AsReader®

ASR-A23D

Dock-Type Barcode Reader for Android

User's Manual

Contents

Preface

Thank you for purchasing the AsReader ASR-A23D.

This manual describes precautions for handling AsReader ASR-A23D correctly.

Please read the manual carefully before use.

※ In some sections of this manual, we may refer to " AsReader ASR-A23D " as "the device", "this product", "the product", or "the AsReader".

If you have any comments or questions about this manual, please contact us:

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★ The images shown in this manual are for illustrative purposes only and may differ from the actual product.

★In order not to damage your life and property safety, please read this manual carefully before using this product. We will not be responsible for any loss caused by non-compliance with this manual.

★We are not responsible for any damage caused by natural disasters, such as earthquake, lightning, winds, floods, fire outside our responsibility, third party behavior, other accidents, intentional or negligent abuse or other improper use.

★If damage is caused by dropping or collision as determined by our company, a fee would be charged for repairs,even within the warranty period.

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1) If used in combination with components, products, device, data processing systems or software outside our company.
2) If our products are used in unexpected ways.
3) If our products are modified by any person or company other than our company.
4) If used in countries other than where purchased.

Safety Instructions

In order to avoid personal injury, device failure, fire or the like circumstances, please make sure to read the information about the warning and caution below

⚠ Warning
Do not attempt to disassemble, modify or repair the device yourself, otherwise it may cause malfunction, fire or electric shock. We are not responsible for any malfunction of this product or mobile device caused by modification.
If you notice any abnormalities such as smoke, abnormal odor, or strange noises coming from the product during use, stop using it immediately. Continued use may cause fire or electric shock.
Do not drop or throw the product and subject it to strong impact. It may cause damage, fire, electric shock, or malfunction. If the product is damaged by being dropped and the inside of the device is exposed, do not touch the exposed part with your hands, because there is a risk of electric shock or injury from the damaged part.
Do not charge the battery in wet environments. Otherwise, it may result in electric shock, short circuit, fire, or burns.
Do not use if the magnetic charging port is damaged or broken. It may cause fire or electric shock.
If charging is not completed within the specified charging time, stop charging the device. It may cause liquid leakage, heat generation, fire, or failure.
Do not throw the product into fire or heat. It may burst or cause a fire.
Do not look into the light emitted from the AsReader or point it at other people's eyes, which may injure the eyes.

⚠ Caution
For charging, please use the magnetic charging cable that is provided with this product. Please use this cable with your own wall-adapter that provides an output of 5V/2A (not included with the ASR-A23D). Using different cables or different output chargers may result in failed charges.
Please refer to local regulations when you recycle this device.
Please contact your local place of purchase immediately if any defects occur.
Continuous use of this product in water or in rain may cause damage to the attached mobile device. If it gets wet, please wipe it off immediately with a clean, dry cloth.
The magnetic charging port of the product and its charging cable have built-in magnets, which may erase the data on magnetic cards such as credit cards. To protect your data, please keep magnetic cards, such as credit cards, more than 10 cm (4 in) away from these magnets.

How to Care for the Device

Please use this device in a clean environment. Adhesive chemicals or oils may cause the resin shell to break.

· Chemicals include cosmetics, detergents, pesticides, thinners, gasoline, etc.

· Oils include tallow and other animal oils, hand creams, etc.

Please keep the device clean. If the device becomes dirty, wipe it with a soft, dry cloth.
Using strong solvents or cleaners may cause color changes and performance problems.

