AMobile

G47

Mobile Computing Device

User's Manual

Version 4.0

2018.11

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Revision History

Version	Release Time	Description
1.0	November 2018	Initial release
2.0	Dec 2018	Add FCC warning
3.0	Dec 2018	Add CE warning
4.0	Jan 2019	Correct “I/O Interface” description

Copyright

Disclaimer

The information in this document is subject to change without prior notice in order to improve the reliability, design and function. It does not represent a commitment on the part of the manufacturer.

Under no circumstances will the manufacturer be liable for any direct, indirect, special, incidental, or consequential damages arising from the use or inability to use the product or documentation, even if advised of the possibility of such damages.

About This Manual

This user's manual provides the general information and installation instructions for the product. The manual is meant for the experienced users and integrators with hardware knowledge of personal computers. If you are not sure about any description in this manual, consult your vendor before further handling.

We recommend that you keep one copy of this manual for the quick reference for any necessary maintenance in the future. Thank you for choosing AMobile products.

Contents

Declaration of Conformity

CE

Environmental Conditions

Working Temperature -10 ~ 55℃

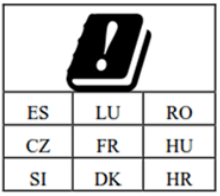
Working humidity 65+/-20%RH

Hereby, Hong Kong AMobile Intelligent Corp. Limited Taiwan Branch, declares that this Mobile Computing Device/ PD470, is in compliance with the essential Requirements and other relevant provisions of Radio Equipment Directive 2014/53/EU.

Environment friendly disposal

You can help protect the environment!

Please remember to respect the local regulations: hand in the non-working electrical equipment to an appropriate waste disposal center.



A warning that batteries(battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

CAUTION RISK OF EXPLOSION IF BATTERY IS RWPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERYS ACCORDING TO THE INSTRUCTINS

Charge at constant current of 0.2C until voltage reaches 4.25V, then charge at constant voltage 4.25V till charge current reduce to 0.02C

The following standards have been applied for the investigation of compliance:

5G (if necessary)
For 5150-5250 and 5725-5850 frequency band,
Operations in the 5150-5250 and 5725-5850 band are restricted to indoor usage only.

Product Name:	Mobile Computing Device
Model No.:	G47
Battery:	Manufacturer: Hong Kong AMobile Intelligent Corp. Limited Taiwan Branch DC 3.8V 4000mAh

Draft ETSI EN 301 489-1 V2.2.0 (2017-03)
Final draft ETSI EN 301 489-3 V2.1.1 (2017-03)
Draft ETSI EN 301 489-17 V3.2.0 (2017-03)
Draft ETSI EN 301 489-19 V2.1.0 (2017-03)
Draft ETSI EN 301 489-52 V1.1.0 (2016-11)
ETSI EN 301 511 V9.0.2 (2003-03)
ETSI EN 301 908-1 V11.1.1 (2016-07)
ETSI EN 301 908-2 V11.1.1 (2016-07)
ETSI EN 301 908-13 V11.1.1 (2016-07)
ETSI EN 303 413 V1.1.1 (2017-06)
ETSI EN 300 330 V2.1.1 (2017-02)
ETSI EN 301 893 V2.1.1 (2017-05)
ETSI EN 300 328 V2.1.1 (2016-11)
EN 62479: 2010
EN 50566: 2017
EN 50360: 2017
EN 62209-1: 2016
EN 62209-2: 2010
IEC 62133-2: 2017
EN 62471: 2008
EN 60950-1: 2006 +A11: 2009 +A1: 2010+A12: 2011+A2: 2013
EN 50332-1: 2013
EN 50332-2: 2013
EN 55032:2015
EN 55024: 2010
EN 61000-3-2: 2014
EN 61000-3-3: 2013

Manufacturer Name: Hong Kong AMobile Intelligent Corp. Limited Taiwan Branch
Manufacturer Address: 8F.-1, No.700, Zhongzheng Rd., Zhonghe Dist.,
New Taipei City 235, Taiwan

