CUSTOMER : Standard

DATE : 2021. 03. 22

REV : Rev. 1.0

SPECIFICATIONS FOR APPROVAL

REGX-XXXXC

Model	Model Name	Customer P/N1
GATWAY	REGX-XXXXC	-

RoHS
Compliant

APPROVAL	REMARK	APPENDIX

DESIGNED	CHECKED	APPROVED
2020.06.19	2020.06.19	2020.06.22
K.S.AN	H.H.HAN	I.U.KIM

SPECIFICATION			
MODEL	GEN MINI	REV. No.	Rev. 1.0
REG. DATE	2021.03.16	PAGE	26
REV. DATE	2021.03.16	-	-

Revision History

Revision	Date	Contents of Revision Change	Remark
1.0	’21.03.16	First release	-

1. Application

This Specification is applied to ATEC IOT Gateway of Module Type
used by retailers for managing ESL Product. Typically, GEN MINI is connected to Server System using its ethernet communication.

2. Quality

Quality should meet each condition which mentioned on this specification. However, the items which are not mentioned on this specification follow the inspection agreements and standards which are agree with both companies.

3. Appearance and Characteristics

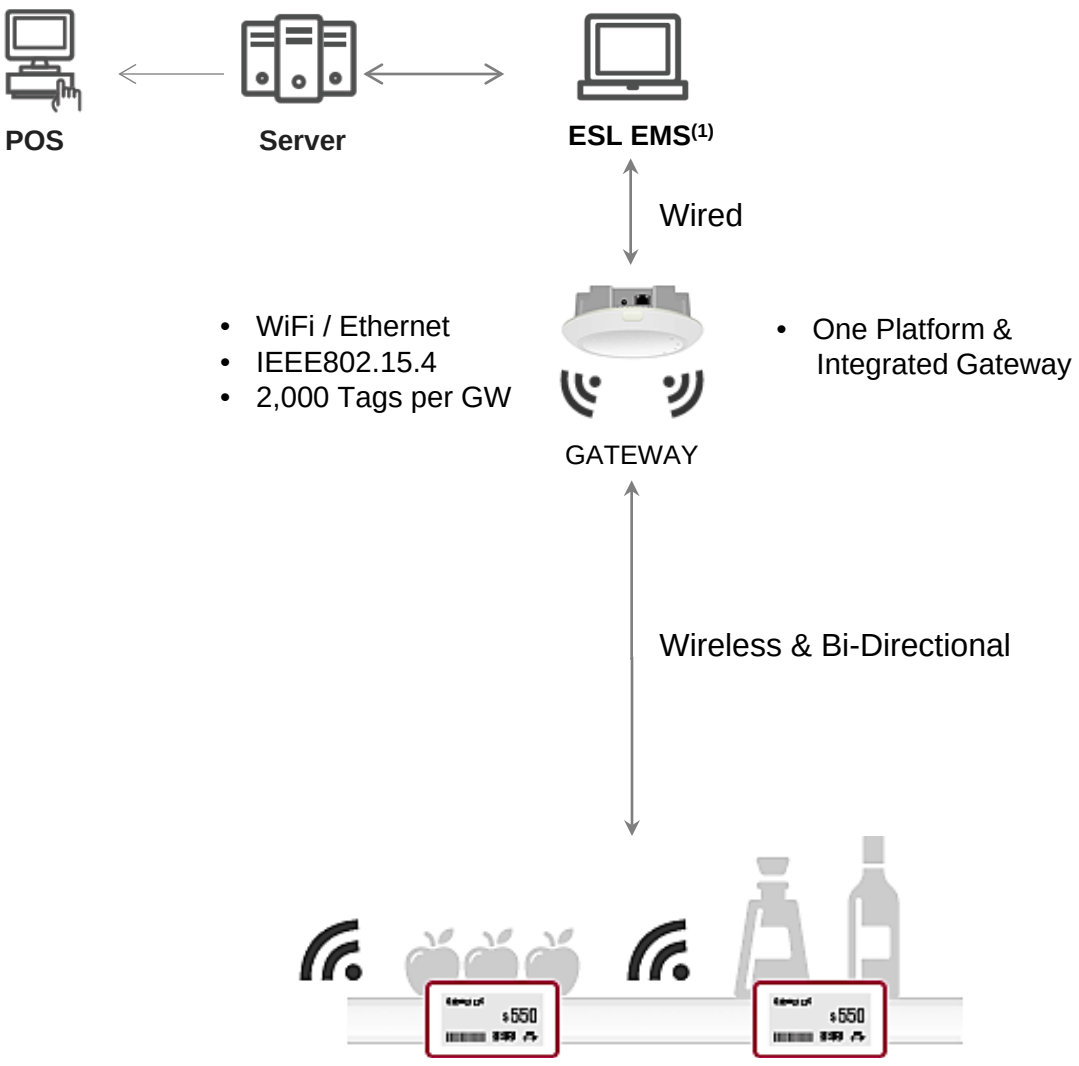
3.1. Appearance

Appearance should not be contaminated by harmful materials and should not have cracks, etc. Mechanical dimensions should meet the contents of clause 9.

3.2. Characteristic

Electrical Characteristics should meet the contents of clause 7.

4. Overall Service Scenario



2.4GHz Wireless Tags

(Battery / Power Line)

(1) EMS : ESL Management Software

5. General Features

5.1. Description

Item		Description
Size		93.5(H)X 44(V) X 13(L)
Operating Environment		-. CPU : Cortex-A9 (1GHz) -. Memory : eMMC 16GB, DDR3 SDRAM 2GB -. 3 RF ZIGBEE Module -. Host USB2.0 Port supported for WiFi AP -. OS : Linux Kernel 4.1.15 -. Network & maintenance function ▷ Network setup / management ▷ Software upgrade -. On ceiling using bracket
Power		Rate : 5.0 V / 600 mA
Network	802.15.4	2.4GHz IEEE802.15.4 compliant RF Transceiver
	Security	Robust wireless network (ATEC IOT own protocol)