1 Assembly of Products and Accessories

1.1 Assembly of Products and Accessories

This product is a 1D and 2D barcode reader used together with an Android phone, supports HID mode and Serial mode.
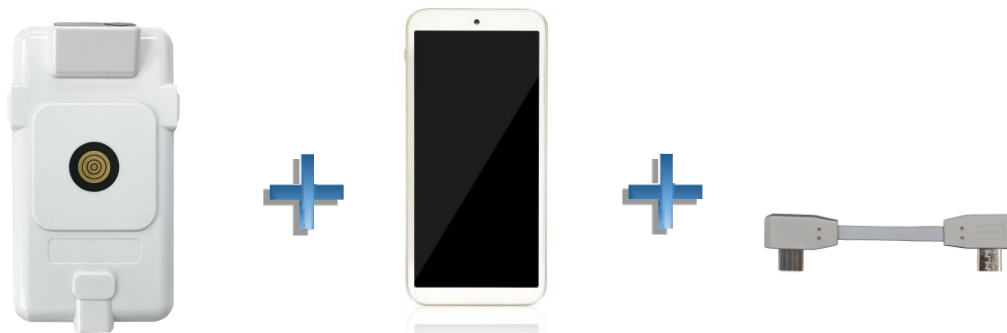*Note: Some Android phone models may not support this product.*

◆ For HID mode:
The default setting of this product is HID mode. If the product is in HID mode, it can be used after being assembled with the mobile phone without installing any application.

To use the product in HID mode, you need the following accessories.

●AsReader   ●Android phone   ●OTG cable

◆ For Serial mode:
To use the product in Serial mode, you need to download an APP in addition to the HID mode accessories. For the details of the APP, please refer to Chapter 4.

Note:
1. The Android phone you use must be USB Host supported.
2. Since the interface standards vary depending on mobile phones, please confirm with the distributor whether there is a suitable OTG cable.
3. For instructions of charging, please refer to Chapter 6.

1.2 Inside the Box

The following items are contained in the box. Please first make sure you have all of these items. In case that any items are missing, please contact the company from whom you purchased the device.

● AsReader   ● Magnetic charging cable   ● OTG cable   ●Two-sided tape

1.3 Application development

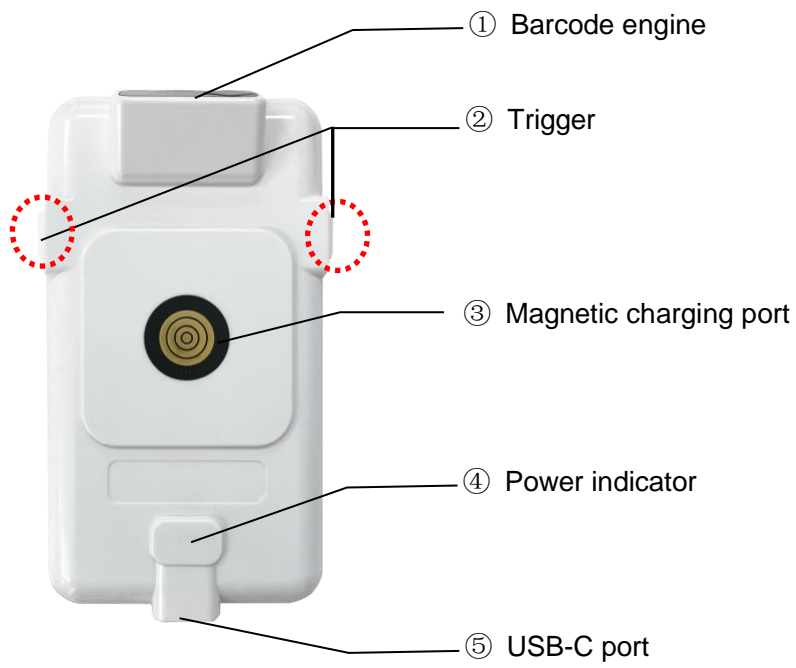To use the product in Serial mode, you need to install a corresponding application to your Android phone.

You can download SDK from our official website for the development of Android application (Please refer to the SDK Reference Guide and sample code).

URL: In preparation

2 Name of Each Part of the AsReader

① Barcode engine

② Trigger

③ Magnetic charging port

④ Power indicator

⑤ USB-C port

3 Functions and Operations

① Barcode engine

・ When the trigger button on either side of the product is pressed, the scanning window will emit red light with an aiming point in its center, aim it at the 1D and 2D barcodes, and then scan them.

・ The scan timeout is 5 seconds by default. In other words, if no barcode is detected within 5 seconds of scanning, the barcode engine will turn off the red light.

・ You can set the barcode scanning engine, referring to the **Barcode Setting Manual**.

・ ※ Settings will be saved in the AsReader until you reset it.

