

## Introduction

- 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

- This quick start guide may be revised or withdrawn at any time without prior notice.
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 **Caution and Warning** (Please refer to the specification manual and instruction guide for details.)
**1. Laser Safety**

- Do not stare into the laser beam.

**2. Handling Instructions [OPH-1005]**

- Do not attempt to disassemble, modify or update this device.
- Operating the scanner while operating machinery or a vehicle can be distracting.
- Do not drop this product or put heavy items on this product.
- Do not insert foreign substances into the device.
- Do not use this product in the following areas:
  - In areas exposed to direct sunlight for long periods of time.
  - In dusty environments.
  - Near water or other liquids, or in extremely high humidity.
  - Near heat sources, such as radiators, heat registers, stoves, or other types of devices that produce heat.
  - Near microwaves or medical devices.
- When cleaning this product, rub gently with either a soft dry cloth or a damp cloth with mild detergent.

**[Battery Pack]**

- Do not attempt to disassemble this battery.
- Do not expose the battery pack to liquids or allow the battery contacts to get wet.
- Do not expose the battery pack to heat sources including other devices that produce heat.
- Do not short the power leads on the battery pack. If the (+) and (-) terminals come in contact with metals (such as a necklace or hairpin), a short-circuit will occur.
- Do not load the battery pack with its (+) and (-) terminals reversed.
- Check the local regulations for proper battery disposal.

## Before Getting Started

## ■ What's in the Box

Confirm that you have the following items before getting started:

| No. | Item              | Function                                                   |
|-----|-------------------|------------------------------------------------------------|
| 1   | Portable Terminal | A laser portable terminal with a barcode scanning feature. |
| 2   | Strap             |                                                            |
| 3   | Quick Start Guid  | Provides product information and instruction guide.        |

\* The number of accessories may differ depending on the product specification.  
Please contact the nearest dealer if accessories are damaged or missing.

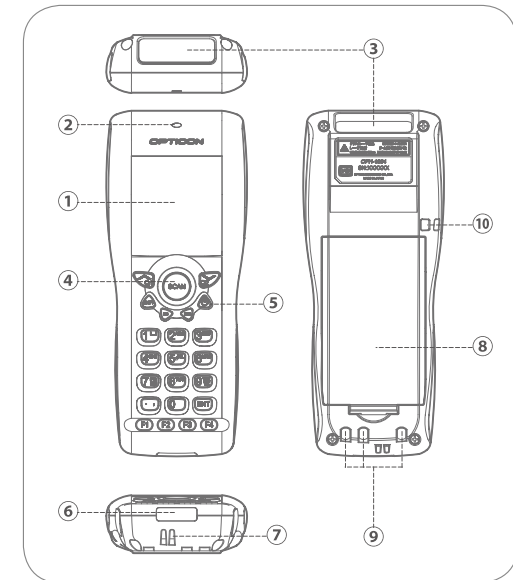
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## Overview