	Protocol	Compatible with ATEC IOT protocol communication devices
	Comm. Range	Max. 30m (Under LoS) (3)(4)

[Notice] (1) Communication Range depends on surrounding environment
(2) Use the enclosed product for the antenna and do not use any other product..

6. Absolute Maximum Rating

6.1. Environmental Conditions

The normal operating environmental conditions are those as below. In such conditions, ESL must be in conformity with the present specification. The conformity to such requirement must be certified by the manufacturer.

Parameter	Condition	Min.	Typ.	Max.	Unit
Operating Environment (1)	Temperature	0	23	60	℃
	Humidity	0	50	50	%RH
Storage Environment (2)	Temperature	-30	23	70	℃
	Humidity	-	-	80	%RH

[Notice] (1) After receiving the product, it should be installed within 3 months

6.2. Electrical Conditions

The operating electrical conditions are those as below. In such conditions the GEN MINI must be in conformity with the present specification. All devices can be damaged or non-operated over the specification as below.

The conformity to such requirement must be certified by the manufacturer.

Parameter	Condition	Min	Typ.	Max	Unit
Supply Voltage	DC Power Supply	4.5	5.0	5.5	V
Power Consumption		-	-	600	mA
ESD Protection	Air Condition @Soft Fail	-8	-	+8	kV

7. Electrical Specification

7.1. IEEE802.15.4

The REBE-TZ15K supports IEEE802.15.4.

7.2. General Specification

- Standard : Only IEEE802.15.4 PHY
- Frequency : 2405 ~ 2480MHz
- Channel : 16CH. (5MHz Spacing)
- Modulation : DSSS/O-QPSK
- Max. Data Rate : 250Kbps

7.3. Electrical Specification

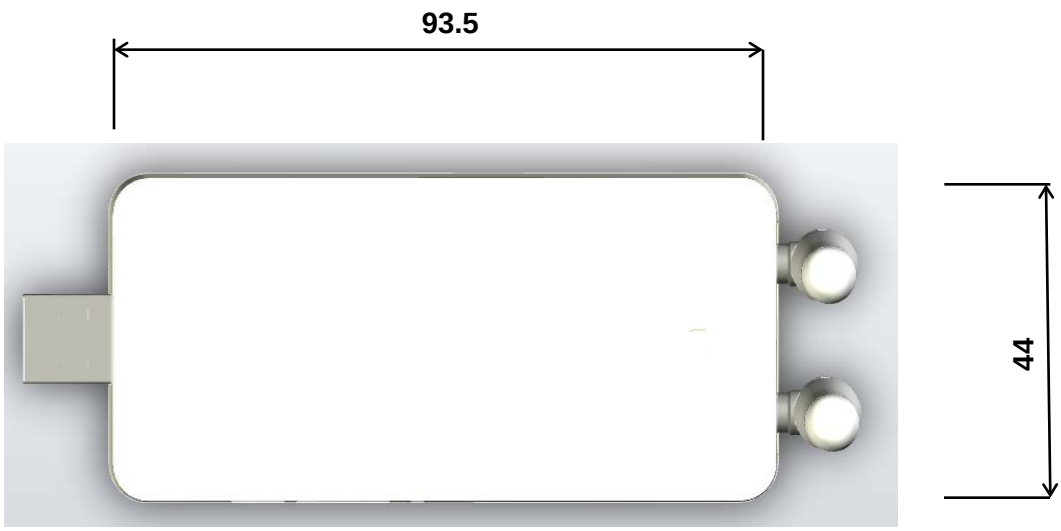
- Channel power depend on each country regulations (EX. KC, etc)
- The electrical specification which is shown below is ATEC IOT internal specification.
- All values depend on surrounding environment and current statement of access point

