EMBISCAN

USER MANUAL

USB 2.0

E P C

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Dear Customer,

Thank you for purchasing Embisphere Product. This product will help you in easy management of
your inventories. Please read this manual carefully to become familiarized with your product’s
features and to ensure years of reliable operation.

Wishing you a pleasant experience of inventory with the EmbiScan.

EMBISPHERE team
SAFETY INFORMATION

For your safety and to avoid any risk of personal injury please take a few minutes to carefully read this guide before using the device.

Keep these operating instructions in a safe and easily accessible place for future reference.

Laser Safety information

- Complies with 21CFR1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001.
- Class 1 Laser devices are not considered to be hazardous when used for their intended purpose

CAUTION

Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

Product Care

Your device is an electronic product that needs to be treated with care.

- Do not subject it to unnecessary shock or vibration.
- Keep your EmbiScan and its cable away from water, rain and excessively humid areas.
- Do not disassemble it. There are no user-serviceable parts inside. Opening will void your warranty.
- If your device is very cold or has been stored in a cold area, do not apply power to the device until it has been allowed to come to room temperature.
SUMMARY

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1. PRODUCT DESCRIPTION

Figure 1. Product description

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Description</th>
<th>Fonction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Orange LED</td>
<td>RFID activity indicator light</td>
</tr>
<tr>
<td>2</td>
<td>Red/Green LED</td>
<td>Read Confirmation/Error LED indicator</td>
</tr>
<tr>
<td>3</td>
<td>Amber LED</td>
<td>RFID multiple mode indicator light.</td>
</tr>
<tr>
<td>4</td>
<td>Barcode switch</td>
<td>Barcode activation button</td>
</tr>
<tr>
<td>5</td>
<td>RFID multiple mode switch</td>
<td>RFID multiple mode activation button</td>
</tr>
<tr>
<td>6</td>
<td>RFID single mode switch</td>
<td>RFID single mode activation button</td>
</tr>
<tr>
<td>7</td>
<td>Blue LED</td>
<td>ON/OFF indicator light</td>
</tr>
<tr>
<td>8</td>
<td>USB connector</td>
<td>USB cable interface for computer connection</td>
</tr>
</tbody>
</table>
2. GETTING STARTED

- Connect the USB cable of your EmbiScan to the USB port of your computer. This USB port must be compliant to IEC60950-1 part 2.5 and EN60950-1.

- The device is powered up, the blue LED lights up.

![Figure 2. EmbiScan starts up](image)

- The EmbiScan device driver installation starts. The following icon appears on the right bottom corner of your desktop.

![Figure 3. Installation of device’s driver](image)

- When the EmbiScan is recognized by the computer, the message “device driver software installed successfully” and the buzzer sounds once. Your EmbiScan is now ready to use.

![Figure 4. Driver installed successfully](image)
3. USING THE EMBISCAN

3.1. Turning the product ON

- To turn on your EmbiScan connect the USB cable to the USB port of your computer. This power supply must be compliant to IEC60950-1 part 2.5 and EN60950-1.
  - The blue led indicator, located on the bottom of the handle, lights up.

- After few seconds, the USB communication between the computer and the EmbiScan is established and the buzzer sounds. The EmbiScan is then ready to be used.

Figure 5. The buzzer sounds once - EmbiScan is ready to use

Figure 6. EmbiScan starts
3.2. Barcode reading

- Press Barcode button to initiate barcode scanning

- Focus the laser beam toward the barcode label. Please make sure that the entire laser beam covers the barcode. The minimum reading distance is 5 cm.
If barcode scanning is successful, the green LED lights up and buzzer sounds with “OK sound”

If barcode scanning is not successful, the laser beam lights off. In this case, retry the operation by moving away from the barcode or by changing the tilt of laser beam

- Barcode ID is displayed on the screen.