・ **Barcode Setting Manual** download link:
URL: In preparation

② Trigger

・ By pressing the trigger buttons, the device will start scanning. Scanning can also be triggered within the application under Serial mode.

・ The scan can be performed as long as at least one of the trigger buttons of the AsReader is pressed.

・ You can check the battery level of the AsReader by long-pressing the both triggers at one time.

③ Magnetic charging port

・ It is used with the magnetic charging cable included in the package for charging.

④ Power indicator

Running status	LED status
Long-press both triggers to view battery level ※	A corresponding number of white LEDs blink
Charging...	The indicator LED at the right is red and on
Full charged	Red LED off

※To enable this function, the LED setting item needs to be set to ON in the APP (Serial mode) ; or you can set it through the setting parameters in the following manual (HID mode).
ASR-A23D Barcode Parameters for HID Mode
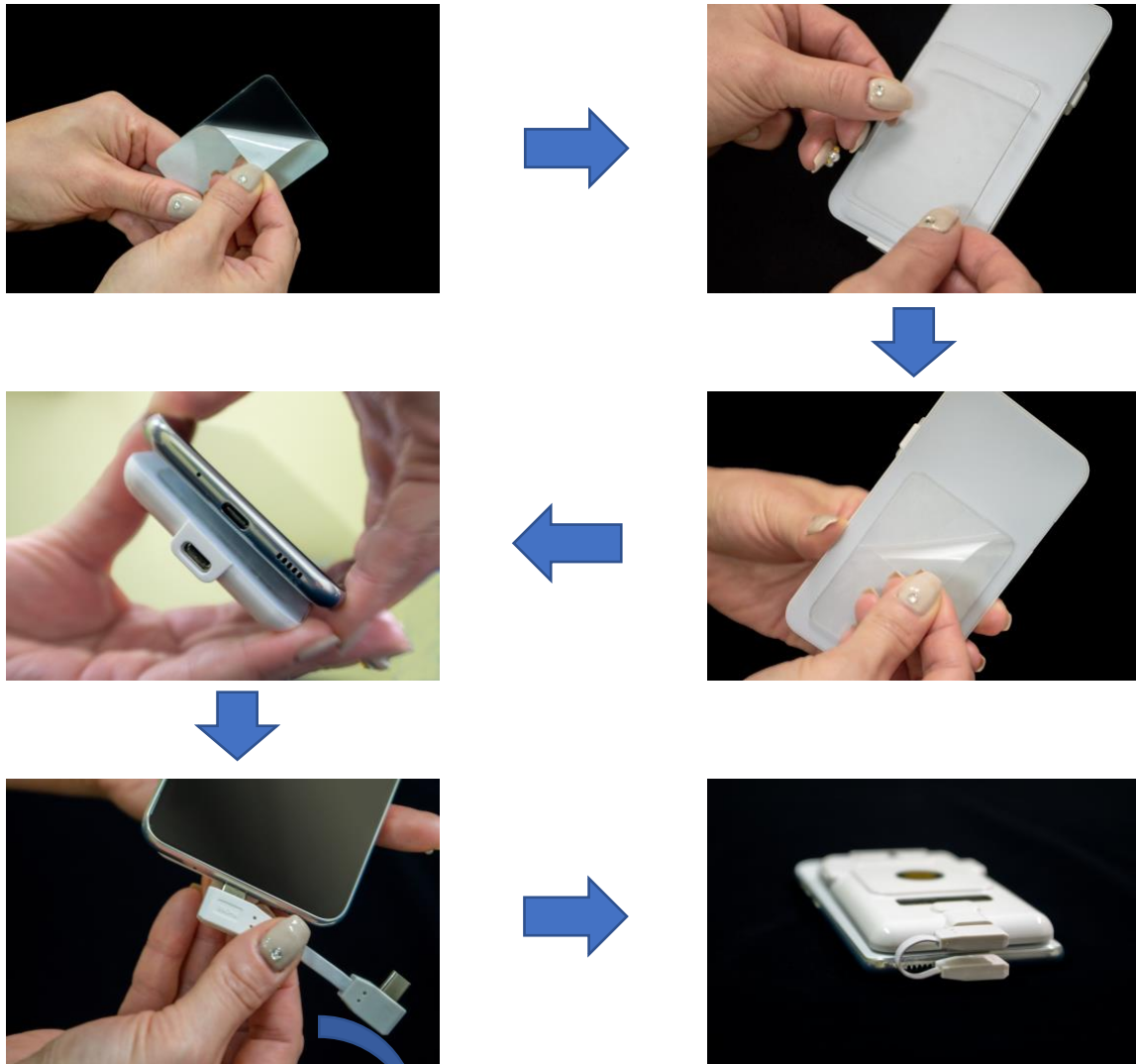URL: In preparation