Operation Frequency:	GSM/GPRS/EGPRS 900: Tx: 880-915MHz, Rx: 925-960MHz GSM/GPRS/EGPRS 1800: Tx: 1710-1785MHz, Rx: 1805-1880MHz GSM/GPRS/EDGE 850: 824-849MHz (Not used in Europe) PCS/GPRS/EDGE 1900: 1850-1910MHz (Not used in Europe) WCDMA Band I: Tx: 1920-1980MHz, Rx: 2110-2170MHz WCDMA Band VIII: Tx: 880-915MHz, Rx: 925-960MHz WCDMA Band II: 1850-1910MHz (Not used in Europe) WCDMA Band V: 824-849MHz (Not used in Europe) WCDMA Band IV:1710-1755MHz (Not used in Europe) LTE Band 1: Tx: 1920-1980MHz, Rx: 2110-2170MHz LTE Band 3: Tx: 1710-1785MHz, Rx: 1805-1880MHz LTE Band 7: Tx: 2500-2570MHz, Rx: 2620-2690MHz LTE Band 8: Tx: 880-915MHz, Rx: 925-960MHz LTE Band 20: Tx: 832-862MHz, Rx: 791-821MHz LTE Band 38: Tx: 2570-2620MHz, Rx: 2570-2620MHz LTE Band 40: Tx: 2300-2400MHz, Rx: 2300-2400MHz LTE Band 2: 1850-1910MHz (Not used in Europe) LTE Band 4: 1710-1755MHz (Not used in Europe) LTE Band 5: 823-850MHz (Not used in Europe) LTE Band 7: 2500-2570MHz (Not used in Europe) LTE Band 12: 699~716MHz (Not used in Europe) LTE Band 17: 704-716MHz (Not used in Europe) WiFi: 802.11b/g/n HT20: 2412-2472MHz 802.11n HT40: 2422-2462MHz 802.11a/n/ac: 5150-5250MHz Bluetooth: 2402-2480MHz GPS: 1.57GHz FM: 87.5~108MHz NFC: 13.56MHz
Max. RF output power:	GSM900: 33 dBm GSM1800: 30 dBm WCDMA FDD Band: 24 dBm LTE FDD/TDD Band: 23 dBm WiFi (2.4G) : 9.45 dBm EIRP WiFi (5G) : 9.40 dBm EIRP Bluetooth: 6.48 dBm EIRP NFC: 15.38 dBμA/m

The RF frequencies can be used in Europe without restriction.

This product is intended for sale and application in a business environment.

Emergency call

If any emergency arises, dial 112/911 (or other emergency call number) for emergency help.
Due to the nature of cellular networking, the success of emergency call is not guaranteed.

FCC Warning:

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.

Any changes or modifications not expressly approved by the guarantee of this device could void the user's authority to operate the device.

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.

This Mobile Computing Device meets the government's requirements for exposure to radio waves. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. Thestandards include a substantial safety margin designed to assure the safety of all persons regardless of age or health.

The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. Device types:

G47 (FCC ID: 2AQ5W-G47) has also been tested against this SAR limit. The highest SAR value reported under this standard during product certification for use at the ear is 0.524W/kg and when properly worn on the body is 0.571W/kg. This device was tested for typical body-worn operations with the back of the handset kept 10mm from the body. To maintain compliance with FCC RF exposure requirements, use accessories that maintain a 10mm separation distance between the user's body and the back of the handset. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided.

Body-worn Operation

This device was tested for typical body-worn operations. To comply with RF exposure requirements, a minimum separation distance of 10mm must be maintained between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.

5G

For 5150-5250 and 5725-5850 frequency band,

Operations in the 5150-5250 and 5725-5850 band are restricted to indoor usage only.

5G:

Any emission is maintained within the band of operation under all conditions of normal operation. The max. frequency stability is less than 20ppm.

RoHS

AMobile Intelligent Corporation certifies that all components in its products are in compliance and conform to the European Union's Restriction of Use of Hazardous Substances in Electrical and Electronic Device (RoHS) Directive 2002/95/EC.

The above mentioned directive was published on 2/13/2003. The main purpose of the directive is to prohibit the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE) in electrical and electronic products. Member states of the EU are to enforce by 7/1/2006.

AMobile Intelligent Corporation hereby states that the listed products do not contain unintentional additions of lead, mercury, hex chrome, PBB or PBDB that exceed a maximum concentration value of 0.1% by weight or for cadmium exceed 0.01% by weight, per homogenous material. Homogenous material is defined as a substance or mixture of substances with uniform composition (such as solders, resins, plating, etc.). Lead-free solder is used for all terminations (Sn(96-96.5%), Ag(3.0-3.5%) and Cu(0.5%)).

SVHC / REACH

To minimize the environmental impact and take more responsibility to the earth we live, AMobile hereby confirms all products comply with the restriction of SVHC (Substances of Very High Concern) in (EC) 1907/2006 (REACH --Registration, Evaluation, Authorization, and Restriction of Chemicals) regulated by the European Union.

