

RTC-710AP

Rugged Tablet Computer

User's Manual 2nd Ed

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Packing List

Before setting up your product, please make sure the following items have been shipped:

Item	Quantity
● RTC-710AP	1
● 12V power adapter (Power Cord ordered separately)	1

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

About this Document

This User's Manual contains all the essential information, such as detailed descriptions and explanations on the product's hardware and software features (if any), its specifications, dimensions, jumper/connector settings/definitions, and driver installation instructions (if any), to facilitate users in setting up their product.

Users may refer to the product page at AAEON.com for the latest version of this document.

Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references

1. All cautions and warnings on the device should be noted.
2. Make sure the power source matches the power rating of the device.
3. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
4. Always completely disconnect the power before working on the system's hardware.
5. No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
6. If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
7. Always disconnect this device from any AC supply before cleaning.
8. While cleaning, use a damp cloth instead of liquid or spray detergents.
9. Make sure the device is installed near a power outlet and is easily accessible.
10. Keep this device away from humidity.
11. Place the device on a solid surface during installation to prevent falls
12. Watch out for high temperatures when the system is running.
13. Never pour any liquid into the openings. This could cause fire or electric shock.
14. As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.
15. If any of the following situations arises, please the contact our service personnel:
 - i. Damaged power cord or plug

- ii. Liquid intrusion to the device
- iii. Exposure to moisture
- iv. Device is not working as expected or in a manner as described in this manual
- v. The device is dropped or damaged
- vi. Any obvious signs of damage displayed on the device

- 16. **DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.**
- 17. Do not use the battery pack if any part of it is protruding or inflated. Replace with a new battery pack immediately.
- 18. If the battery pack cannot be charged (won't hold a charge, system is unable to charge it), replace the battery pack with a new one immediately.

FCC Statement

Warning!



This device complies with Part 15 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.

Caution:

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte. Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur. Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

产品中有毒有害物质或元素名称及含量

AAEON System

QO4-381 Rev.A0

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯 醚(PBDE)
印刷电路板 及其电子组件	×	○	○	○	○	○
外部信号 连接器及线材	×	○	○	○	○	○
外壳	○	○	○	○	○	○
中央处理器 与内存	×	○	○	○	○	○
硬盘	×	○	○	○	○	○
液晶模块	×	×	○	○	○	○
光驱	×	○	○	○	○	○
触控模块	×	○	○	○	○	○
电源	×	○	○	○	○	○
电池	×	○	○	○	○	○

本表格依据 SJ/T 11364 的规定编制。

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T 26572 标准规定的限量要求以下。

×：表示该有害物质的某一均质材料超出了 GB/T 26572 的限量要求，然而该部件

仍符合欧盟指令 2011/65/EU 的规范。

备注：

一、此产品所标示之环保使用期限，系指在一般正常使用状况下。

二、上述部件物质中央处理器、内存、硬盘、光驱、电源为选购品。

三、上述部件物质液晶模块、触控模块仅一体机产品适用。

China RoHS Requirement (EN)

Hazardous and Toxic Materials List

AAEON System

QO4-381 Rev.A0

Component Name	Hazardous or Toxic Materials or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBBS)	Polybrominated diphenyl ethers (PBDES)
PCB and Components	X	O	O	O	O	O
Wires & Connectors for Ext.Connections	X	O	O	O	O	O
Chassis	O	O	O	O	O	O
CPU & RAM	X	O	O	O	O	O
HDD Drive	X	O	O	O	O	O
LCD Module	X	X	O	O	O	O
Optical Drive	X	O	O	O	O	O
Touch Control Module	X	O	O	O	O	O
PSU	X	O	O	O	O	O
Battery	X	O	O	O	O	O

This form is prepared in compliance with the provisions of SJ/T 11364.

O: The level of toxic or hazardous materials present in this component and its parts is below the limit specified by GB/T 26572.

X: The level of toxic of hazardous materials present in the component exceed the limits specified by GB/T 26572, but is still in compliance with EU Directive 2011/65/EU (RoHS 2).

Notes:

1. The Environment Friendly Use Period indicated by labelling on this product is applicable only to use under normal conditions.
2. Individual components including the CPU, RAM/memory, HDD, optical drive, and PSU are optional.
3. LCD Module and Touch Control Module only applies to certain products which feature these components.