## ■ OPH-1005 Basic Specifications

| Parameter             | Specifications          |                                                                                                                                                                                                                                                                            |
|-----------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical Features     | Size                    | (H) 136.1 x (W) 55.4 x (D) 22.8 mm                                                                                                                                                                                                                                         |
|                       | Weight                  | Approx. 140g (including Li-ion battery)                                                                                                                                                                                                                                    |
| Control Section       | CPU                     | 32bit MCU                                                                                                                                                                                                                                                                  |
|                       | OS                      | Proprietary                                                                                                                                                                                                                                                                |
| Memory                | FROM                    | 4MB                                                                                                                                                                                                                                                                        |
|                       | RAM                     | 4MB                                                                                                                                                                                                                                                                        |
| Display Section       | Material                | LCD (262144 color)                                                                                                                                                                                                                                                         |
|                       | Number of dots          | 320 dots x 240 dots                                                                                                                                                                                                                                                        |
|                       | Dot size                | 0.24mm x 0.24mm                                                                                                                                                                                                                                                            |
|                       | Dot pitch               | 0.18mm                                                                                                                                                                                                                                                                     |
|                       | Backlight               | White LEDs                                                                                                                                                                                                                                                                 |
|                       | Contrast Control        | Enabled                                                                                                                                                                                                                                                                    |
| Other Display Section | LED                     | Bi-color LED (Red and Green)                                                                                                                                                                                                                                               |
|                       | Buzzer                  | Tone and loudness can be configured                                                                                                                                                                                                                                        |
| Operation Section     | Keys                    | 23 keys                                                                                                                                                                                                                                                                    |
| Scanning Section      | Light Source            | Red laser diode                                                                                                                                                                                                                                                            |
|                       | Wavelength              | 650 ± 10nm                                                                                                                                                                                                                                                                 |
|                       | Light Output            | 1mW or less                                                                                                                                                                                                                                                                |
|                       | Scan Rate               | 100 ± 20scan/sec                                                                                                                                                                                                                                                           |
|                       | Supported Symbolologies | JAN, EAN, UPC-A, UPC-E, NW-7(Codabar), Industrial 2 of 5, Interleaved 2 of 5, Code 11, Code 39, Code 93, Code 128, MSI/Plessey, UK/Plessey, IATA, Telepen, Matrix 2 of 5, S-Code, Tri-Optic, Chinese Post, EAN 128, RSS-14, RSS Limited, RSS Expanded, PDF417, MicroPDF417 |
| Power Supply Section  | Main Battery            | Lithium-ion battery (3.7V 1100mAh)                                                                                                                                                                                                                                         |
|                       | Backup Battery          | Manganese dioxide lithium-ion battery (11mAh)                                                                                                                                                                                                                              |
|                       | Operating Time          | Approx. 50 hours (2 scans/10 sec)                                                                                                                                                                                                                                          |
|                       | Data Retention Time     | More than 24 hours                                                                                                                                                                                                                                                         |
| Comm. Section         | IrDA                    | IrDA Ver. 1.2<br>Baud rate: (SiR): 9600 to 115.2kbps                                                                                                                                                                                                                       |
| Clock Section         | Real Time Clock (RTC)   | Supports year, month, day, hour, minute, second (leap year supported)                                                                                                                                                                                                      |
| Durability            | Operating Temp.         | -10 deg. C to 50 deg. C                                                                                                                                                                                                                                                    |
|                       | Operating Humidity      | 20% to 85% (non-condensing)                                                                                                                                                                                                                                                |
|                       | Storage Temp.           | -20 deg. C to 60 deg. C                                                                                                                                                                                                                                                    |
|                       | Storage Humidity        | 20% to 85% (non-condensing)                                                                                                                                                                                                                                                |
|                       | Charging Temp.          | 0 deg. C to 40 deg. C                                                                                                                                                                                                                                                      |
|                       | Ambient Light Immunity  | Fluorescent: up to 4,000lx<br>Sunlight: up to 80,000lx                                                                                                                                                                                                                     |
|                       | Dust-and Drip-proof     | IP54                                                                                                                                                                                                                                                                       |
|                       | Shock Endurance         | Dropped 3 times from each of 6 angles onto concrete from a height of 150cm with no defects found. (Total 18 times)                                                                                                                                                         |

## ■ Detailed View



| No. | Part                       | Function                                                                                              |
|-----|----------------------------|-------------------------------------------------------------------------------------------------------|
| ①   | LCD                        | Indicates the status of program execution, scanned data and so on.                                    |
| ②   | Status LED (Red and Green) | Alerts users the status of scanning operation and data communication.                                 |
| ③   | Optical Window             | The scan engine emits a laser beam through the optical window while scanning a barcode.               |
| ④   | SCAN Key                   | Starts a barcode scanning operation.                                                                  |
| ⑤   | POWER Key                  | Turns ON or OFF the power.                                                                            |
| ⑥   | IrDA Communication Window  | This portable terminal communicates with the designated cradle through the IrDA communication window. |
| ⑦   | Buzzer Hole                | Buzzer sounds through the buzzer hole.                                                                |
| ⑧   | Battery Cover              | Protects the battery pack.                                                                            |
| ⑨   | Charging Terminals         | Electrical terminals for power distribution and power management.                                     |
| ⑩   | Strap Hook                 |                                                                                                       |



• To avoid communication problems between the portable terminal and a cradle, keep the IrDA communication window clean.

• The IrDA communication performance may decline due to excessive ambient light especially under strong sunlight or inverted fluorescent light.

## Overview

### ■ Key Layout



| Key    | Function                                                                                                                |
|--------|-------------------------------------------------------------------------------------------------------------------------|
| SCAN   | Scans a barcode.                                                                                                        |
| Q1     | Navigate through the menu or toggle between options.<br>(These keys can be programmed suitable for user's application.) |
| Q2     |                                                                                                                         |
| SHIFT  | Shifts from "number input mode" to "alphabet input mode" and vice versa.                                                |
| BS     | Deletes one letter before the cursor.                                                                                   |
| CLR    | Cancels an input.                                                                                                       |
| POWER  | Turns the power ON and OFF.                                                                                             |
| 0-9, . | 10 numeric keys to input numbers, alphabets or symbols.                                                                 |
| ENT    | Determines the input.                                                                                                   |
| F1-F4  | 4 function keys which can be programmed by a user.                                                                      |



\* The layout of keys may differ depending on the product specification.

### Designated Cradles (Optional)\*

We offer a series of communication and charging cradles with different communication methods. Please select the most suitable cradle for the desired operation.

