

# OPTICON

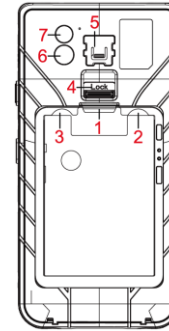
**H-28**  
**H-28EU**  
**H-28NCSA**  
 Mobile  
 Computer

## Quick Start Guide



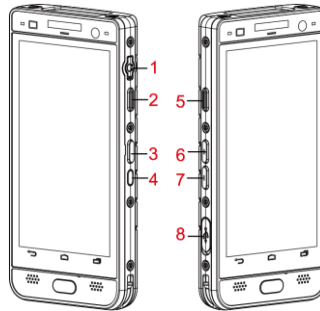
### Front View

1. Front camera
2. Logo LED
3. Back key
4. Home key
5. Menu key
6. Scan button
7. Speaker
8. Information LED
9. Charging LED



### Back View

1. Battery connector
2. SIM card slot (H-28EU model)
3. Micro SD card slot
4. Battery cover lock switch
5. Hand strap hook
6. Back camera
7. Flash LED



### Side View

1. Earphone connector
2. Scan button
3. Function button
4. Power button
5. Scan button
6. Volume up
7. Volume down
8. USB connector

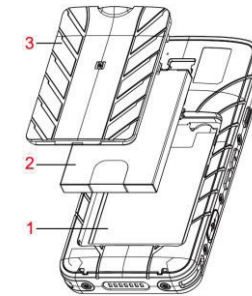
## Charging Instructions

### Battery Installation

The H-28(EU/NCSA) battery pack is initially not fully charged. After installing the battery pack, please charge it via the USB cable or the charging cradle. By default, the battery pack is not installed in the H-28(EU/NCSA) at the factory to avoid damage caused by excessive draining.

Annual replacement of the battery pack can avoid possible risks or abnormalities and ensure maximum performance. Do not store fully charged or (almost) empty batteries for long periods of time. We recommend charging the spared battery packs every two to three months to keep its charge at a moderate level to maximize battery life.

Please remove the hand strap first when opening the battery compartment. Push the battery cover lock switch to open position then remove the battery cover. Please make sure that the battery contacts are properly aligned with the contacts of the terminal. Close the battery cover and push the cover lock switch to lock.



1. Battery slot
2. Battery pack
3. Battery cover

**CAUTION**  
 RISK OF EXPLOSION IF  
 BATTERY IS REPLACED BY  
 AN INCORRECT TYPE.  
 DISPOSE OF USED  
 BATTERIES ACCORDING TO  
 LOCAL REGULATIONS

### Charging Time

The required charging time depends on the actual application of the H-28(EU/NCSA) and the condition of the battery pack. The H-28(EU/NCSA) is shipped with a Lithium-ion battery but not fully charged. Please fully charge it before the 1st time use.

### Charging via USB Cable

Use the provided USB charge & communication cable together with the quick charge compliant power adapter in the standard package to charge the H-28(EU/NCSA) from a power outlet.

### Charging via Charging Cradle

Connect the cradle with a power adapter to a power outlet. Place the H-28(EU) on the cradle for charging.

## SD/SIM Card Installation (H-28EU/NCSA model)

1. Turn off the H-28EU/NCSA or put it in battery swap mode
2. Remove the battery cover
3. Remove the battery pack by pulling the tab on the end of the battery
4. Lift the retaining door
5. Please see the back view
6. Insert the micro SD card into the left slot
7. Insert the SIM card into the right slot
8. Insert the battery pack into the battery compartment
9. Restore the battery cover and lock the battery cover lock switch

## Barcode Data Capture

To scan a barcode label:

1. Point the scan window at the barcode.
2. Tap Scan on the screen or press one of the scan buttons on the H-28(EU/NCSA). The imager will project a green aiming bar. The green aiming bar is used to position the barcode or object within the field of view of the imager.
3. Ensure the entire barcode is within the width area formed by the green aiming bar, then either wait for the timeout or release the scan key to capture the image. A white beam will illuminate the barcode to capture and decode it.

## Confirm what is in the Box

- H-28/H-28EU/H-28NCSA
  - A mobile computer with a barcode scanning feature.
  - USB cable
  - Charge/Communication cable & quick charge compliant power adapter.
  - Battery box
  - With rechargeable battery.
  - Hand strap
  - Quick Start Guide
- Provides product information and instructions.



\* The number of accessories may differ depending on the product configuration. If any of the accessories are damaged or missing, please contact your local representative.

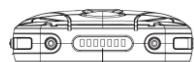
## General View

### Top View



1. Scan Window

### Bottom View



1. Cradle IO connect

## FCC Compliance for H-28

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 device 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 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 circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### 15.21 Statement

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 1cm between the radiator and your body.

## General Safety Rules

Please read this Guide thoroughly and carefully before you start using this device. Use only the components and accessories supplied by the manufacturer for H-28(EU/NCSA) you are using.

Do not attempt to disassemble H-28(EU/NCSA), as it does not contain parts that can be repaired by the user. Any tampering will void the warranty. When replacing the battery pack or at the end of life of H-28(EU/NCSA) disposal must be performed in compliance with the laws in force in your jurisdiction. Do not submerge H-28(EU/NCSA) in any liquid (water, detergent, etc).