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Chapter 1

Product Specifications

1.1 Specifications

System

Processor	Intel® Celeron® Processor N3350, 1.1 GHz Dual-Core, up to 2.4 GHz Intel® Pentium® Processor N4200, 1.1 GHz Quad-Core, up to 2.5 GHz
Operating System	Windows® 10 IoT Enterprise SAC
Memory	Onboard LPDDR4, 4GB (Default)/8GB
Storage	eMMC 64GB (Default)/128GB
Display	7" WXGA (1280 x 800) 300 nit/700 nit TFT LCD with Projected Capacitive Multi-Touch Screen
I/O Port	SIM Card Slot x 1 USB 3.2 Gen 1 (Type-C) x 1 Audio Jack x 1 (3.5mm) DC-in Jack x 1 Micro SD Card Slot x 1 USB 2.0 (Type-A) x 1 COM Port x 1 (RS-232 via I/O Module) RJ-45 x 1 (10/100/1000 Base-T via I/O Module)
Communication	Wi-Fi 802.11 b/g/n Bluetooth v5.1
Navigation	Up to 3 GNSS, GPS + Galileo (Default) GLONASS BeiDou (Optional) External Antenna (Optional)

System

WWAN (Optional)	LTE via M.2 Slot x 1 Note: Hot-Swappable Battery cannot be used when LTE Module is installed
Camera	2MP Front Camera 8MP Rear Camera with Flash
Sensor	G-Sensor, E-Compass Gyro-Sensor Light-Sensor
Expansion Slot	M.2 Slot x 1 Docking Connector: USB 3.2 Gen 1 x 1
Barcode Scanner (Optional)	2D Barcode Scanner: OPTICON MDI-4100-USB via I/O Module (Optional)
HF RFID (Optional)	ISO 15693 (R/W) ISO 18092 (R/W) ISO 14443-A (R/W) ISO 14443-B (Only Read UID) Dependent on Card Type
Audio	Speaker x 1
Physical Key	F1 (Ctrl+Alt+Del as Soft Reboot) F2 (Screenprint) F3 (Barcode Scanner Trigger) Volume Up Volume Down

Mechanical

Color	Dark Gray
Dimension	8.65" x 5.46" x 0.94" (219.8mm x 138.8mm x 23.9mm)
Gross Weight	1.54 lb. (0.7Kg) based on configurations

Environmental

Operating Temperature	-4°F ~ 122°F (-20°C ~ 50°C) for High-Brightness Version
Storage Temperature	-22°F ~ 158°F (-30°C ~ 70°C)
Humidity	MIL-STD-810G Method 507.5
Environmental Sealing	IP65
Vibration	MIL-STD-810G Method 514.6
Drop	MIL-STD-810G Method 516.6 Procedure IV Height of Drop: 122 cm (48 inch; 4 ft)
ESD	Air charge: +/- 8KV, Contact charge: +/- 4KV
Certifications and Standards	CE, FCC

Power Supply

AC / DC Adapter	AC 100V ~ 240V, 50Hz ~ 60Hz Output: 12V, 3.34A, 40W
Battery Life	Li-ion Battery 8-hour battery life based on test configurations
Master Battery	7.2V, 4540mAh, 32.7W
Slave Battery	Hot-Swappable Battery: 7.4V, 1530mAh, 11.3W (Optional)

Display

LCD	7" TFT-LCD/16:10, with LED backlight
Resolution	1280 x 800
Maximum Color	—
Dot Size	0.03925mm (H) x 0.11775mm (V)
Brightness	700/300 nits
Viewing Angle	Horizontal: 178° (Typical), Vertical: 178° (Typical)

Touch Screen

Touch Type	7" Projected Capacitive Multi-Touch Screen (700 nits with 10 points/300 nits with 5 points)
Light Transmission	Min. 85%