⑤ USB-C port

・ Connects to a mobile phone via the OTG cable included in the package for communicating with the mobile phone.

4 Preparation before Use

In order to use the AsReader, the accessories and mobile device shown in <u>Chapter 1 - 1.1</u> must be combined and then connected to the AsReader. The assembly method is as follows:

① Attach the two-sided adhesive tape to the AsReader and then attach the AsReader to the back of the mobile device.

② Connect the AsReader to the mobile device with the OTG cable. ※ You can also use a phone case to wrap them. Please consult the sales company about the details of the case.

Note: The terminal of the cable with the word "Phone" should be plugged into the mobile Phone.

◆ **HID mode**

The default mode of this product is HID mode. After successful assembly, please start your phone, then the product would be powered on automatically.

If the product is currently in Serial mode, you have to switch it to HID mode.

◆ **Serial mode**

If you want to use the product in Serial mode, you need to install an application for the product in your Android phone and switch the product to Serial mode. You can use your own application or apply our demo app "AsReader ASR-A23D Demo".

Download the demo app at:

https://play.google.com/store/apps/details?id=jp.co.asterisk.asreader.a23d

◆ Mode switching

To switch the mode of this product from HID to Serial or vice versa, an application is needed.

In case you have developed your own application, you need to add this mode switching function to it. Of course, you can choose our demo app "AsReader ASR-A23D Demo". (Refer to the above for the downloading URL)

5 How to Scan

◆ HID mode

HID (Human Interface Device) mode: When this product is connected to a mobile device, this product is recognized as a keyboard, and the data read by this product is sent to the mobile device as it is and displayed on the text input tool. Therefore, there is no need to use an application.

① When ready as described in Chapter 4 above, make sure the battery is fully charged.

② Start "NotePad" or other text tools, pressing any of the triggers and point the red light at the 1D/2D barcode to scan. Then the scanned data will be displayed in the text.

◆ Serial mode

① When ready as described in Chapter 4 above, make sure the battery is fully charged.

② Next, start the application, boot the product, check the connection status between the application and the product, and make sure that the product is working in Serial mode.

③ Press any of the triggers and point the red light at the 1D/2D barcode to scan (You can also scan by using the application instead of using the triggers). Then, the data scanned will be displayed in the application.

※ The red laser is for aiming. If you aim at the middle point of the barcode, it will be easier to read.

6 How to Charge It

The battery of the product is charged through the magnetic charging cable included in the package. Put the magnetic terminal of the magnetic charging cable onto the product's magnetic charging port as the following picture. It's recommended to use a power adapter of 5V/2A or above (not accompanied with the product). Then the rightmost LED of the four power indicators is red and remains on. When the product is fully charged, the red LED turns off. It takes about 2 hours to fully charge the product once the battery runs out. (The battery indicator on the product does not show the charging status of the mobile device. Please check the display on the mobile device for its charging status.)

※ When using the device for the first time or if it has been left unused for a long period of time, please fully charge the battery of this device before use.

※ If an Android phone is connected when this product is being charged, both this product and the Android phone will be charged simultaneously. In that case, the Android device is unable to make communication with the product.

7 Troubleshooting

If you think that there is a failure in the product, please check the following before contacting your distributor.