All substances listed in SVHC < 0.1 % by weight (1000 ppm)

Safety Symbols

This symbol indicates that a potential hazard to personal safety exists from a laser source. When this symbol is displayed in this manual, pay special attention to the specific safety information associated with the symbol

Important Safety Instructions

Read these safety instructions carefully:

1. Read all cautions and warnings on the device.
2. Dropping it or letting it fall may cause damage
3. Make sure the correct voltage is connected to the device.
4. For pluggable device, the socket outlet should be near the device and should be easily accessible.
5. Disconnect this device from the A/C outlet before cleaning it. Use a moist cloth. Do not use liquid or sprayed detergent for cleaning.
6. Do not scratch or rub the screen with a hard object.
7. Never use any of the solvents, such as Thinner Spray-type cleaner, Wax, Benzene, Abrasive cleaner, Acid or Alkaline solvent, on the display. Harsh chemicals may cause damage to the cabinet and the touch sensor.

8. Remove dirt with a lightly moistened cloth and a mild solvent detergent. Then wipe the cabinet with a soft dry cloth.
9. If the device will not be used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
10. Never pour any liquid into openings. This may cause electrical shock.
11. Never open the device. For safety reasons, the device should be opened only by qualified service personnel.
12. If one of the following situations arises, get the device checked by service personnel:
    a. The power cord or plug is damaged.
    b. Liquid has penetrated into the device.
    c. The device does not work well, or you cannot get it to work according to the user's manual.
    d. The device has been damaged.
    e. The device has obvious signs of breakage.
13. Keep this User's Manual for later reference.
14. Do not leave this device in an uncontrolled environment where the storage temperature is below-20°C (-4°F) or above 55°C (131°F). This may damage the device.

Do not use the power adapter that isn't made for the device. Supplying the device with inappropriate voltage may cause harm to the battery or, even worse, burn the device.

Laser Safety

The device's barcode scanner that uses laser lights is a class 2 laser product. DO NOT stare into the laser beams or point the laser beam at anyone's eyes when the barcode scanner is in operation.

Rechargeable Battery Pack Safety

With very little care, you can optimize the battery life and maximize the lifespan of the battery. Most importantly, use only the device in its ideal operating temperature (as described in 1.5 Specifications) – do not leave it in a hot trunk during the summer.

- **Important Terms to Understand**

  "Battery life" means the time the device will run before it must be recharged (sometimes this is also called "playtime" or "runtime").

  "Battery lifespan" means the total amount of time your battery will last before it must be replaced.

- **Using the Device for the First Time**

  Be sure to fully charge (approx. 3 hours) the device when charging the device for the first time.

- **Long-Term Storage & Maintenance**

  If you are putting away the device for more than three months, it is recommended that get recharged every three months. If you store with an uncharged battery, it could fall into a deep worn-out state which would render it incapable of holding any charge. Be sure to store the device at the proper temperature (as described in 1.5 Specifications).

- **Battery Lifespan**

  The non-replaceable batteries for the device are designed to retain up to 80% of their original capacity after 300 charging and recharging cycles when properly maintained. You may choose to replace new battery with the help of qualified service personnel when it no longer holds the sufficient charge that meets your needs.

- The lithium-ion battery is currently one of the most popular battery packs. The best advantage is that it has no memory effect, so users needn't worry about that issue. Users can charge the battery anytime whether it is fully drained or not. However, it's recommended that users drain the battery until the system shows power shortage warning and then recharge the battery. Doing so is helpful to the reliability of your battery.
- Don't expose the battery to elevated heat situations such as under direct sunlight in a car or near fire.
- Don't disassemble the battery, or the battery leakage might cause skin or eye injury. If electrolyte leaking from the battery contacts your skin or clothing, immediately flush it with running water. If it splashes into eye, rinse the eye at least 15 minutes with clean water and then seek medical attention.
- To avoid battery leakage or explosion, don't discard the battery into water or fire, or put them near a heat source such as a gas stove or an oven.
- If you are putting away the battery for more than three months, it is recommended that the battery should be fully charged, and get recharged every three months. If you store the device with an uncharged battery, it could fall into a deep worn-out state which would render it incapable of holding any charge. Be sure to store your the device and battery at the proper temperature (as described in 1.5 Specifications).
- The battery consists of precise electrical components and cells. Do not drop or hit the battery.