Chapter 2

Getting Started

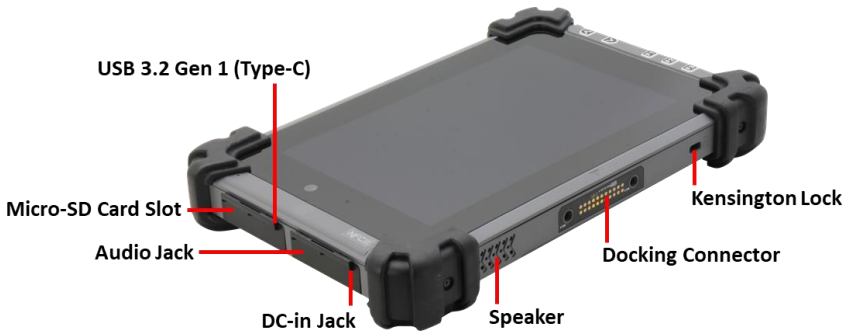
2.1 Product Overview

Front View



Function	Description
Light Sensor	Ambient Light Sensor
2MP Front Camera	2MP Front Camera
HF RFID	ISO 15693 (R/W) ISO 18092 (R/W) ISO 14443-A (R/W) ISO 14443-B (Only Read UID) Dependent on Card Type
Function Key x 5	F1 (Ctrl+Alt+Del as Soft Reboot) F2 (Screenprint) F3 (Barcode Scanner Trigger) Volume Up Volume Down

Side View (Bottom-Left)



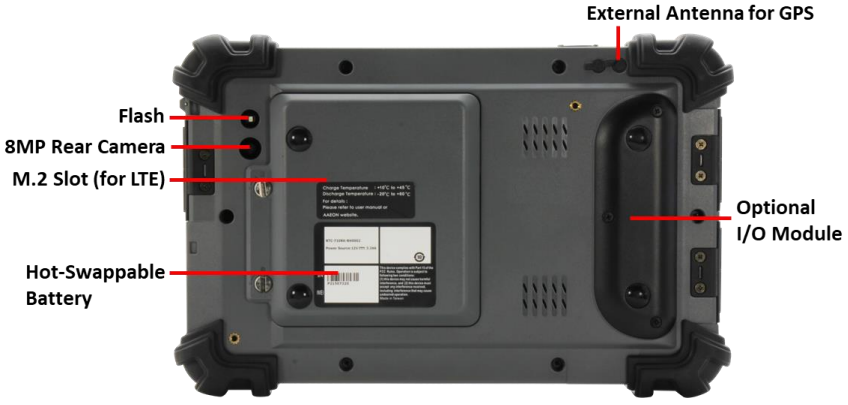
Function	Description
USB 3.2 Gen 1	USB Type-C
Micro-SD Card Slot	Micro-SD Card Slot
Audio Jack	3.5 mm Stereo Headphone Jack
DC-in Jack	Input: DC 12V
Speaker	Audio Out Speaker
Docking Connector	RTC-710AP Connection for Docking Station
Kensington Lock	Device Lock

Side View (Top-Right)



Function	Description
USB 2.0	Type A x 1
Nano SIM Card Slot	Nano SIM Card Slot
Power Button	(1) Power On or Shutdown Device (2) Enter Sleep Mode

Rear View



Function	Description
Flash	Rear Camera LED Flash
8MP Camera	With LED Flash
M.2 Slot	For LTE module (Need to order LTE version)
Battery Bay	Hot-Swappable Battery x 1
Optional I/O Module	Optional I/O Module
External Antenna for GPS	GPS + Galileo (Default), BeiDou (Optional) (Must order external GPS antenna version)

2.2 Notes Before Use

Before using your device, please read through the following instructions

- Use only the power adapter that comes with your device. Using a different power adapter may cause damage.
- The AC power cord is designed for the RTC-710AP only.
- This product is intended to be supplied by a Listed Power Adapter or DC power source, rated 12Vdc, 3A minimum, T_{ma} = 40°C. Please contact AAEON for further assistance.
- Using a power outlet is the best way to charge your device (refer to section 1.2 for the power adapter's voltage output and acceptable input).
- When using the device for the first time, fully charge the battery for up to 8 hours. If the device is inactive, charging the battery once per month is recommended to prevent battery life deterioration.
- There are two batteries in the RTC-710AP: Both batteries can be monitored at the title bar). Charge the device once Hot-swappable battery drops below 20%.
- Always allow your battery to be fully charged before use.
- To prolong battery life, allow a fully charged battery to discharge more than 95% before recharging.
- Ensure that the battery cover is properly secured by manually pushing the pin to lock position.
- The RTC-710AP CANNOT be charged via an USB connection.
- The IP65 waterproof protection may get damaged when subjected to shock greater than levels tested in MIL-STD-810G Method 516.6 Procedure IV. The protection may also be affected if the rubber connector fails to cover or close firmly.

2.3 Turning on the Device

The power button turns your device on and off. Hold the button for one second to power on.

To start or wake from sleep mode, hold the power button for 0.5 seconds until the shutdown confirmation is shown. If the system remains unresponsive, press and hold the power button to force power off (may result in data loss).