#### Communication & Charging Cradle CRD-1001

RS-232C USB

|                                          |                                                          |
|------------------------------------------|----------------------------------------------------------|
| Communication Method<br>(Cradle to Host) | Communicates with the host via RS-232C or USB interface. |
| Size                                     | (H)70.0 × (W)68.0 × (D)96.0 mm Max                       |
| Weight                                   | 110g Max (excluding AC adapter and cable)                |
| Charging Time                            | 2 hours and 10 minutes                                   |

#### Communication & Charging Cradle CRD-1002

MODEM

|                                          |                                                                                              |
|------------------------------------------|----------------------------------------------------------------------------------------------|
| Communication Method<br>(Cradle to Host) | Communicates via telephone line and connects to the Public Switched Telephone Network (PSTN) |
| Size                                     | (H)70.0 × (W)68.0 × (D)96.0 mm Max                                                           |
| Weight                                   | 100g Max (excluding AC adapter and cable)                                                    |
| Charging Time                            | 2 hours and 10 minutes                                                                       |

#### Communication & Charging Cradle CRD-1003

GSM

|                                          |                                                                                       |
|------------------------------------------|---------------------------------------------------------------------------------------|
| Communication Method<br>(Cradle to Host) | Communicates with the host via GSM (Global System for Mobile Communications) Network. |
| Size                                     | (H)70.0 × (W)68.0 × (D)96.0 mm Max                                                    |
| Weight                                   | 115g Max (excluding AC adapter and cable)                                             |
| Charging Time                            | 3 hours                                                                               |

#### Communication & Charging Cradle CRD-1004

ETHERNET USB

|                                          |                                                 |
|------------------------------------------|-------------------------------------------------|
| Communication Method<br>(Cradle to Host) | Communicates with the host via Ethernet or USB. |
| Size                                     | (H)70.0 × (W)68.0 × (D)96.0 mm Max              |
| Weight                                   | 115g Max (excluding AC adapter and cable)       |
| Charging Time                            | 3 hours                                         |



\* Please refer to the specification manual or the instruction guide for details of designated cradles.

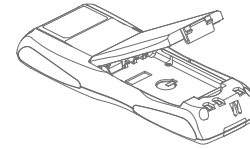
\* A designated SIM card will be needed to use the CRD-1003 GSM cradle.

## Using the Portable Terminal

### ■ How to Insert or Exchange a Battery

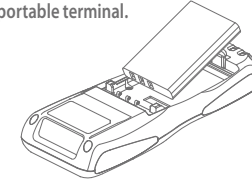
#### STEP 1

Please open the battery cover before inserting or exchanging a battery.



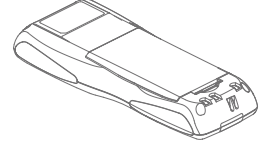
#### STEP 2

Make sure that the battery contacts are in contact with the spring contacts of the portable terminal.



#### STEP 3

Please close the battery cover.



\* When the cover is not closed correctly the portable terminal will not be turned ON.

### ■ How to Scan a Barcode

Please refer to the following examples of a scanning operation.

Make sure that the barcode is within the width of the laser aiming pattern.

| Correct | Incorrect |
|---------|-----------|
|         |           |

## Trouble Shooting

### The portable terminal does not get powered ON.

- The battery level of the portable terminal may be extremely low or empty. Please try again after you charge the portable terminal.
- Check if the battery cover is closed tight.

### The portable terminal does not read a specific type of barcode.

- That specific type of barcode may not be supported by the portable terminal. Please confirm the specification manual of the portable terminal for details of supported symbologies.
- The specific type of barcode may not be enabled in the application. Change the settings in your application.

### The portable terminal does not read a barcode smoothly.

- The scanning performance of the portable terminal may decline due to inappropriate scan angle. Please adjust the angle of the portable terminal and try again. Make sure that the barcode is within the width of the laser aiming pattern.

## Contact

Please contact OPTICON or your local dealer.

|                 |                                                                                  |                |                                                                                                                |
|-----------------|----------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------|
| The Netherlands | Opticon Sensors Europe B.V.<br>tel: +31 (0)23-5692700 / email: sales@opticon.com | Sweden         | Opticon Sensors Nordic AB<br>tel: +46 (0)8-58548560 / email: henrik@opticon-sensors.se                         |
| U.S.A.          | Opticon Inc.<br>tel: 800-636-0090 / email: opticon@opticonUSA.com                | United Kingdom | Opticon Limited<br>tel: +44 (0)1582-635100 / email: sales@opticon.co.uk                                        |
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| Italy           | Opticon s.r.l.<br>tel: +39 (0)051-6321800 / email: opticon@opticonitalia.it      | Australia      | Opticon Sensors Pty. Ltd.<br>tel: +61 (0)2-43402666 / email: sales@opticon.com.au                              |
|                 |                                                                                  | Brazil         | Opticon Sensors Europe B.V., Latin American Office<br>tel: +55 11-5081 2088 / email: sales.la@opticon.com      |

More product details, additional support, and configuration options (from the Universal Menu Book) are available at [www.opticon.com](http://www.opticon.com).

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