M-11
Quick Start Guide

≡OPTICON

Introduction

- The M-11 is an on/in-counter 2D imager scanner, that can read 1D codes, 2D codes and OCR.
- Read this quick start guide carefully before installing and/or using this product.
- Keep this quick start guide for future reference and store in a safe place.

Notice

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⚠ Caution and Warning (Refer to the specification manual and instruction guide for details)

1. LED light
- Do not stare into the LED light from the scan window. It may damage your eyes.
2. Handling
- Do not disassemble this product.
- Do not put heavy items on the product or apply any shock to it.
- Do not use this product near combustible materials.
- Do not swing the product around by the cable. It may cause injury or damage to the device.
- In case the core wire expose or breakage occurs in the interface cable, please contact the dealer. Using it as it is may cause malfunction or smoke.
- In case any abnormality occurs in the scanner, unplug the interface cable and the AC adapter connecter and contact the dealer.
- Do not use in environments where serious damage are concerned.
- Do not use this product near water or other liquids.
- Do not store this product in dusty environments and in extremely high humidity.
- If perchance condensation formed on the product, abstain from the use of it until moisture has evaporated to prevent malfunctions.
- Avoid static electricity and do not put the product near a radio or a TV. Excessive static electricity may cause malfunctions.
- Do not use or store this product in dusty and/or humid environments, nor extremely cold or hot places. Also avoid exposure to direct sunlight for long periods of time.
- Do not place in an unstable place.

What's in the Box

Confirm that you have the following items before getting started.
Please contact your dealer if items are damaged or missing.
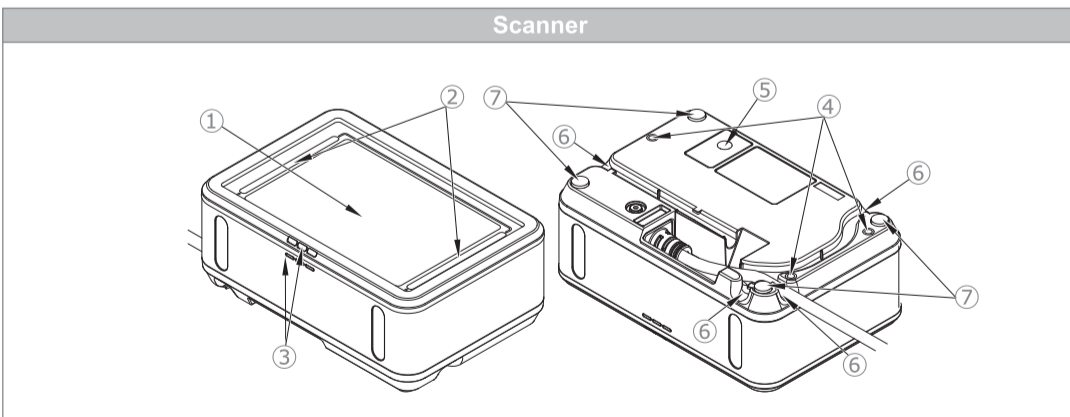
❑ USB-HID Keyboard / USB-COM Interface

No.	Item	Model	Function
1	Scanner	M-11	On-counter 2D imager scanner (2.0m cable attached)
2	Adhesive gel feet	-	Adhesive gel feet to be used for vertical orientation mounting.
3	Quick Start Guide	-	Provides brief instructions on how to use and configure the M-11.

❑ RS-232C Interface

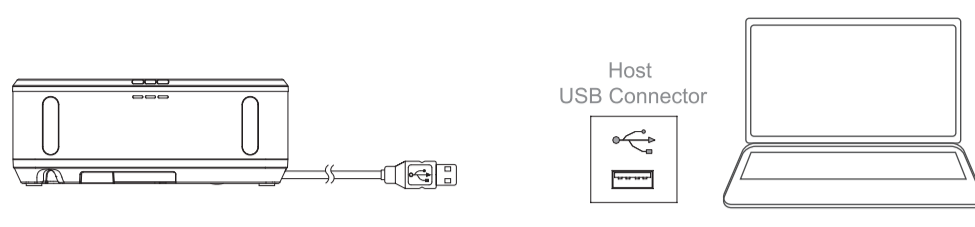| No.	Item	Model	Function
1	Scanner	M-11	On-counter 2D imager scanner (2.0m cable attached)
2	Adhesive gel feet	-	Adhesive gel feet to be used for vertical orientation mounting.
3	AC Adapter	-	AC adapter with interchangeable plugs
4	Quick Start Guide	-	Provides brief instructions on how to use and configure the M-11.