It is strongly recommended that the user back up important data regularly.

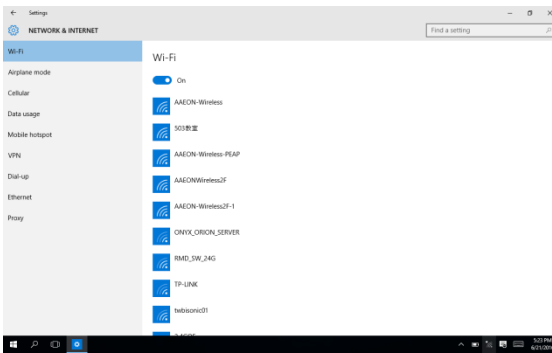
Insert the Battery Pack and ensure the battery cover is securely locked. The initial booting sequence may take several minutes to complete.

2.4 Network & Internet Configuration

To connect your RTC-710AP to Wi-Fi, first access the Network & Internet menu in the system settings.

Wi-Fi Settings

Step 1: Go to **Settings > Network & Internet > Wi-Fi**



Step 2: Select the Wi-Fi network or access point you wish to connect to.

Step 3: Type in the password and tap **Connect**.

Chapter 3

Accessories

3.1 Barcode Scanner

The barcode scanner accessory enables the RTC-710AP to read barcodes to perform various actions. Note: the barcode scanner does not ship with any software or SDKs.

Perform the following test to check if the scanner is working:

1. Open the Notepad application
2. Scan a barcode
3. If the scanner is working, the code will be entered as text into Notepad

For detailed specifications and operating instructions, please refer to the bar code scanner manual in the driver disk provided.

You can scan the barcode below to change the USB interface type.



@MENU_OPTO@ZZ@X.Z
@SU@ZZ@OTPO_UNEM@

Description	Code
Change to Maintenance mode	X.Z
Defaults USB HID	SU



@MENU_OPTO@ZZ@X.Z
@C01@ZZ@OTPO_UNEM@

Description	Code
Change to Maintenance mode	X.Z
Defaults USB VCP	C01

Chapter 4

Frequently Asked Questions

4.1 Frequently Asked Questions (FAQ)

1. How can I adjust the device's automatic sleep settings?

Press and hold the power icon on the task bar at the bottom of the window, select **Power Options**, and follow instructions to set the device's sleep settings.

2. How do I enable the touch keypad?

Press and hold the **Time and Date** option on the taskbar at the bottom of the window, select **Show Touch Keyboard**, after clicking, you will see a keyboard button appear in the taskbar.

3. How do I force shutdown?

Press and hold the power button for 10 seconds to force shutdown.

4. How do I disable screen auto-rotation?

Settings -> Display -> Rotation lock -> set to On.

Or click the icon on the far right of the taskbar, click **Expand** and set **Rotation lock** to On.

5. How do I set the device's time and time zone settings?

Settings -> Time & Language -> Date & time.

If there is a network connection, you can also click **Set Time Automatically** followed by **Set Time Zone Automatically**.

6. How do I adjust the language settings?

Settings -> Time & Language -> Language.

To download additional languages, a network connection is required.

Appendix A

Statements

A.1 Safety Caution

Important Safety Instructions

Power Safety Requirement

Products with electrical current ratings up to 3A and weighs more than 1 Kg must use approved power cords greater than or equal to: VCTF, 3G or 0.75mm².

Basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

- Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
- Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
- Do not use the telephone to report a gas leak in the vicinity of the leak.
- Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.

Instructions importantes de sécurité.

Exigences de sécurité concernant l'alimentation.





Les produits dont le courant électrique monte jusqu'à 3A et pesant plus de 1Kgs doivent utiliser un cordon d'alimentation approuvé égal ou supérieur à VCTF, 3G ou 0.75mm²

Des mesures de précaution de base doivent toujours être suivies afin de réduire les risques d'incendie, de choc électrique et de blessures aux personnes, incluant :

- *Ne pas utiliser ce produit près de l'eau, par exemple dans une baignoire, une cuvette, un évier, une machine à laver, un sous-sol humide ou une piscine.*
- *Eviter d'utiliser un téléphone (autre que sans fil) pendant un orage électrique ? il y a un risque de choc électrique à distance lié à la foudre.*

