

# MINDEO

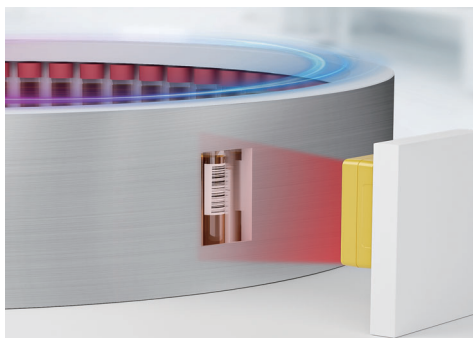
AI



## ES4790i Embedded Image Scanner with Built-in AI Chip

### Features

- 1 Designed for the IVD industry
- 2 Use self-developed AI Engine, fully upgrade scanning performance
- 3 Red and white auxiliary lighting easily cope with a variety of complex barcode reading scenes
- 4 Compact design and plug-and-play interfaces allow easy integration into different host devices
- 5 Support external and serial trigger modes



# ES4790i Specifications

| Mechanical & Electrical Characteristics |                                                                                                                                                                                                                  |                                               |                |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------|
| Dimensions(L × W × H)                   | 78 mm × 77.5 mm × 19.6 mm                                                                                                                                                                                        |                                               |                |
| Weight                                  | 221 g (without cable)                                                                                                                                                                                            |                                               |                |
| Case Material                           | Zinc alloy                                                                                                                                                                                                       |                                               |                |
| Scan Window Material                    | Tempered glass                                                                                                                                                                                                   |                                               |                |
| Cable                                   | Straight 2.0 m                                                                                                                                                                                                   |                                               |                |
| Interfaces                              | RS-232 (3.3 V TTL-level), USB Keyboard, USB Virtual COM                                                                                                                                                          |                                               |                |
| Indicator                               | Beeper                                                                                                                                                                                                           |                                               |                |
| Operating Mode                          | Handheld, Auto-detect, Command, Level                                                                                                                                                                            |                                               |                |
| Programming Method                      | Manual (reading special barcode)                                                                                                                                                                                 |                                               |                |
| Firmware Upgrade                        | Online                                                                                                                                                                                                           |                                               |                |
| Electrical                              |                                                                                                                                                                                                                  |                                               |                |
| Input Voltage                           | 5.0 ± 0.25 VDC                                                                                                                                                                                                   |                                               |                |
| Current                                 | Scanning: 250 mA, Standby: 130 mA                                                                                                                                                                                |                                               |                |
| Performance Characteristics             |                                                                                                                                                                                                                  |                                               |                |
| Scan Pattern                            | Image                                                                                                                                                                                                            |                                               |                |
| Image Size                              | 1280 × 1024 pixels                                                                                                                                                                                               |                                               |                |
| Light Source                            | White LED (5700 K), Red LED<br>525 nm peak wavelength, green LED                                                                                                                                                 |                                               |                |
| Scanner Field of View                   | WA: Horizontal: 64°, Vertical: 7°<br>SR: Horizontal: 40°, Vertical: 7°                                                                                                                                           |                                               |                |
| Print Contrast                          | 20% minimum reflective difference                                                                                                                                                                                |                                               |                |
| Decoding Capability                     | UPC-A, UPC-E, UPC-E1, EAN-13, EAN-8, ISBN (Bookland EAN), ISSN, Code 39, Code 39 full ASCII, Code 32, Trioptic Code 39, Interleaved 2 of 5, Codabar (NW7), Code 128, ISBT 128, Code 93, UC C/EAN 128 (GS1 - 128) |                                               |                |
| Minimum Resolution                      | 1D: 3 mil                                                                                                                                                                                                        |                                               |                |
| Decoding Depth                          |                                                                                                                                                                                                                  | WA                                            | SR             |
|                                         | 3mil Code39 (3 chars)                                                                                                                                                                                            | 0 mm – 90 mm                                  | /              |
|                                         | 5mil Code128 (12 chars)                                                                                                                                                                                          | 0 mm – 110 mm                                 | 20 mm – 170 mm |
|                                         | 10mil Code 39 (3 chars)                                                                                                                                                                                          | 0 mm – 140 mm                                 | 0 mm – 240 mm  |
|                                         | 20mil Code 39 (3 chars)                                                                                                                                                                                          | 0 mm – 190 mm                                 | 0 mm – 290 mm  |
| Environmental Characteristics           |                                                                                                                                                                                                                  |                                               |                |
| Temperature                             | Operating: -20°C to 50°C (-4°F to 122°F); Storage: -40°C to 70°C (-40°F to 158°F)                                                                                                                                |                                               |                |
| Humidity                                | 5% to 95% (non-condensing)                                                                                                                                                                                       |                                               |                |
| Mechanical Vibration                    | IEC60068-2-6: Un-powered scanner withstands a random vibration along each of the X, Y and Z axes for a period of one hour per axis, define as follows:                                                           |                                               |                |
|                                         | 20 Hz to 80 Hz                                                                                                                                                                                                   | Ramp up to 0.04 G2/Hz at the rate of 3 dB/oct |                |
|                                         | 80 Hz to 350 Hz                                                                                                                                                                                                  | 0.04 G2/Hz                                    |                |
|                                         | 350 Hz to 2000 Hz                                                                                                                                                                                                | Ramp down at the rate of 3 dB/oct             |                |
| Mechanical Shock                        | IEC60068-2-27: Shock pulse: 0.5 ms, Maximal acceleration: 1500 G, Shock direction & time: ± X-axis, ± Y-axis, ± Z-axis, 3 times for each direction, total of 18 times.                                           |                                               |                |
| Safety                                  | Photobiological Safety: EN62471:2008   EMC: EN55032, EN55035                                                                                                                                                     |                                               |                |
|                                         | ESD Protection: contact discharge: ±4 KV, air discharge: ±8 KV                                                                                                                                                   |                                               |                |
|                                         | Sealing: IP52   RF Immunity: IEC61000-4-3, 10 V/m   Illumination: 0~100,000 lux                                                                                                                                  |                                               |                |
|                                         | Drop Resistance: Withstands multiple 1.5 m (5 ft.) drops to concrete                                                                                                                                             |                                               |                |

[Notice]: Specifications are subject to change without notice.

**MINDEO**

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ES4790i V1.5  
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