User Manual: AsReader DOCK-Type Combo

Model Name: ASR-X23XX
Project Name: DOCK-Type Combo Reader
Document Number: SQP-0621-ASR-X23XX
Revision: 0

Supplier Approval

Made by	Checked by	Approved by
ybkim		

Customer Approval

Checked by	Checked by	Approved by

Revision History

Rev	ECN	Description	Approved by	Date
0		Initial draft		2022.10.18

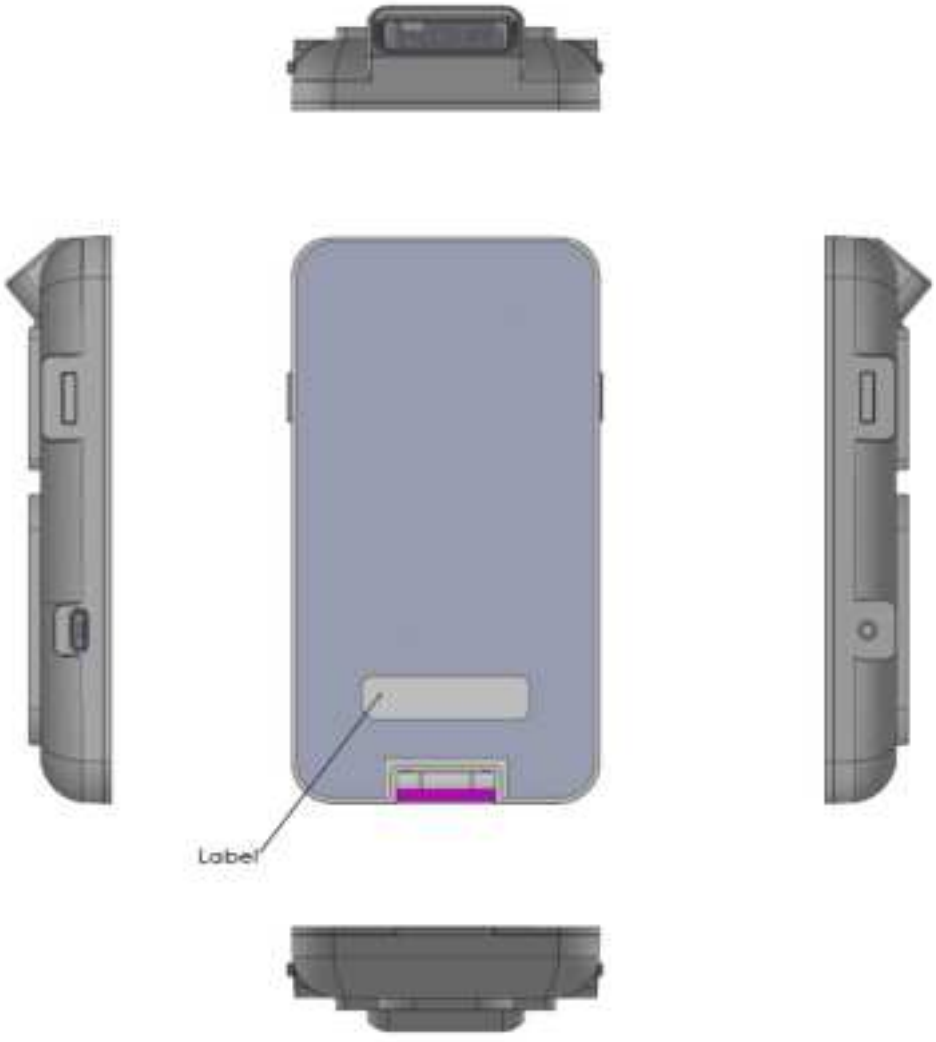
1. Overview

1.1. Introduction

Mobile AsReader Dock-Type Combo reader allow you to read RFID tags and scan 2D/1D Barcode. It can be used as a host device that supports BLE (Bluetooth Low Energy). It complies RFID standard (Air Protocol: EPC Gen2 V2 / ISO 18000-6C), Operation Frequency is 840MHz~960MHz. It uses Li-ion battery (1100mAh) as internal power. Also, it can charge reader's battery by using Magconn cable or USB micro 5-pin cable.