Detailed View

❑ Detailed View

Scanner

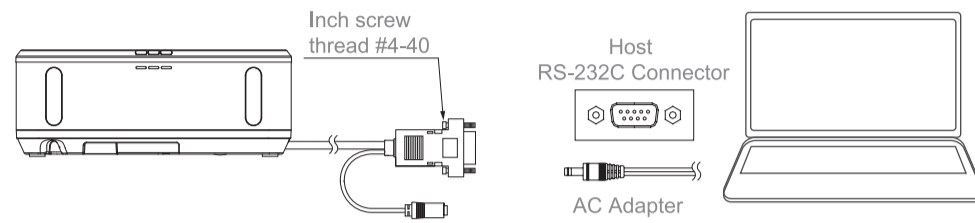| No.	Name	Description
①	Scan Window	Light path of the imager, LED illumination and aiming. Ensure that it is free from dust and dirt before scanning. When cleaning this product, rub gently with either a soft dry cloth or a damp cloth with mild detergent.
②	Status LED	This LED shows the operating status of the scanner. Various lighting color can also be set.
③	Speaker Holes	Sound from the built-in speaker comes out through these holes.
④	Mounting Holes	Screw holes that can be used to mount the scanner. Screw holes (3 places) M3×L6 0.63[N·m]
⑤	Function Key	Loudness and sound frequency can be changed by the function key operation. It also can be set as invalid or mode change key by setting.
⑥	Cable Outlet	Cable outlet can be selected from 4 direction depending on install condition.
⑦	Rubber Feet	Rubber feet to prevent slipping. DO NOT remove! Removal of feet may cause the function key to be pressed and cause unwanted operation.

Connection and Operation Check

❑ Connect to the Host

Connect the interface cable to the appropriate connector on the host side as shown below. When connected, the startup speaker will sound and the status LED at the top of the scanner will light up to indicate that it is now ready to scan.

■USB Interface

Host USB Connector

■RS-232C Interface

Inch screw thread #4-40

Host RS-232C Connector

AC Adapter

Basic Operation

M-11 has two basic modes and its usage are described below.

❑ Hands-free mode

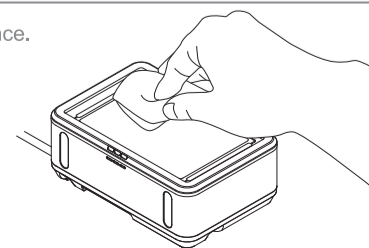| Operation mode name	Hands-free mode (default)
Mode description	The mode to read instantly by holding a printed 1D code or 2D code like on products.
Menu label	
Operation diagram	
Install condition and gel feet affixing locations	Fix reading direction and install direction with the Speaker holes as a guide. Attach the gel feet according to the position shown below. Gel feet package / Speaker holes / Speaker holes / Gel feet attach here

Prioritize for printed codes (default)	Enable printed and screen reading
Default hands-free mode prior reading on the paper.	To read code on the screen with hands-free mode, set following.

❑ Screen priority mode

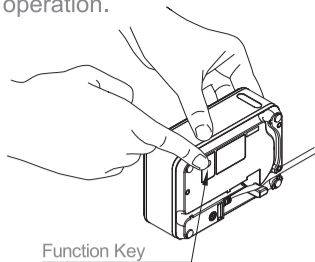| Operation mode name	Screen priority mode
Mode description	This mode is most suitable to read 2D code or 1D code displayed on the screen like smartphones. Code on the paper can also be read, but motion tolerance is not supported. Normal LED illumination is disabled and only the status indicator LED is used in this mode.
Menu label	
Operation diagram	

Cleaning the Scan Window

If the scan window gets dirty, it may affect reading performance.
Rub gently with either a soft dry cloth or a damp cloth with mild detergent.

Function Key Operation

Loudness and sound frequency can be changed by the function key operation.
It also can be set as invalid or mode change key by setting.

Key operation	Setting	Operation
Press till 2 seconds	Loudness	Change as Maximum/Loud/Normal/Minimum
Press 2 seconds or more	Sound frequency	Change in sound frequency 4 pattern

Function Key

❏ Function Key Operation Setting

Speaker's Operation	Mode Change	Disable Function Key

Code Read Option

When reading of 2D codes are not wanted, then scan to disable.
Scan the enable code to restore 2D code reading capability.

Disable 2D codes	Enable 2D Code

Default Setting

• USB-HID Keyboard Interface

❏ USB-HID keyboard interface default
Make sure the USB cable is connected to the scanner when using the USB-HID keyboard interface.

