

# RTC-700RK

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Rugged Tablet Computer

User's Manual 1<sup>st</sup> Ed

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## Acknowledgement

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- Cortex is the registered trademark of ARM Holdings
- Android is the trademark of Google Inc.

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## Packing List

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

Item	Quantity
● RTC-700RK with Android 6.0.1	1
● AC/DC power adapter	1

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

## About this Document

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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 [AAEON.com](http://AAEON.com) for the latest version of this document.

## Safety Precautions

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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. Do not cover the openings on the device to ensure optimal heat dissipation.
13. Watch out for high temperatures when the system is running.
14. Do not touch the heat sink or heat spreader when the system is running
15. Never pour any liquid into the openings. This could cause fire or electric shock.
16. 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.

17. 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
18. **DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.**

## FCC Statement

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### **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.*



China RoHS Requirements (CN)

产品中有毒有害物质或元素名称及含量

AAEON Panel PC/ Workstation

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	○	○	○	○	○	○
<p><b>O:</b> 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 <b>SJ/T 11363-2006</b> 标准规定的限量要求以下。</p> <p><b>X:</b> 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 <b>SJ/T 11363-2006</b> 标准规定的限量要求。</p> <p><b>备注:</b> 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、触控模块为选购品。</p>						

# China RoHS Requirement (EN)

Poisonous or Hazardous Substances or Elements in Products

AAEON Panel PC/ Workstation

Component	Poisonous or Hazardous Substances or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)
PCB & Other Components	○	○	○	○	○	○
Wires & Connectors for External Connections	○	○	○	○	○	○
Chassis	○	○	○	○	○	○
CPU & RAM	○	○	○	○	○	○
Hard Disk	○	○	○	○	○	○
LCD	○	○	○	○	○	○
Optical Drive	○	○	○	○	○	○
Touchscreen	○	○	○	○	○	○
PSU	○	○	○	○	○	○
<p>○: The quantity of poisonous or hazardous substances or elements found in each of the component's parts is below the SJ/T 11363-2006-stipulated requirement.</p> <p>X: The quantity of poisonous or hazardous substances or elements found in at least one of the component's parts is beyond the SJ/T 11363-2006-stipulated requirement.</p> <p>Note: The Environment Friendly Use Period as labeled on this product is applicable under normal usage only</p>						

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# Chapter 1

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## Product Specifications

## 1.1 Specifications

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### System

- **Processor** ARM® Cortex® A17 Quad-core 1.6GHz
- **System Memory** DDR3L 2 GB SDRAM
- **LCD Display** 7" (1280 x 800) TFT LCD with 5-point P-cap 7H  
Anti-Scratch Screen  
WiFi b/g/n
- **Communication** Bluetooth 4.1 downward compatibility  
  
Mini USB x 1
- **I/O Port** USB Type A x 1  
Mini HDMI x 1  
3.5 mm Stereo Headphone Jack x 1  
DC-In Jack x 1  
Built-In Speaker & Microphone  
10-pin Cradle Pin  
SIM Card Slot  
Micro SD card slot
- **Storage** 16 GB eMMC Flash
- **Navigation** GPS/ Glonass  
E-Compass
- **Camera** 8M Pixel AF Camera  
Built-in Light Sensor
- **Sensor** Built-in G-Sensor  
Built-in 3-axis Digital Gyroscope  
Built-in Vibration Motor
- **OS** Android 6.0.1

## Mechanical

- Color Black
- Dimension (W x H x D) 136.6 x 219 x 21 mm (5.38 x 8.58 x 0.83")
- Gross Weight 0.57 Kg (1.25 lb)
- Carton Dimension 245 x 158 x 82 mm (96.5 x 62.2 x 32.3")

## Environmental

- Operating Temperature -20°C ~ 50°C (-4 ~ 122°F)
- Storage Temperature -55°C ~ 75°C (-67 ~ 167°F)
- Operating Humidity 10 ~ 75%
- Water/ Dust Protection IP65  
Rating
- Vibration Met MIL-STD-810G-514.6 Procedure I Cat.24,  
Fig 514.6E-1 & 514.6E-2 (Unit is non-operating)  
ASTM 4169-99 Truck Assurance Level II,  
Schedule E (Unit is non-operating)
- Drop 26 drops from 150 cm height to 2" plywood  
over concrete with bumpers & unit off  
2 units to pass  
MIL-STD-810G-516.6, Procedure IV
- ESD Air +/- 8KV, Contact +/- 4KV
- EMI/ Safety CE/ FCC Class B/ UL

## Power Supply

AC/DC Adapter	AC Power Input: 100 ~ 240 V, 50 ~ 60 Hz, 24 W output: 12 V, 3 A
Battery	Lithium-Polymer High Capacity Battery swappable, 6 hrs 1) Master BAT/Hard pack: 7.4V 1530 mAh 2) Slave BAT/Soft pack: 7.4V 1530 mAh

## LCD

● Display Type	7" TFT LCD Module with LED Backlight
● Max. Resolution	1280 x 800
● Max. Colors	16.7 M
● Dot Size (H x W)	0.1695 x 0.0565
● Luminance (cd/m <sup>2</sup> )	400 nit
● Viewing Angle	Horizontal: 178° Vertical: 178°