1.2. Product Appearance

Case Materials	PC (Poly Carbonate)
Charging	Magconn or micro 5-pin USB
Trigger TAGGING button	2 EA



2. Hardware Specifications

2.1. Main Feature

Item	Description
Processor	
MCU	GigaDevice GD32F103RBT6, ARM Cortex-M3
External Crytal	8 MHz
Connectivity	
BLE	BLE supported host devices
USB-micro B	For charging
Magconn	Magconn magic cable for charging
Battery	
Capacity	Li-ion Battery 1100mAh
Others	
Physical buttons	2 buttons
LED	1 red LED, 4 white LEDs

2.2. Barcode Module Specification

Item	Description
Engine	Honeywell N6603
Decoder	Honeywell Mini-DB
Sensor	Proprietary CMOS sensor with global shutter and 844 x 640 pixel resolution
Illumination	White LED
Aming	650 nm high-visibility red laser (class 2 laser safety)
Motion Tolerance	Up to 584 cm (230″) per second in total darkness with 100% UPC at 10 cm (4″) distance
Field of View	Horizontal Field Angle: 42.4° Vertical Field Angle: 33°
Scan Angles	Tilt: 360°, Pitch: ± 45, Skew: ± 60°
Symbol Contrast	20% minimum reflectance
Symbologies	Linear: UPC/EAN/JAN, GS1 DataBar, Code 39, Code 128, Code 32, Code 93, Codabar/NW7, Interleaved 2 of 5, Code 2 of 5, Matrix 2 of 5, MSI, Telepen, Trioptic, China Post 2D Stacked: PDF417, MicroPDF417, GS1 Composite

	2D Matrix: Aztec Code, Data Matrix, QR Code, Micro QR Code, MaxiCode, Han Xin Code Postal: Intelligent Mail Barcode, Postal-4i, Australian Post, British Post, Canadian Post, Japanese Post, Netherlands (KIX) Post, Postnet, Planet Code OCR Option: OCR-A, OCR-B, E13B (MICR)

2.3. RFID Module Specification

Item	Description
RFID Reader Chip	PHYCHIPS PR9200
Air Protocol	ISO 18000-6C / EPC Class1 Gen 2
Part No. & Operating Frequency	840 MHz ~ 960 MHz
RFID Read Distance	Up to 0.5m (depend on tags)
Antenna	Ceramics patch antenna
Tag	Read, Write, Lock, Kill

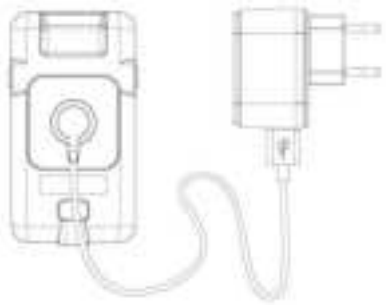
2.4. Battery Pack

Item	Description
Description	Rechargeable Lithium ion battery pack
Battery cell configuration	1S1P (3.7V 1100mAh)
Model name	MBP-CY110S (MBP1S1P1100)
Charging Voltage	4.2V
Discharging cut-off voltage	2.75V
Charging Current	Standard 550mA Maximum 1.2A (25℃) Cut-off <55mA
Discharging Current	Standard 550mA Maximum 1.2 A (25℃)

2.5. Charging

Device can be charged with Magconn cable or USB micro 5-pin.

