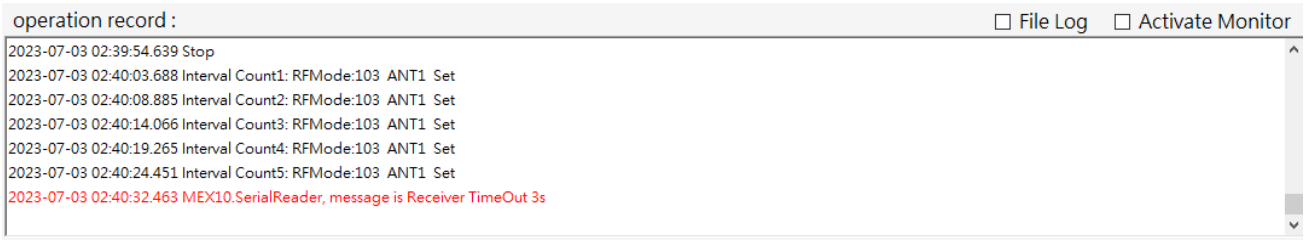
◆ ANT error:



Reason:

1. ANT is Disconnection to ANT port of module
2. VSWR is too large of ANT, it should be lower than 1.3
3. Reflection RF power too large, please check is there some Metal around ANT.

◆ Receiver data time out:



Reason:

1. Software CRASH
2. Interface CRASH

Federal Communication Commission Interference Statement

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 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.

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.

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

IMPORTANT NOTE: FCC Radiation

Exposure Statement:

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

LABEL OF THE END PRODUCT:
The final end product must be labeled in a visible area with the following" Contains TX FCC ID: 2BEYTM87P8 ". The FCC part 15.19 statement below has to also be available on the label: This device complies with Part 15 of 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.