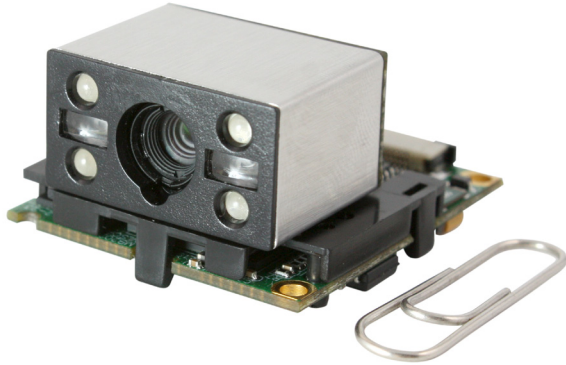


EM2028

1D/2D CMOS Scan Engine



Designed for OEM applications, this high performance CMOS engine can easily be integrated into various solutions such as kiosks, ticketing machines, PDA's and many more.

Product Features

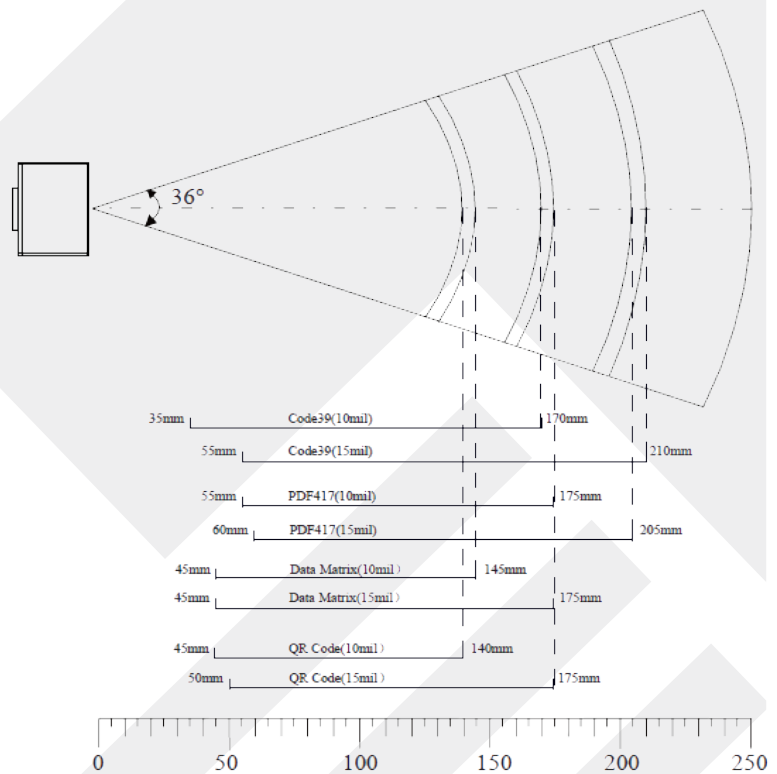
- **Ease of integration**

Compact and easy to integrate design, where the CMOS engine and decoder board can be placed separately into your solution. The small form factor enables easy integration into various solutions.

- **Advanced Technology**

Includes core-technology **UIMG™**, which is independently designed and manufactured by Newland Auto-ID. **UIMG™** technology includes the optical, CMOS, digitizer, decoder, image processing & embedded systems. The scanner supports all global standard 1D and most 2D barcode symbologies. Its' reading performance reaches and exceeds global standards. By using the accessories provided, the user can ideally set up the scanner to its user environment.

EM2028 Decode Zones



EM2028 Specifications

Image Capture Specifications

Image Sensor	CMOS
Resolution	752*480

Barcode Scan Specifications

Symbols	2D	PDF417, QR Code(Model 1/2), DataMatrix(ECC200, ECC000, 050, 080, 100,140),Aztec, Maxicode, etc.
	1D	Code128, EAN-13, EAN-8, Code39, UPC-A, UPC-E, Codabar, Interleaved 2 of 5, ISBN, Code 93, UCC/EAN-128, GS1 Databar, etc
Precision		≥ 5mil
Depth of Scan Field		30mm-230mm
Print Contrast Ratio		≥ 30%
Sensitivity**	Roll	360°@ 0°Pitch and 0° Skew
	Yaw (skew)	±60°@ 0°Roll and 0° Pitch
	Pitch	±55°@ 0°Roll and 0° Skew