General Cleaning Tips

You may need the following precautions before you begin to clean the device. When you clean any single part or component for the device, please thoroughly read and understand the details below.

1. We strongly recommended that you should shut down the system before you start to clean.
2. When you need to clean the device, please rub it with a piece of dry cloth.
3. Never get circuit board damp or wet.
4. Be cautious of all kinds of cleaning solvents or chemicals when you use it for the sake of cleaning. Some individuals may be allergic to the ingredients.
5. Try not to put any food, drink or cigarette around the device.

Cleaning Tools

Although many companies have created products to help improve the process of cleaning your devices and peripherals, users can also use household items to clean their devices and peripherals. Below is a listing of items you may need or want to use while cleaning your devices or peripherals. Keep in mind that some components in your device may only be able to be cleaned using a product designed for cleaning that component, if this is the case it will be mentioned in the cleaning.

- **Cloth:** A piece of cloth is the best tool to use when rubbing up a component. Although paper towels or tissues can be used on most hardware as well, we still recommend you to rub it with a piece of cloth.
- **Water or rubbing alcohol:** You may moisten a piece of cloth a bit with some water or rubbing alcohol and rub it on the device. Unknown solvents may be harmful to the plastics parts.
- **Cotton swabs:** Cotton swaps moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas in your keyboard, mouse, and other locations.
- **Foam swabs:** Whenever possible, it is better to use lint-free swabs such as foam swabs.

Recommended Cleaning Procedures

1. Close all application programs
2. Close operating software
3. Turn off the device
4. Remove all peripherals
5. Disconnect the power cable
6. Proceed to clean.

Disposing of the Device

- **Within the European Union**

EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste.

This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow the guidance of your local authority, or ask the shop where you purchased the product, or if applicable, follow any agreements made between yourself. The mark on electrical and electronic products only applies to the current European Union Member States.

- **Outside the European Union**

If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.

Additional Information & Technical Support

You can download the related technical documents such as datasheet and user's manual as well as driver on our website.

Please do not hesitate to call or e-mail our customer service when you still cannot get the information you need.

http://amobile-solutions.com/web_en/contact.php

E-mail: support@amobile.com.tw

Warranty

This product is warranted to be in good working order during the warranty period. Should this product fail to be in good working order at any time during this period, we will, at our option, replace or repair it at no additional charge except as set forth in the following terms. This warranty does not apply to products damaged by misuse, modifications, accident or disaster.

Vendor assumes no liability for any damages, lost profits, lost savings or any other incidental or consequential damage resulting from the use, misuse of, or inability to use this product. Vendor will not be liable for any claim made by any other related party.

Vendors disclaim all other warranties, either expressed or implied, including but not limited to implied warranties of merchantability and fitness for a particular purpose, with respect to the hardware, the accompanying product's manual(s) and written materials, and any accompanying hardware. This limited warranty gives you specific legal rights.

Return authorization must be obtained from the vendor before returned merchandise will be accepted. Authorization can be obtained by calling or faxing the vendor and requesting a Return Merchandise Authorization (RMA) number. Returned goods should always be accompanied by a clear problem description.

Chapter 1

Introduction

1.1 Product Highlights

- Fully rugged for warehousing / transportation / medical/ retail applications
- 1.5M (5ft.) drop resistance
- 5" TFT color LCD 1280 x 720 HD resolution
- Projected capacitive multi-touch panel with anti-reflection Corning® glass
- High mobility with multiple connectivities including WLAN, Bluetooth and WWAN
- Optional built-in barcode imager
- With optimized battery life up to 8 hours
- G-sensor, gyroscope, light sensor, E-compass, GPS navigation
- Fingerprint authentication for security protection
- Lightweight design for daily use, 243g

1.2 Package Contents

Upon opening the package, carefully inspect the contents. If any of the items is missing or appears damaged, contact your local dealer or distributor. The package should contain the following items:

	5” Rugged Android™ Mobile Computing Device
	USB Cable
	User Manual

1.3 Parts of the Device

1	Barcode Scanner	6	Barcode Trigger Key (Left)
2	Front Camera	7	Volume Key
3	USB Port	8	Power Key
4	SIM Card Slot	9	Barcode Trigger Key (Right)
5	Function Key	10	Rear Camera

