ES910 - ES920 - ES922

Designed for Embedded Automatic Barcode Reading

524 65846 222 64

1D

2D

2D high performance

unitech

because we care

ES910 - ES920 - ES922

Designed for Embedded Automatic Barcode Reading

The ES series are metal alloy cased barcode readers to be embedded in Kiosk, installed at production line or to be used as a loosen device at different applications. The ES series is available from Linear laser based, 2D imager and 2D imager higher performance version to meet different requirements.

ES910

	ES910	
Input voltage	5 VDC +/- 0.25V	
Working power	90.04mA (operating); 148mA (Peak)	
Standby power		
Laser	650nm laser diode	
Image size	N/A	
Image field of view	N/A	
Scanning angles	± 60°, ± 65°, 42° (Skew, Pitch, Roll)	
Decoding rate	200 scans/sec	
Print contrast	20% minimum reflective difference	
Decode capability	All major 1D symbologies including GS1 Databar	
Indicator	Beeper	
Supporting interface	RS232 (3.3V TTL-level), USB, USB virtual COM port	
Operating mode	Manual trigger or Auto-detection	
Dimensions H x W x D	45.66mm x 40.80mm x 20.55mm	
Weight	29gm	
Case material	Zinc alloy; ABS (optional)	
Working temperature	-20°C to 55°C	
Storing temperature	-40°C to 70°C	
Humidity	5% to 95% (non-condensing)	
Programming method	Manual (with setup barcode sheet)	
Program upgrade	Online firmware update	
Minimum resolution	Long-range series	High-Density series
Depth of field	5 mil: 40 - 110mm	3 mil: 5 - 50mm
	10 mil: 10 - 280mm	10 mil: 10 - 85mm
	13 mil: 15 to 315mm	13 mil: 10 - 150mm
	16 mil: 25 - 385mm	16 mil: 25 - 165mm
	35 mil: 145 - 630mm	35 mil: 145 - 295mm
IP sealing	IP51	
Safety	Laser safety: EN60825-1, Class 1	
	EMC: EN55022, EN55024	
	Electrical safety: EN60950-1	
Mechnical vibration	N/A	
Mechanical shock	N/A	

ES920

	ES920
	5 VDC +/- 0.25V
	White LED: 345mA; Red LED: 202mA
	White LED: 905mA; Red LED: 92mA
	N/A
	640 x 480 pixels
	Horizontal: 48°, Vertical: 38°,
	+/- 58°, +/- 65°, 360° (Skew, Pitch, Roll)
	30 frames/Sec
	20% minimum reflective difference
	All major 1D and 2D symbologies
	Beeper
	RS232 (3.3V TTL-level), USB, USB virtual COM port
	Manual trigger, Auto-detection, Command
	45.5mm x 41.0mm x 19.0mm
	70gm (without cable)
	Zinc alloy
	-10°C to 45°C
	-35°C to 70°C
	5% to 95% (non-condensing)
	Manual (with setup barcode sheet)
	Online firmware update

1D

- 4 mil at Code128, 1mil=0.0254mm
- 4 mil Code 128 (9 chars): 15 - 40mm
- 10 mil Code 128 (9 chars): 10 - 150mm
- 13 mil Code 39 (6 chars): 5 - 160mm
- 20 mil Code 39 (1 char): 25 - 340mm
- 6.7 mil PDF417 (20 chars): 12 - 70mm
- 10 mil QR (20 chars): 5 - 85mm
- 20 mil QR (20 chars): 10 - 200mm

IP52

Photobiological Safety: EN62471:2008 EMC: EN55022

ESD Protection: EN55024 (IEC61000-4-2, contact discharge: ±2 KV, air discharge: ±8 KV, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-11) RF Immunity: IEC61000-4-3, 10 V/m

Artificial Light Immunity: 100,000 Lux

IEC60064-2-6 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

IEC60064-2-27 Shock pulse: 0.5 ms, Maximal acceleration: 1500 G, Shock direction & time: ±X -axis, ±Yaxis, ±Z-axis, 3 times for each direction, total of 18 times.

ES910

- 1D
- Compact design.
- Easy integration with different host devices.
- IP51

ES920

- 1D/2D
- Compact design and easy integration.
- Two options for auxiliary light: white and red.
- IP52

ES922

- 1D/2D
- With high image size (1280*800)
- Industry level, IP52
- It has four versions:
  SR (standard range),
  HD (high density),
  WA (wide angle),
  ER (enhanced range).

ES922

Specifications

3.4 - 5.5 VDC
White LED: 435mA
White LED: 105mA
N/A
1280 x 800 pixels
Horizontal: 45°, Vertical: 28°
± 70°, ± 72°, 360° (Skew, Pitch, Roll)
60 frames/sec
20% minimum reflective difference
All major 1D and 2D symbologies
Beeper
RS232 (3.3V TTL-level), USB, USB virtual COM port
Manual trigger, Auto-detection, Command
43.5mm x 41.0mm x 19.0mm
68gm (without cable)
Zinc alloy
-20°C to 50°C
-20°C to 70°C
5% to 95% (non-condensing)
Manual (with setup barcode sheet)
Online firmware update
High density (HD) - Standard range (SR)
3 mil Code 39 (3 chars): 55 - 83mm (HD)
4 mil Code 128 (9 chars): 45 - 142 mm (HD) 90 - 160mm (SR)
13 mil UPC (6 chars): 40 - 380mm (HD), 40 - 550mm (SR)
5 mil QR (40 chars): 48 - 100mm (HD)
6.7 mil PDF417 (20 chars): 30 - 160mm (HD), 70 - 160mm (SR)
10 mil QR (20 chars): 17 - 200mm (HD), 25 - 190mm (SR)
20 mil QR (20 chars): 20 - 320mm (HD), 20 - 380mm (SR)

IP52
Photobiological Safety: EN62471:2008 EMC: EN55022 ESD Protection: EN55024
(IEC61000-4-2, contact discharge: ±2 KV, air discharge: ±8 KV, IEC61000-4-4,
IEC61000-4-5, IEC61000-4-6, IEC61000-4-11) RF Immunity: IEC61000-4-3, 10 V/m
Artificial Light Immunity: 100,000 Lux

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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

IEC60064-2-27: Shock pulse: 0.5 ms, Maximal acceleration: 1500 G,
Shock direction & time: ± X-axis, ± Yaxis, ± Z-axis, 3 times for each direction,
total of 18 times.

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These three embedded scanners are designed for different application/usage/reason to make the best choice:

ES910

Scanning barcodes only	Customers card for binding benefits	To check payment & exchange a product	For medical purposes scan patient records	To aquire the pattern & print it in the clothes

ES920

Scanning Bar and QR codes	At the parking garage	Reading admission cards to give access	To controll admission armwristbands	Self-service terminals

ES922
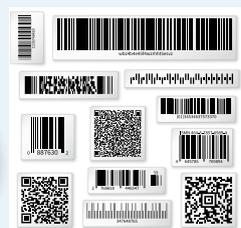
Scanning all types of codes	Scan packages on the assembly line	To scan coupons on mobile devices	Personal registration & allowes access	Security key card & unlock the door
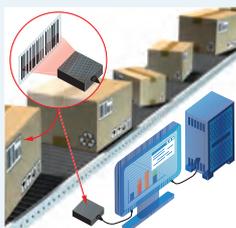
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