Illumination Specifications

Light Source	LED (622 nm - 628 nm)
Light Intensity	330 LUX (130 mm)

Electrical and Mechanical Specifications

Voltage		DC 5V (4.5-5.5)
Current	Max	350mA
	Working	260mA
Height		20 mm
Width		30 mm
Length		35 mm
Weight		14g

Environment Specifications

Operating Temperature	-5°C - +45°C
Storage Temperature	-40°C - +60°C
Humidity	5% - 95% (non-condensing)
Ambient Illumination	0 ~ 100,000 LUX

Certificates

FCC Part15 Class B, CE EMC Class B

**Test Condition:

Code39: 4 Bytes ; Resolution = 10mil; W:N = 3:1 ; PCS = 1.0 ;
Barcode Height = 12mm; Distance = 100mm; T=23°C; Illumination= 200 LUX

Accessories

Evaluation kit

EVK2028	The Evaluation Kit for EM2028, with trigger, beep functions and USB, RS232 interfaces.
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Flex Cable

This cable connect to the RS232 port of EVK2028 with a RJ45 port.

RS232 cable	With a standard female RS232 port to connect to standard male RS232 port.
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With a power port to accept power adapter supply.

This cable connect to the USB Slave port of EM2028 with a USB-B male port.

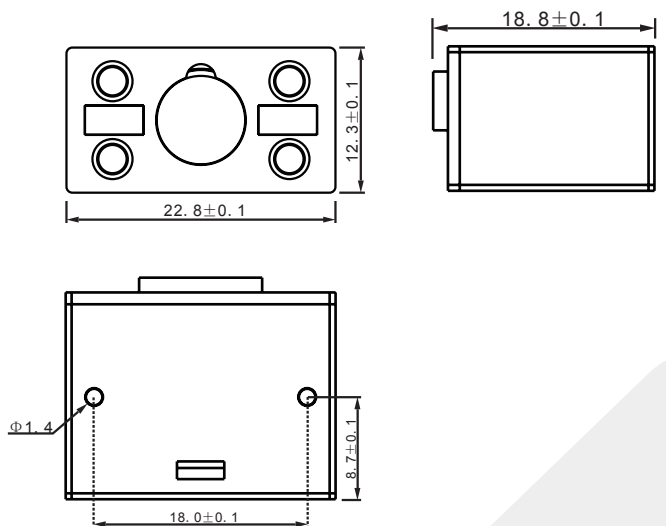
USB cable	With a standard USB Slave port to connect to standard USB Host port.
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Power

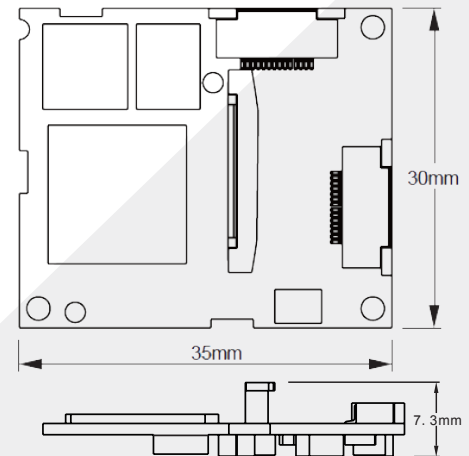
Power Adapter	The power adapter for EVK2028 by the CBL2028R. Output: DC5V, 2A; Input: AC100~240V, 50~60HZ.
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Dimensions (Unit: mm)

EM2028 Sensor



Decoder Board



Applicable Accessories

Quick Set

A platform for 2D barcode scanning configuration based on Microsoft Windows. Quick set connects the scanner engine through USB or RS-232, so users are able to modify the scan engine parameters in real-time through a Windows interface.

Integration Manual / Programming Guide

A manual to explain the user the basics of the scanner, how to integrate and configure it. Furthermore, it enables the user to set the scanner to the specific wishes regarding scanning modes, readable barcodes and barcode formats.

uTools Lite

A developing tool for the 2D scan engine based on Microsoft Windows or Linux. It includes tools needed for programming compilers, C/C++ libraries. The user can directly control the scan engine by these programs, to achieve a self defined decoding.