● When the product cannot connect to Android phones (common for HID mode and Serial mode)
・ Please check whether the Android phone supports the function of USB Host or if the setting is effective.
・ Please check whether the battery of the product have been fully charged.
・ Please restart the Android phone.
・ Please replace the OTG cable with a new one and reconnect it.
・ Please confirm that you have installed the application. (Serial mode）
・ Please restart the application. (Serial mode)

● When this product and the Android phone cannot be charged simultaneously (common for HID mode and Serial mode)
・ Depending on the model of your Android phone, simultaneous charging may not be possible as some of these phones do not support this feature.
・ Please try a power adapter with higher output power (above 5V2A).
・ Please re-plug the OTG cable.
・ Please replace the OTG cable with a new one.

● When the Trigger button of the product is pressed but no red light is emitted (common for HID mode and Serial mode)
・ Please check whether the physical connection status is normal.
・ Please check whether the battery is fully charged.
・ Please restart the app or try using AsReader A23D Demo app. (Serial mode)

● When scanning a barcode, the product emits red light, but no barcode data is displayed on the app
・ Restart the app or try using AsReader A23D Demo app. (Serial mode)
・ It might be a problem with the Text tools, try other software (HID mode)

Appendix-Specifications

Items		Specifications	
Product name		Dock-Type Barcode Reader for Android	
Model		ASR-A23D	
Barcode	Scanning mode	2D Image scanner	
	Reading distance	■Barcode density	■Distance to the front end of the device
		Code39 - 5mil	5.1 - 16.2cm
		Code128 -5mil	6.3 - 12.7cm
		PDF417 - 6.6mil	6.3 - 16.0cm
		PDF417 - 10mil	4.5 - 22.8cm
		100% UPC - 13mil	5.0 - 31.7cm
		Code39 -20mil	5.0 - 49.5cm
		Data Matrix - 20mil	3.8 - 34.3cm
		QR Code - 20mil	3.8 - 27.9cm
	Scanning amplitude	42° (horizontal); 28° (vertical)	
	Scanning angle	Pitch: ±60° Roll: 360° Skew:: ±60° ※1	
	Readable barcode type	■1D: JAN, UPC/EAN, CODE11, CODE39, CODE93, CODE128, ITF (INTERLEAVED 2of5), DISCRETE 2of5, CHINESE 2of5, MATRIX 2of5, KOREAN 3of5, CODEBAR(NW-7), MSI, GS1 DATABAR OMNIDIRECTIONAL, GS1DATABAR LIMITED, GS1DATABAR EXPENDED ■2D: PDF417, MicroPDF417, Data Matrix, GS1 Data Matrix, QR Code, Micro QR Code, GS1 QR code, Aztec, Composite, Hanxin, Grid Matrix, Maxicode Postal: US Postnet, US Planet, UK Postal, Australian Postal, Japan Postal, Dutch Postal (KIX), UPU FICS Postal, Mailmark	
	Light sources	Red light LED	
Power supply	Battery capacity	Rechargeable lithium-ion batteries, 700mAh	
	Uninterrupted scanning times	Appr. 25000 times ※2	
	Charging method	Magnetic charging cable ※3	
	Micro USB input	5V/2A	
	Charging time	Appr. 2h (built-in battery) ※4	
Key input		2 trigger buttons	
Communication	Interface	USB OTG	
Appearance	Dimensions (W)x(D)x(H)	64 X 10 X 119mm ※5	
	Weight (with battery)	65g	
	Material	PC (polycarbonate)	
	Case color	White	
	Display LED	Power indicator	

Environment	Working environment	-10℃-45℃, 20-85 % RH (Above 0℃ required for charging)
	Storage environment	-20℃-60℃, 10-95 % RH
	IP rate	IP 65
	Anti-drop	1.5m (6 sides, 4 edges, 1 times each) ※6
Certification		FCC/ CE/ RoHS
Requirements	Supporting system	Android
Accessories		Magnetic charging cable, OTG cable

※1. It depends on the type of barcode.

※2. Verified while scanning beeps and vibration were being ON.

※3. Use your own 5V/2A output USB adapter for charging. (Not included)

※4. When Android phone is connected during charging, both the phone and AsReader will be charged simultaneously, but Android phone cannot communicate with the AsReader when being charged.

※5. Except protruding part.

※6. Limited to the body of AsReader.

**Dock-Type Barcode Reader for Android
ASR-A23D**

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