Charging time: 2 hours



2.6. LED description

RED:

Charging: Red LED On

Fully charged: Red LED off

While:

4 LEDs for battery gauging

90%-100%: 4 LEDs on

70%-89%: 3 LEDs on, 1 LEDs toggle

50%-69%: 2 LEDs on, 1 LEDs toggle

30%-59%: 1 LEDs on, 1 LEDs toggle

10%-29%: 1 LEDs toggle

0%-10%: All LEDs off

3. Environmental Requirements

3.1. Temperature

Operation

-Discharge: -10 to 45°C

-Charge: 0 to 40C

Storage (for shipping)

-20 to 60°C: 1 month

-20 to 45°C: 3 month

-20 to 20°C: 1 year

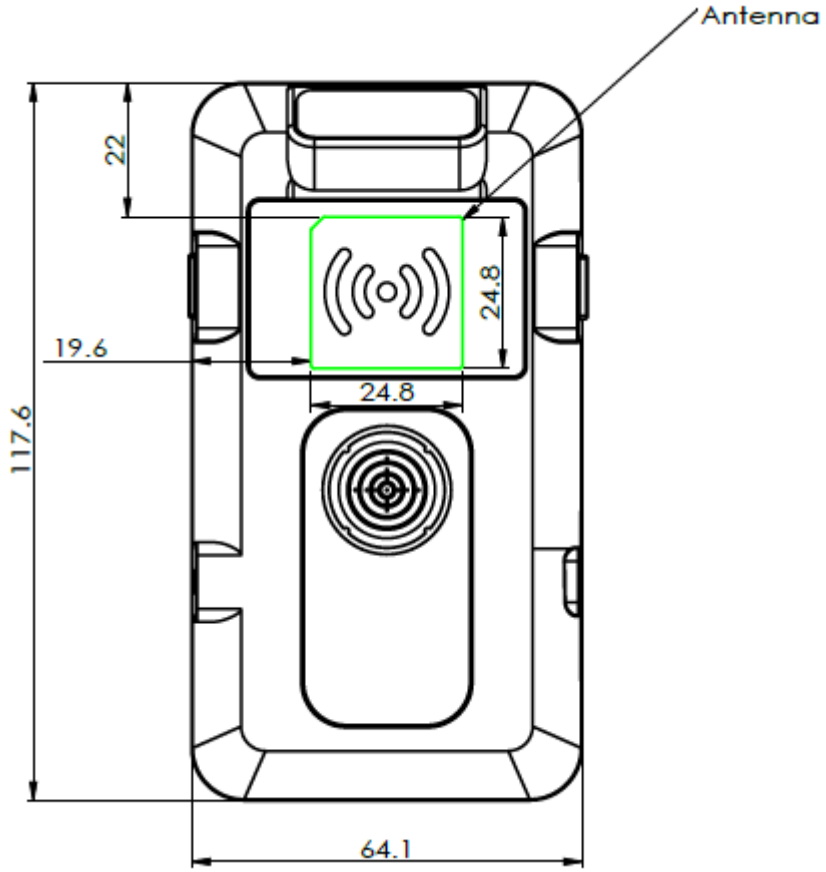
3.2. IP ratings

TBD

4. Mechanical Specifications

4.1. Dimensions

117.6 x 64.1 x 24.8 mm



4.2. Weight

Under 109.8g

Certification and Safety Approvals FCC Compliance Statement

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.

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 on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antennae

-Increase the separation between the equipment and the 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 RF Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. The antenna used for this transmitter must not transmit simultaneously with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures.

FCC Caution

Any changes or modifications to the equipment not expressly approved by the party responsible for compliance could void user's authority to operate the equipment.

Industry Canada(IC) Statement

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 present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisee aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioelectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

IC RF Exposure Statement

Cet équipement est conforme aux limites d'exposition aux radiations de la FCC définies pour un

environnement non contrôlé. Les utilisateurs finaux doivent suivre les instructions d'utilisation spécifiques pour satisfaire à la conformité d'exposition RF. L'antenne utilisée pour cet émetteur ne doit pas émettre simultanément avec d'autres antennes ou émetteurs, sauf en conformité avec les procédures FCC relatives aux produits multi-émetteurs.

► **Contains transmitter module IC: MBN52832 (FCC ID: HSW2832 / IC: 4492A-2832)**