### For Safe Use Concern, Please Pay Special Attention on the Following Notices:

The manufacturer has taken safety as first priority during design stage. To avoid any potential accident, please be cautious on the following alert points:

- Please do not stock this device under conditions of high temperature which will cause the battery to become hot, fire, or broken etc. leading to failure and safety concerns.
- When the charging time is noticed longer than standard required (CHARGING LED, RED, is still ON), please stop charging immediately.

- Please charge this device in place without any water-spray or moisture.
- Ensure that the AC adapter can freely dissipate its heat, don't cover the AC adapter with objects, such as curtains.
- Never use damaged AC adapters, immediately replace it with a new approved AC adapter.
- Please do not put any heavy weight on top of this device as it might cause device enclosure crack then lead to cutting injury.
- Please do not use wet hand to pull out the AC adapter which might cause electric shock.
- Please do not use H-28(EU/NCSA) AC adapter on any other different devices.
- Please do not put the device into water which may cause short-circuit or fire.
- Please do not put this device in place close to open fire.
- If the power or USB cable is seriously twisted or broken, please stop using immediately or it may cause electric shock, short-circuit, or fire.
- Please stop using immediately when there is any unusual smell or overheat during charging or operation.
- Please stop using immediately when there is any liquid or dew on the device.
- Please do not use the AC adapter outdoor. Please do not wrap the AC adapter with cloth which will block heat dissipation and will cause electric shock or fire.
- Except charging, please remove the AC adapter plug from the wall AC outlet socket or it will cause fire accident.

### Important Notices When Using

- Before replacing battery pack due to failure, shortened life, or any other unusual behavior, please confirm if the device has been used correctly and there has no user operation issue involved.
- It is possible there will be some missed data or interference encountered during the wireless transmission. It is not a situation can be controlled by the manufacturer.
- Please do not use any alcohol, benzene, organic solvent, cleaner liquid, or steel-wool on the surface of this device.
- Please do not scratch the surface of Scan Window in any way as which will cause problem on barcode scanning.



### Audio Safety

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

### European Union Regulatory Notes

Hereby, Opticon Sensors Europe B.V. declares that the radio equipment type H-28(EU/NCSA) is in compliance with Directive 2014/53/EU.

The WiFi operating in the bands 5150 - 5350 MHz shall be restricted to indoor use for the following countries: 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.

The full text of the Declaration of Conformity is available at the following internet address: <https://opticon.com/product/h-28/>

### SAR Compliance (H-28EU)

#### SAR Information (for EU):

Head: 0.776 W/kg@ 10g (CE)  
Body: 1.400 W/kg@ 10g (CE)

### SAR Compliance (H-28)

#### SAR Information (for EU):

Head: 0.074 W/kg@ 10g (CE)  
Body: 0.181 W/kg@ 10g (CE)

## Body - worn Operation

This device was tested for typical body-worn operations. A minimum separation distance must be maintained between the user's body and the handset, including the antenna: 0.5 cm to comply with the RF exposure requirements in Europe third-party belt-clips, holsters and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided.

## Power and Frequency Ranges

### H-28EU

Radio Type	Description	Frequency	Maximum Output
Bluetooth	Bluetooth BR+EDR	2400-2483.5 MHz	4dBm
	Bluetooth 4.0-LE	2400-2483.5 MHz	4dBm
WLAN	2.4GHz	2400-2483.5 MHz	17dBm
	5GHz	5150-5350 MHz	21dBm
GSM		5470-5725 MHz	22dBm
	GSM 900	880-915 MHz	33dBm
WCDMA		1710-1785 MHz	30.5dBm
	GSM 1800	1710-1785 MHz	30.5dBm
LTE	WCDMA Band I	1920-1980 MHz	24dBm
	WCDMA Band VIII	880-915 MHz	24dBm
LTE	LTE Band 1	1920-1980 MHz	23.5dBm
	LTE Band 3	1710-1785 MHz	23dBm
other		2500-2570 MHz	23dBm
		880-915 MHz	23dBm
other		832-862 MHz	23dBm
		2570-2620 MHz	23dBm
other		2300-2400 MHz	23dBm
	NFC	13.56 MHz	
other	GPS	1575.42 MHz	

### H-28

Radio Type	Description	Frequency	Maximum Output
Bluetooth	Bluetooth BR+EDR	2400-2483.5 MHz	4dBm
	Bluetooth 4.0-LE	2400-2483.5 MHz	4dBm
WLAN	2.4GHz	2400-2483.5 MHz	17dBm
	5GHz	5150-5350 MHz	21dBm
other		5470-5725 MHz	22dBm
	NFC	13.56 MHz	

## Documentation

Documentation, drivers and software updates for the H-28(EU/NCSA) are available at: [www.opticon.com](http://www.opticon.com)

Opticon Sensors Europe BV

Opalaan 35, 2132 XV Hoofddorp, the Netherlands.

© Copyright Opticon. All rights reserved. This information is subject to change without prior notice.

For availability, contact your local representative.