![Barcode reading successful](image)

**Figure 10. Barcode reading successful**

![Barcode ID displayed](image)

**Figure 11. Barcode ID displayed**

### 3.3. RFID tag check – RFID SINGLE MODE

- Press RFID SINGLE button to initiate RFID tag reading (you don’t have to keep your finger pressed on the button)

![RFID Single button illustration](image)

**Figure 12. RFID Single button illustration**

- Point the head of the reader toward tag or product to be scanned. For your information the reading distance is around 50 cm maximum
Figure 13. RFID single mode reading illustration

**Please make sure there is just one RFID tag in the field of your EmbiScan**

- Every time a RFID tag is read, the buzzer sounds and the orange LED indicator blinks

Figure 14. RFID reading

- Check the success of reading by looking at the LED indicators or by listening buzzer sounds

✓ If tag reading is successful, **the green LED lights up and buzzer sounds with “OK sound”**

Figure 15. Tag reading successfully
If tag reading is not successful or if you have scanned more than one tag, the red LED lights up and buzzer sounds with “NOK sound”

![Figure 16. Wrong tag reading illustration](image)

- TAG SGTIN is displayed on the screen

![Figure 17. Tag SGTIN displayed](image)

3.4. RFID tag inventory – RFID MULTIPLE MODE

- Press RFID MULTIPLE button to initiate RFID tag reading (you don’t have to keep your finger pressed on the button)

![Figure 18. RFID Multiple button illustration](image)
- Amber Led indicator lights up

![Figure 19. Amber light Led illustration](image)

- Every time a RFID tag is read, the buzzer sounds and the orange LED indicator blinks

![Figure 20. RFID reading](image)

- SGTINs of tags are displayed on the screen

![Figure 21. Tags SGTINs displayed](image)

### 3.5. Turning OFF the product

- Remove the USB cable from your computer to power off the EmbiScan

- The device is powered off, the blue LED turns off.
## 4. Technical parameters

<table>
<thead>
<tr>
<th>TECHNICAL DATA</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFID UHF Frequency</td>
<td>ETSI (EU) 865.6 - 867.6 MHz</td>
</tr>
<tr>
<td></td>
<td>FCC (NA, SA) 902 – 928 MHz</td>
</tr>
<tr>
<td></td>
<td>SRRC-MII (China) 920 – 925 MHz</td>
</tr>
<tr>
<td>RFID UHF Chip compatibility</td>
<td>EPCglobal Class 1 Gen 2 (ISO 18000-6C) with anti-collision</td>
</tr>
<tr>
<td>RFID UHF Output power</td>
<td>23 dBm maximum (200 mW)</td>
</tr>
<tr>
<td>RFID UHF Antenna</td>
<td>Built in antenna for up to 80 cm read range</td>
</tr>
<tr>
<td>Internal storage</td>
<td>Up to 2500 tags</td>
</tr>
<tr>
<td>Barcodes</td>
<td>UPC/EAN, Code 128, Code 39, Code 93, Code 11, Codabar, RSS, GS1 databar</td>
</tr>
<tr>
<td>User interface</td>
<td>Multi color LED, buzzer Buttons for RFID INVENTORY, RFID SINGLE, BARCODES</td>
</tr>
<tr>
<td>Connection</td>
<td>USB type A cable, 1.5m length</td>
</tr>
<tr>
<td>Power supply</td>
<td>USB 5V DC - 500 mA</td>
</tr>
<tr>
<td>Impact Resistance</td>
<td>Designed for 5 drops to concrete from 1.5 meters</td>
</tr>
<tr>
<td>Ingress protection</td>
<td>IP54 Compliant according to IEC 60529 standard by internal testing</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-10°C / 55°C</td>
</tr>
<tr>
<td>Construction</td>
<td>ABS-PC and EPDM rubber</td>
</tr>
<tr>
<td>Dimensions (HxWxD)</td>
<td>21 cm x 6 cm x 5 cm</td>
</tr>
<tr>
<td>Weight</td>
<td>185 g</td>
</tr>
</tbody>
</table>
For any issue, remark or suggestion, please contact:

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