RF Performance					
Parameter	Condition	Min	Typ	Max	Unit
Output Power	-	0	-	-	dBm
Receiver Sensitivity	PER=1% (Required -85dBm)	-85	-	-	dBm
Maximum Input Level	PER=1% (Required -20dBm)	-	-	-20	dBm
Frequency Tolerance	Required Max. ±75kHz	-75	-	75	ppm
Error Vector Magnitude	Required Max. 35%	-	-	35	%

8. Mechanical Information

8.1. Mechanical Dimension

Size	93.5 x 44 x 13.0 (mm)



9. Disclaimers

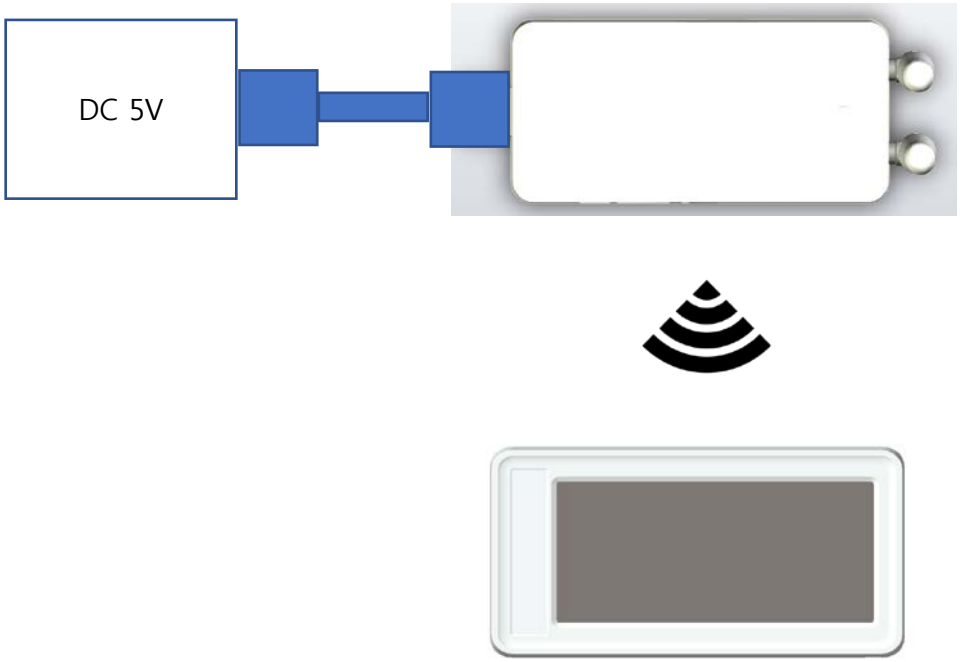
-. *ATEC IOT* is not responsible for any damages caused by any accidents or operational environments exceeding the absolute maximum ratings.

-. Consultation with *ATEC IOT* is recommended for unassured environments or operations to avoid any possible malfunctions or damages of the products or risk of life or health.

-. Any unauthorized, without prior written consents, from *ATEC IOT* disassembly is prohibited if purposed for reverse-engineering. All defected devices must be reported to *ATEC IOT* and not to be disassembled or analyzed.

-. The product information can be modified and upgraded without prior notice.

9. Description



-After a certain amount of time after turning on your device,
Send images to ESL TAG at regular intervals.

a. Rule Part 15.19(a)(3): 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.

b. Rule Part 15.21: The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to 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 in accordance with 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