1.4 Dimension

1.5 Specifications

Durability Features	
1.5M (5ft.) drop-resistance	
System	
CPU	octa-core processor MTK 8768 4*A53 2.0GHz/4*A53 1.5GHz
OS	Android™ 9
Memory	2GB
Storage	16GB
Audio	Integrated microphone
	Integrated speaker
Peripherals and Devices	
Camera	Front: 5.0 megapixel camera
	Rear: 13.0 megapixel AF camera with LED
Sensor	Accelerometer (G-sensor)
	3-axis digital gyroscope
	E-Compass/Proximity Sensor
Light Sensor	Ambient light sensor
WLAN	Integrated IEEE 802.11 a/b/g/n /ac
Bluetooth	Integrated Bluetooth 4.1 LE + with HID input
WWAN	Support, details refer to datasheet
Navigation	GPS, Glonass, Beidou
Barcode Scanner	1D/2D barcode reader with physical trigger buttons
I/O Interface	
SIM /SD Card Type	1x Nano+ SD Card 2x Nano (option)
SD Storage	up to 128GB

LCD Display	
Size/Type	5” TFT LCD
Resolution	1280 x 720
Touch Screen	
Type	5-point Projected Capacitive Touch screen
	Corning® glass coating w/ anti-reflection coating
Power Supply	
Power System	Lithium-ion battery
	Lithium-ion rechargeable battery
Battery Type	non-replaceable
Battery Capacity	4000mAh
Battery Life	Up to 8 hours battery life
Adapter Input	Input: AC100~240C, 50~60 Hz
Adapter Output	DC power output: 5V/2A, 9V/2A, 12V/1.5A
Mechanical & Environmental	
Storage Temp.	-40 ~ 70°C (-40°F ~ 158°F)
Operating Temp.	-10 ~ 55°C (5°F ~ 131°F)
Dimensions (W x H x D)	160 x 76 x 22 mm (6.3” x 2.99”x 0.87”)
Weight	243g (0.54lb) (with battery)

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Chapter 2

Getting Started

2.1 Installing microSD and SIM Card

To install the microSD card and/or SIM card:

Figure 2-1
Pull out the plug

Figure 2-2
Insert the small hole with a metal pin

Figure 2-3
Take out the SIM Tray when it pops up.

Figure 2-4
As the diagram shown, insert SIM Card and TF Card.

2.2 Charging the Battery

Due to shipment, the battery is partially drained when the package is delivered to you. Be sure to charge the battery to full when you are charging it for the first time.

Caution: Do not charge the PD470 via computer USB connection due to that the voltage output from computer USB is not enough to charge the device.

2.2.1 Charging the Battery

To charge the battery using a electrical outlet:

1. Using the USB cable that comes with the device, connect the small end of the cable to the USB port on the device.
2. Then connect the other end of the USB cable to the power adapter.
3. Connect the power adapter to an electrical outlet.

Step 1: Connect the same end of the USB cable to the device.
Step 2: Connect the USB cable to the power adapter.
Step 3: Connect the power adapter to a power outlet.

Warning: Use only the power adapter that comes with your device. Using a different power adapter may damage your device and may result in poor performance. It may also invalidate warranty applying to the device.

2.2.2 Checking the Battery Level

When the charging is in process, a battery indicator will appear in the status bar showing the charging percentage. Unplug the USB cable from the device when the battery is fully charged.

2.3 Installing/Replacing the Battery

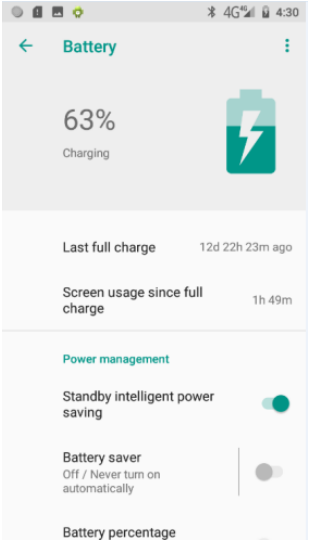
Please contact qualified service personnel for battery replacement.

2.4 Optimizing Battery Life

To optimize the operating time of the battery, it is recommended that you do the following:

- Decrease the LCD display brightness.
- Set a shorter timeout of inactivity to allow the screen enter sleep mode.
- Turn off the display if you are not using it.
- Always exit the applications if it is not in use.
- Disable the Wi-Fi, Bluetooth or GPS function if you are not using it.
- Disable the App that heavily drains the battery if you are not using it.

  To view the battery usage by access settings-> Battery.



- Disconnect USB devices such as USB flash drive if it is not in use.

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