# Chapter 2

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Getting Started



## 2.1 Product Overview

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### Front View



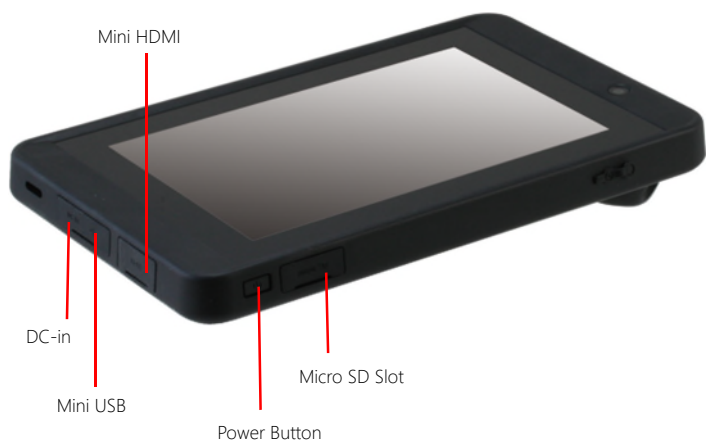
Side View (Left)



COM/ Ethernet Module (Optional)

Part	Function
USB Type A	You may connect a USB type A device (ie USB flash drive) or extension cable directly to the tablet.
3.5 mm Audio Jack	Usable with any audio device with a 3.5 mm jack.
SIM Card Slot	Usable with standard-size SIM cards only.
Cradle Interface	For interaction with the tablet's docking station.

Side view (Right)



Part	Function
Mini HDMI Port	Output only, usable with a Micro HDMI cable
DC-in Jack	Connect the DC power cable to this jack.
Mini USB	Usable with a Micro USB cable.
Power Button	Turns the tablet on/off. If the system is unresponsive, press and hold the button to forced power off.
Micro-SD Card Slot	A micro-SD card (or adapter) can be inserted here.

Rear View



Part	Function
Scanner Trigger/ Multi Function Button	Turns scanners on/off
Battery Bay	Battery bay for battery 2 (battery 1 is built-in)

## 2.2 Notes Before Use

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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 cable is designed for the **RTC-700RK only**
- This product is intended to be supplied by a Listed Power Adapter or DC power source, rated 12Vdc, 3A minimum, Tma = 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 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 deterioration.
- There are two batteries in the **RTC-700RK**: Battery 1 is internal while battery 2 is swappable by the user (both batteries can be monitored at the title bar). Charge the device once battery 1 drops below 20%
- Always allow your battery to be fully charged before use. Calibrating the battery before use is also highly recommended.
- 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-700RK **CANNOT** be charged via an USB connection.
- The IP65 waterproof protection may get damaged when subjected to shocks 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

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- The power button turns your device on and off. Hold the button for three seconds to power on.
- To start or wake it up from sleep mode, hold the power button for 0.5 seconds till 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 important data is backed up on a regular basis.

## 2.4 Touch Controls

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Gusture	Action
Single Taps	Single taps allow users to open any files or applications or select text input area
Long Tap (Tap and Hold)	Long tapping an icon allows it to be moved freely on the screen. This gesture also opens the Android context menu, letting you cut, copy, rename, delete the selected file, or select multiple files for batch actions

# Appendix A

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Statements



## A.1 Statements

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### Declarations and Safety Statements

#### Federal Communications Commission Statement

This device 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 causes 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 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 the equipment.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## RF Exposure Information (SAR)

This device meets the government's requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard for wireless devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg. \*Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands. This device was tested according to FCC SAR procedure, and was tested directly contacted with the Body. While there may be differences between the SAR levels of various devices and at various positions, they all meet the government requirement.

The FCC has granted an Equipment Authorization for this device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this device is on file with the FCC and can be found under the Display Grant section of [www.fcc.gov/oet/ea/fccid](http://www.fcc.gov/oet/ea/fccid) on the FCC ID: OHBRTC700RKWBG

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

## A.2 Canadian Notice

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### ISED Regulations

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This Class B digital apparatus complies with Canadian ICES-003.

**Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.**

### ISED Radiation Exposure Statement

This EUT is compliant with SAR for general population/uncontrolled exposure limits in ISED RSS-102 and has been tested in accordance with the measurement methods and procedures specified in IEEE 1528. This equipment should be installed and operated with minimum distance 0 cm between the radiator and your body.

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

The County Code Selection feature is disabled for product marketed in the U.S. and Canada.

For products available in the U.S./Canada markets, only channels 1-11 can be operated. The selection of other channels is not possible.

Canada, avis d'Industrie Canada (ISED):

Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-247.

Son fonctionnement est soumis aux deux conditions suivantes: (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence,

notamment les interférences qui peuvent affecter son fonctionnement. L'identifiant ISED de cet appareil est 23644-RTC700RKWBG

Informations concernant l'exposition aux fréquences radio (RF):

La puissance de sortie émise par cet appareil sans fil est inférieure à la limite d'exposition aux fréquences radio d'Industrie Canada (ISED). Utilisez l'appareil sans fil de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique a été évalué et démontré conforme aux limites SAR (Specific Absorption Rate – Taux d'absorption spécifique) d'ISED lorsqu'il est installé dans des produits hôtes particuliers qui fonctionnent dans des conditions d'exposition à des appareils portables.

Ce périphérique est homologué pour l'utilisation au Canada. Pour consulter l'entrée correspondant à l'appareil dans la liste d'équipement radio (REL - Radio Equipment List) d'Industrie Canada rendez-vous sur:

<http://www.ic.gc.ca/app/sitt/reletel/srch/nwRdSrch.do?lang=eng>

Pour des informations supplémentaires concernant l'exposition aux RF au Canada rendez-vous sur :

<http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html>

## A.3 Safety Caution

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### 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 0.75mm<sup>2</sup>.

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 0.75mm<sup>2</sup>*





*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.4 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-700RK should only be used in environments between -20°C (-4°F) and 50°C (122°F).</p>

### Regulatory information / 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.



## A.5 Battery Caution

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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.*

### Regulatory information / 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.

## A.6 Adapter Caution

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This RTC is for use with model NO. FSP036-RBBN2

*Ce modèle RTC est à utiliser avec le modèle n° FSP036-RBBN2.*