Change interface to USB-HID and reset to factory default

❏ Basic setting for USB-HID Keyboard Interface
[Suffix setting]
Set whether or not to add an "Enter Key" to the end of the output data.

None	Enter

• USB-COM Interface

❏ USB-COM interface default
Make sure the USB cable is connected to the scanner when using the USB-COM interface.

Change interface to USB-COM and reset to factory default

* USB-COM driver must be installed for the use of USB-COM.
* For OPOS driver, please contact sales offices.

• RS-232C Interface

❏ RS-232C interface default
Read the below menu code with the USB cable still connected and then change to an RS-232C cable.
If there only is an RS-232C cable, then keep the function key pressed while powering up and hold it pressed for at least 10 seconds. Then the menu code can be read. Make sure the RS-232C cable with D-SUB connector is connected to the scanner when using the RS-232C interface.

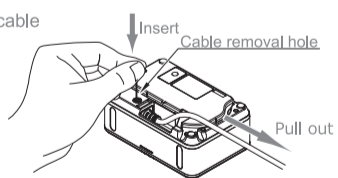| Change interface to RS-232C and reset to factory default |
|---|
| |

Exchange Cable

❏ Removing cable
* In case the core wire expose or breakage occurs in the interface cable, please contact the dealer.
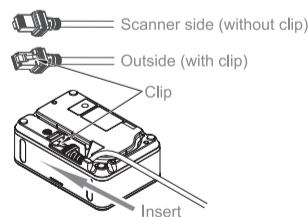 Using it as it is may cause malfunction or smoke.

Removing
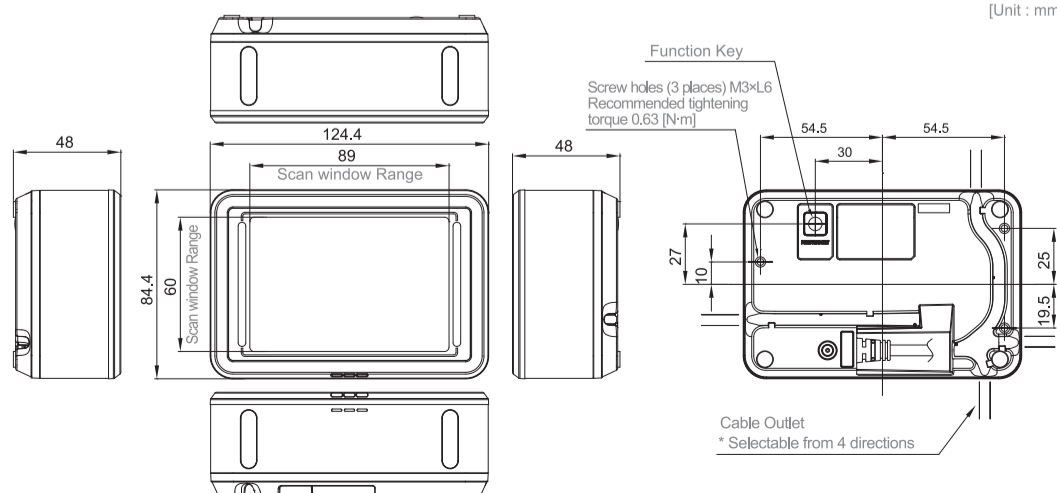Insert paperclip to the cable removal hole and slowly pull out cable.

Insert
Cable removal hole
Pull out

When inserting paperclip, use a paperclip with round or flat tip.
Do not use sharp tip paperclip, it may break the waterproof packing.

Attaching
Hold the root of the plug so that plug's clip are on outside, and insert the cable slowly until it clicks.

Scanner side (without clip)
Outside (with clip)
Clip
Insert

Dimensions

[Unit : mm]

48
124.4
89
Scan window Range
48
84.4
60
Scan window Range

Function Key
Screw holes (3 places) M3×L6
Recommended tightening torque 0.63 [N·m]
54.5
54.5
30
27
10
25
19.5

Cable Outlet
* Selectable from 4 directions

Basic Product Specifications

Interface

Interface	USB (HID/COM), RS-232C
Input voltage	4.5~5.5V
Cable	2.0m straight standard (removable)
Connector	USB : USB-APlug RS-232C : D-sub 9pin female
Enclosed item	AC adapter (For RS-232C)

