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# PROD1185

## Personal Digital Assistant

# User's Manual

Version 1.0



2019.8

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## Revision History

Version	Release Time	Description
1.0	July 2020	Initial release

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## Copyright

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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.

This product is a Personal digital assistant that provides computing and information storage and retrieval capabilities for personal or business use, often for keeping schedules, calendars and address book information handy.

This device is human-computer interaction in which a computer is expected to be transported during normal usage, which allows for transmission of data, voice and video.


# Declaration of Conformity

## CE

Hereby, Industrea Mining Technology., declares that this Personal Digital Assistant/ PROD1185, is in compliance with the essential Requirements and other relevant provisions of Radio Equipment Directive 2014/53/EU.

**Restriction of 5GHz pictogram and country table**

This production is restricted indoor use only for 5150-5250MHz



AT	BE	BG	CH	CY	CZ	DE	DK	EE	EL	ES
FI	FR	HR	HU	IE	IS	IT	LI	LT	LU	LV
MT	NL	NO	PL	PT	RO	SE	SI	SK	TR	UK

CE

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Manufacturer Name:	Industrea Mining Technology
Manufacturer Address:	3 Co-Wyn Close, Fountaindale, New South Wales, 2258, Australia
Operation Frequency:	<p>LTE-FDD/ B1:1920~1980MHz  B2:1850~1910MHz  B3:1710~1785MHz  B4:1710~1755MHz  B5:824~849MHz  B7:2500~2570MHz  B8:880~915MHz  B12:698~716MHz  B13:777~787MHz  B18: 815~830MHz  B19:830~845MHz  B20:832~862MHz  B25:1850~1915MHz  B26:814~849MHz  B28:703~748MHz</p> <p>LTE-TDD/ B38:2570~2620MHz  B39:1880~1920MHz  B40:2300~2400MHz  B41:2496~2690MHz</p> <p>WCDMA/ B1:1920~1980MHz  B2:1850~1910MHz  B4:1710~1755MHz  B5:824~849MHz  B6:830~840MHz  B8:880~915MHz  B19: :830~845MHz</p> <p>GSM/ GSM850: 824~849MHz  GSM900: 880~915MHz  DCS1800: 1710~1785MHz  PCS1900: 1850~1910MHz</p> <p>Wi-Fi: 802.11b/g/n HT20: 2412-2472MHz  802.11a/n/ac: 5150-5250MHz</p>

	Bluetooth: 2402-2480MHz RFID:13.56MHz
Max. EIRP:	13.56MHz NFC-48.95dB $\mu$ A/m@3m Bluetooth 6.69dBm (EIRP) WLAN 2.4GHz band16.95dBm (EIRP) WLAN U-NII-1 band 21.33dBm (EIRP) GSM 900 band33 $\pm$ 2dBm DCS 1800 band30 $\pm$ 2dBm UMTS Bands24+1.7/-2.7dBm LTE bands23 $\pm$ 2.7dBm

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

## **FCC Warning:**

This device complies with Part 15 of FCC Regulations. 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 FCC Regulations. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates 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 different circuit from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and a human body.



**IC Warning:**

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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED définies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et un corps humain.

5150–5250 MHz is only for indoor use

5150–5250 MHz est uniquement pour une utilisation en intérieur

## **RoHS**

Industrea Mining Technology. 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 2015/863/EU

## **SVHC / REACH**

To minimize the environmental impact and take more responsibility for the earth on which we live, Industrea Mining Technology. 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).

## Important Safety Instructions

Read these safety instructions carefully:

1. Read all cautions and warnings on the device.
2. Dropping the device 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. Do not scratch or rub the screen with a hard object.
6. 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 case and the touch sensor.
7. Remove dirt with a lightly moistened cloth and a mild solvent detergent. Then wipe the case with a soft dry cloth.
8. If the device will not be used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
9. Never pour any liquid into the device openings. This may cause electrical shock.
10. Never open the device. For safety reasons, the device should be opened only by qualified service personnel.
11. 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.
12. Keep this User's Manual for later reference.
13. Do not leave this device in an uncontrolled environment where the storage temperature is below -30°C (-22°F) or above 80°C (176°F). This may damage the device.



Do not use a 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.

To prevent possible hearing damage, do not listen at high volume levels for long periods.

## 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 power the device off 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 the 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, drinks or cigarettes on or near 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 cleaned using a product designed for cleaning that component. If this is the case it will be mentioned in the cleaning.