- *Ne pas utiliser le téléphone pour alerter lors d'une fuite de gaz si vous êtes dans le voisinage de la fuite*
- *Utiliser seulement le cordon d'alimentation et la batterie indiqués dans le manuel. Ne pas jeter les batteries dans le feu. Elles pourraient exploser. Vérifier les dispositions locales de recyclage.*

A.2 Battery Disposal

	<p>There is a risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.</p> <p><i>Il y a un risque d'explosion si la batterie est remplacée par un autre type incorrect.</i></p> <p><i>Disposer de la batterie en accord avec les instructions.</i></p>
	<p>This symbol indicates that the battery should NOT be placed in municipal waste.</p>
	<p>DO NOT throw the tablet with municipal waste. This product is designed for proper reuse of parts and recycling. This symbol indicates that the products (electrical, electronic equipment and mercury-containing button cell battery) should not be placed in municipal waste. Check local regulations for disposal of electronic products.</p>
	<p>SAFE TEMP: The RTC-710RK should only be used in environments between -20°C (-4°F) and 50°C (122°F).</p>

A.3 Battery Caution

There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

*Il y a un risque d'explosion si la batterie est remplacée par un autre type incorrect.
Disposer de la batterie en accord avec les instructions.*

1. User Manual

Read user manual before using the battery pack. Maintain a copy of the manual for reference as needed.

2. Exposure to Sunlight

Do not use, charge or store battery pack in direct sunlight, or leave in a vehicle unattended. This may shorten the battery's life, reduce charging capacity, or cause the battery to generate heat or catch fire.

3. Static Electricity

Battery pack features a protection circuit designed to prevent damage to the battery pack during normal use. Do not use or store near sources of static electricity (greater than 100V), as this may damage the protection circuit, resulting in damage to the battery pack, battery rupture, or fire.

4. Charging Temperature Range

Recommended charging temperature range is 10°C to 45°C. Do not charge the battery pack outside of the recommended range, as this may shorten the battery's life, reduce charging capacity, damage the battery pack, or cause it to generate heat.

5. Charging Method

If using a charging dock or accessory, please read the user manual for the charger before use and follow the recommended charging methods in that manual.

6. First Time Use

If you are using a battery pack for the first time and notice rust, bad smell, or something abnormal (ex: inflated), DO NOT USE the battery pack. Contact the vendor for immediate replacement.

7. Leakage

If the battery pack is leaking and the fluid comes in contact with clothing or skin, immediately wash with fresh water. The battery fluid may cause skin irritation.

8. Storage Conditions

When storing a battery pack for long periods of time, store in a dry place with no exposure to corrosive gases, within the following temperature ranges:

Less than 1 month, -20°C to 50°C

Less than 3 months, -20°C to 40°C

Less than 1 year, -20°C to 20°C

Check regularly to ensure there is no condensation on the battery pack.

9. Long Term Storage Maintenance

When storing battery packs for long periods of time, in order to maintain battery pack life and charging capability, the battery pack should be charged to 50% capacity every 30-45 days.

If the battery pack remains in under-voltage state for a long time, DO NOT use fast charging. It is recommended that you ship the battery to AAeon for inspection before use.

10. Do not use the battery pack if any part of it is protruding or inflated. Replace with a new battery pack immediately.
11. If the battery pack cannot be charged (won't hold a charge, system is unable to charge it), replace the battery pack with a new one immediately.
12. AAEON suggests replacing the battery pack after one year to ensure consistent performance of your rugged tablet device.

A.4 Adapter Caution

This RTC is for use with model NO. A0403TD-120033 (AAEON Part number: 1255X00008).

Ce modèle RTC est à utiliser avec le modèle n° A0403TD-120033. (AAEON Référence : 1255X00008).

A.5 FCC 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 or more 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.

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.

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.

RF Exposure Warning

The equipment complies with FCC RF exposure limits set forth for an uncontrolled environment.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

IMPORTANT NOTE:

Federal Communication Commission (FCC) Radiation Exposure Statement

This EUT is compliance with SAR for general population/uncontrolled exposure limits in ANSI/IEEE C95.1-1999 and had been tested in accordance with the measurement methods and procedures specified in OET Bulletin 65 Supplement C.

A.6 Regulatory Information and Disclaimers

Installation and use of this Wireless LAN device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution of the connecting cables and equipment other than manufacturer specified. It is the responsibility of the user to correct any interference caused by such unauthorized modification, substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government regulations arising from failing to comply with these guidelines.