Optical Specifications

Scan method	Monochrome CMOS area sensor
Pixels	1280 x 800
Frame Rate	120fps (Max)
Light source	Warm white LED
Scan window	Pencil hardness : 6H to 7H Mohs hardness : 4 equivalent
Operating indicators	Side bars 3 colors LEDs × 2, Speaker
Supported symbologies (1D barcode)	JAN-13/8 EAN-13/8, EAN-13 Add-on/EAN-8 Add-on, UPC-A/E, UPC-A Add-on , UPC-E Add-on, Code 39, Code 128, NW-7 (Codabar), Industrial 2 of 5, Interleaved 2 of 5, Code 93, MSI/Plessey, GS1-128
Supported symbologies (2D code)	PDF417, MicroPDF417, GS1 Composite, Codablock F, QR code , Micro QR Code, Data Matrix (ECC 200), Maxi Code, Aztec Code, Chinese Sensible Code
OCR	Machine readable Travel documents (Passport), OCR-font A/B
Minimum resolution	1D barcode : 0.1mm 2D code : 0.169mm
PCS	0.3 or more
Reading angle	Pitch: ±60° /Skew: ±70° Tilt: 360°
Motion Tolerance	2.54m/s (0.33mm EAN/UPC @100mm)

Durability

Operation Temperature/Humidity	-5 to 45°C/10 to 90%RH (no condensation, no frost)
Storage Temperature/Humidity	-30 to 60°C/10 to 90%RH (no condensation, no frost)
Ambient light immunity	Sunlight : 100,000 lx or less Incandescent light : 10,000 lx or less
Drop test	1.5m (concrete floor) Drop the scanner 18 times (6 faces x 3)
Anti-microbial	ISO 22196 equivalent (White model only)
Protection rate	IP42 equivalent

Physical

Weight	Approx. 220g (Excluding cable)
Dimensions	84.4(D) × 124.4(W) × 48(H) mm
Housing color	Black model or white model

Regulatory & Safety
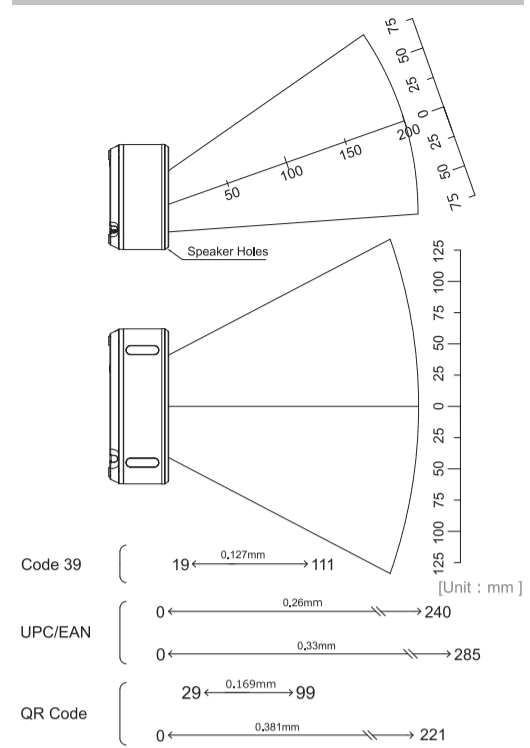
RoHS	RoHS directive
REACH	REACH regulation
WEEE	WEEE directive
LED Safety	IEC 62471:2006 Exempt risk group
EMI/RFI	VCCI/EN55032/FCC Class B / EN55032 EN55024 Class B (For residential, commercial and light-industry environments)

* Refer to the specification manual and instruction guide for details.
* The contents of this document are subject to change without prior notice.
* The values listed are based on measuring method specified by OPTOELECTRONICS. For guaranteed values, please refer to the specifications.
* QR code is a registered trademark of DENSO WAVE INCORPORATED.

Depth of Field

[Unit : mm]

Code 39   19 ←0.127mm→ 111
UPC/EAN   0 ←0.26mm→ 240
          0 ←0.33mm→ 285
QR Code   29 ←0.169mm→ 99
          0 ←0.381mm→ 221

	Code	Resolution(mm)	Near(mm)	Far(mm)
1D	Code39	0.127	19	111
	EAN/UPC	0.26	0	240
	EAN/UPC	0.33	0	285
2D	QR Code	0.169	29	99
	QR Code	0.381	0	221

* Depth is typical value measured at ambient temperature 25°C

Screen Reading Reference Position

Reading reference distance

[Unit : mm]

Scan area
54
78

Reading reference position	Scan area
10mm from the front edge of the scanner	78 x 54 mm

Select the Opticon office

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