



**EM20-M37**  
OEM scan engine

## FEATURES

### Fast and efficient barcode scanning.

The EM20-M37 is a Newland 2D OEM Scan Engine that is easy to use for both your employees and customers. The scanner picks up on barcodes easily and takes almost no time to master.

### Easy integration.

The EM20-M37 is designed as an OEM Scan Engine with minimal casing to incorporate the illumination needed to accomplish optimum scanning. The resulting flexibility makes it a suitable solution for a wide variety of applications.

### Multiple interfaces.

The EM20-M37 supports USB and TTL-232 interfaces to meet diverse customer needs.

### Minimal footprint.

With a shallow form factor (65.2mm), fitting the device into small spaces is simple and hassle free.

### Designed to optimize scanning from a mobile phone screen.

A wide viewing angle and shallow depth of field makes the EM20-M37 an ideal OEM Scan Engine for scanning from a mobile phone screen. It was designed with added illumination that optimizes phone screen reading. Work faster, more efficiently and more effectively, simplifying and speeding up the process for your customers.

## Application Scenarios

Kiosks; self-service cabinets used in e-commerce • express delivery services and smart homes  
• ATMs; queue machines; lottery machines; certificate makers.

|                               |  |   |   |   |
|-------------------------------|--|---|---|---|
| <b>Performance</b>            | Image Sensor   | 752 * 480 CMOS  |   |   |
|                               | Illumination   | White LED   |   |   |
|                               | Symbologies  | 2D  | PDF 417, QR Code, Micro QR, Data Matrix, Aztec, Maxicode, Chinese Sensible Code, GM Code, Micro PDF417 Code, Code One |   |
|                               |  | Postal  | USPS Postnet, Royal Mail, KIX Post, Australian Postal, etc.   |   |
|                               | 1D   | EAN-8, EAN-13, UPC-E, UPC-A, Code 128, UCC/EAN128, I2Of5, ITF-14, ITF-6, Matrix 25, CodaBar, Code 39, Code 93, ISSN, ISBN, Industrial 25, Standard 25, Plessey, Code11, MSI-Plessey, UCC/EAN Composite, GS1 Databar, China Post 25, Code 49, Code 16K |   |   |
|                               |  | Resolution*   |   | ≥4mil   |
|                               |  | Typical Depth of Field*   |   | EAN-13 (13mil): 25mm-50mm<br>PDF417 (6.7mil): 25mm-35mm<br>Data Matrix (10mil): 30mm-35mm<br>QR Code (15mil): 25mm-45mm |
|                               | Min. Symbol Contrast*                                      | 25%   |   |   |
|                               | Scan Angle**   | Roll: 360°, Pitch: ±55°, Skew: ±45°   |   |   |
|                               | Field of View  | Horizontal 85°, Vertical 54.3°  |   |   |
| <b>Mechanical/ Electrical</b> | Interface  | TTL-232, USB  |   |   |
| Operating Voltage             | 12-pin FPC connector: 3.3-5VDC±5%                          |   |   |   |
|                               | 5-pin box connector: 5VDC±5%                               |   |   |   |
| Rated Power Consumption       | 717mW (typical)  |   |   |   |
| Current@5VDC                  | Operating  | 140mA (typical), 148mA (max.)   |   |   |
|                               | Standby  | 57mA  |   |   |
| Dimensions                    | 65.5(W)×61.5(D)×44(H)mm (max.)                             |   |   |   |
| Weight                        | 40g  |   |   |   |
| <b>Environmental</b>          | Operating Temperature                                      | -20°C to 60°C (-4°F to 140°F)   |   |   |
|                               | Storage Temperature  | -40°C to 70°C (-40°F to 158°F)  |   |   |
|                               | Humidity   | 5% to 95% (non-condensing)  |   |   |
|                               | Ambient Light  | 0~100,000lux (natural light)  |   |   |
| <b>Certifications</b>         | FCC Part15 Class B, CE EMC Class B                         |   |   |   |
| <b>Accessories</b>            | NLS-EVK  | Software development board for the NLS-EM20-M37, equipped with a trigger button, beeper and RS-232 & USB interfaces.  |   |   |
|                               | Cable  | USB   | Used to connect the NLS-EVK to a host device.   |   |
|                               |  | RS-232  | Used to connect the NLS-EVK to a host device.   |   |
| Power Adapter                 | DC5V power adapter to power the NLS-EVK with RS-232 cable. |   |   |   |

\*Test conditions: T=23°C; Illumination=300lux using incandescent lamp; sample barcodes made by Newland.

Version: V1.0

\*\*Test conditions: Scan Distance=(min. DOF + max. DOF)/2; T=23°C; Illumination=300lux using incandescent lamp; 2D: QR Code; 10 Bytes; Resolution=15mil; PCS=0.8.

\* Specifications are subject to change without notice.\*

**Newland EMEA HQ**  
+31 (0) 345 87 00 33  
info@newland-id.com  
newland-id.com

**D-A-C-H**  
+49 (0) 6182 82916-16  
info@newland-id.de

**United Kingdom**  
+44 (0) 7771 631387  
info@newland-id.co.uk

**France**  
+39 (0) 345 8804096  
france@newland-id.com

**Russia**  
+31 (0) 345 87 00 33  
russia@newland-id.com

**Benelux**  
+31 (0) 345 87 00 33  
benelux@newland-id.com

**Turkey**  
+90 (0) 544 538 40 49  
turkey@newland-id.com

**Ibérica**  
+31 (0) 345 87 00 33  
info@newland-id.com

**Middle East**  
+39 (0) 345 8804096  
middleeast@newland-id.com

**Italy**  
+39 (0) 342 0562227  
italy@newland-id.com

**South Africa**  
Gauteng: +27 (0) 11 553 8010  
Cape Town: +27 (0) 21 9140819  
info@newland-id.co.za

**Nordic & Baltic**  
+46 (0) 70 88 47 767  
nordic@newland-id.com

**Iran**  
+90 (0) 544 538 40 49  
iran@newland-id.com