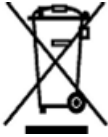
- **Cloth:** A piece of soft, nonabrasive cloth is the best tool to use when rubbing a component. Although paper towels or tissues can be used on most hardware as well, we still recommend you to rub it with a piece of cloth.
- **Water or rubbing alcohol:** You may moisten a piece of cloth a bit with some water or rubbing alcohol and rub it on the device. Unknown solvents may be harmful to the plastic parts.
- **Cotton swabs:** Cotton swabs moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas but care must be taken to avoid introducing liquids into any device openings.
- **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 in order to comply with the correct disposal method.

## 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.

Vendor disclaims 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.

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# Chapter 1

## Introduction

## 1.1 Specifications

Main feature		Detail items	
Basic information		Platform	MTK6762
		CPU	8*Cortex-4*A53 2.0GHz/4*A53 1.5GHz
		OS	Android 9.0
		ROM (eMMC)	32GB
		RAM	3GB
		SD card Capability	up to 128GB
Connectivity	WWAN(data only)	EG25G (supported band will follow module's certification definition)	LTEFDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28
			LTE TDD: B38/B39/B40/B41
			UMTS: B1/B2/B4/B5/B6/B8/B19
			GSM: B2/B3/B5/B8
	WLAN	Wi-Fi	802.11 a/b/g/n/ac 2.4G+5G
	PAN	Bluetooth	BT4.1(BLE HS compliant)
	RFID	NFC	Yes
	Slot	SIM type	micro SIM
SD slot		micro SD	
Customized connector	RS232/Power in	5V, GND, Tx,Rx	
Display		Main display vision size (inch)	5.0"
		Main display resolution	HD(1280×720)
		Main display	TFT
		Main display touch technology	Capacity
		Multi-touch capability	5 points
		TP	AGC
		Brightness (cd/m <sup>2</sup> )	500 cd/m <sup>2</sup>

Camera	Front	5.0Mpxl (FF)
	Rear	13Mpxl(AF)
	Camera Flash	LED
Sensors	GPS	Yes
	Glionass	Yes
	Galileo	Yes
	Proximity sensor	Yes
	Light sensor	Yes
	E-Compass	Yes
	G-sensor (Accelerate sensor)	Yes
	Gyroscope	Yes
	Barometer	Yes
Cable	I/O	4pin - Vin, GND, Tx, Rx (only Tx, Rx with isolation)
	Wires/terminal	4 wires with 20AWG at less(with Molex Crimp terminal PN "43030-0007")
Other	ESD	±8kV air discharge, ±4kV direct discharge
	Drop	1.5 m (conditional drop)
	Sealing level rate	IP67
	Power Input	5~9V, 3A
	Storage Temperature	-30°C ~ 80°C
	Operating Temperature	-20°C ~ 65°C

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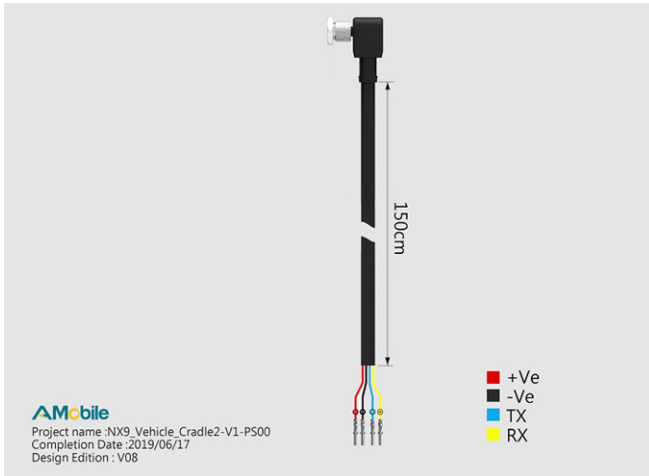
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# Chapter 2

## Accessory

**1. Accessory :**

**1.1 Cable**



**Specification**

- **4 wires with 20 AWG**
- **90 degree M8 IP67 connector**
- **Length: 1.5m**
- **With Molex Crimp Terminal(Molex PN: 43030-0007)**

**Pin define**

Pin	Signal	Cable(color)
1	+Ve	Red
2	-Ve	Black
3	Tx	Blue
4	Rx	Yellow

**1.2 Ram mount: RAM-B-347U**



The RAM-B-347U base consists of a 1" diameter rubber ball connected at right angles to a 2" x 1.7" square base. The base has four pre-drilled holes at each corner, making

the universal 1.5 x 1.188 (hole spacing) AMPS hole pattern

This is mainly use to connect to the holder or stand.

- **Material:** Powder Coated Marine Grade Aluminum
- **Ball Size:**B Size 1" Rubber Ball
- **Note:**The "U" in the part number reflects product packaged in poly bag.
- **Weight:**0.1 lbs.

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