

HONEYWELL N4680 SERIES

COMPACT, DECODED 2D SCAN ENGINE

The N4680 Series barcode scan engine is a one-piece design, fully decoded 2D scan engine that utilizes Honeywell's latest imaging and decoding technology.

Honeywell's next generation, compact decoded N4680 Series 2D scan engine is available in either TTL serial or USB versions, both with an industry-standard, 12-pin ZIF connector. To provide an easier migration path for customers using its predecessor, the Honeywell N3680 Series, the N4680 Series scan engine is the same mechanical size and features the same mounting holes and electrical pin-out to create a drop-in replacement. For legacy customers using the Gen5 5x00 and EAxx platforms, the N4680 Series provides an upgrade path to better performance in a more compact one-piece package.

The N4680 Series scan engine is extremely motion tolerant to reach 6 m/s with its image capture at the rate of 120 fps maximum. Its powerful processor is 2.5 times faster. With the latest decoder platform from Honeywell, this device supports a wide variety of symbologies, including 1D, 2D, and OCR. It also includes advanced features that support reading poorly-printed and on-screen barcodes. These attributes make the N4680 Series scan engine useful to address the growing trend of many paperless, contactless applications.

The N4680 Series allows customers simple integration either with standard serial TTL or USB interface, a compact form factor and no mechanical design issues in dealing with an extra cable and decoder board. Whether you are looking for a scan engine to handle scanning-intensive applications, like many hand-held terminals, or need a compact size to fit into tight mechanical designs, the N4680 Series provides your answer for both mobile and fixed applications.



FEATURES AND BENEFITS



Drop-in replacement for the Honeywell N3680 Series scan engines with the same electrical and mechanical compatibility, but with a much higher motion tolerance that allows customers to design the device into scanning-intensive applications.



Fully integrated, one-piece design scan engine, so there's no need for an extra decoder board or host decoder programming. The N4680 Series does not require a separate CPU or OS for integration into a device.



Improved snappiness with global shutter has much higher motion tolerance of 6 m/s versus 0,1 m/s in rolling shutter.



Supports beyond barcode functionalities such as OCR and TotalFreedom™ that offer an open-system architecture for developing software plug-ins to implement value-added custom features such as Honeywell's EasyDL™.



Wide operating temperature range provides application flexibility.

HONEYWELL N4680 SERIES Technical Specifications

TABLE 1. SCAN PERFORMANCE

CHARACTERISTIC	PARAMETER
SENSOR TECHNOLOGY	global shutter
RESOLUTION	640 pixel x 480 pixel
FPS	120 max.
ILLUMINATION	white LED
AIMING	red dot LED
MOTION TOLERANCE	6 m/s
FIELD OF VIEW	40° horizontal × 30° vertical
SYMBOL CONTRAST	20%
RESOLUTION 1D	3 mil
13 MIL UPC	46 mm to 390 mm [1.81 in to 15.35 in]
5 MIL C39	45 mm to 180 mm [1.77 in to 7.09 in]
10 MIL C39	36 mm to 360 mm [1.41 in to 14.17 in]
20 MIL C39	71 mm to 747 mm [2.79 in to 29.41 in]
7 MIL PDF417	55 mm to 163 mm [2.17 in to 6.42 in]
10 MIL PDF417	42 mm to 247 mm [1.65 in to 9.72 in]
10 MIL QR	40 mm to 182 mm [1.57 in to 7.17 in]
20 MIL QR	36 mm to 367mm [1.42 in to 14.45 in]

TABLE 2. MECHANICAL/ELECTRICAL

CHARACTERISTIC	PARAMETER
DIMENSIONS (H × W × D)	11,5 mm x 21,15 mm x 14,6 mm [0.45 in x 0.83 in x 0.57 in]
WEIGHT	3.3 g [0.12 oz]
INTERFACE	USB or TTL
INPUT VOLTAGE	TTL Serial: 3.3 Vdc ±5 %; USB: 5.0 Vdc ±5 %
TYPICAL CURRENT	TTL Serial: 3.3 V - 320 mA; USB: 5 V - 195 mA

TABLE 3. ENVIRONMENTAL/OTHER

CHARACTERISTIC	PARAMETER
OPERATING TEMPERATURE	-30°C to 60°C [-22°F to 140°F]
STORAGE TEMPERATURE	-40°C to 70°C [-40°F to 158°F]
HUMIDITY (OPERATING AND STORAGE)	Up to 95 % relative humidity, non-condensing, at 60°C [140°F]
AMBIENT LIGHT	0 lux to 100,000 lux
SHOCK	3500 G for 0.4 ms at 23°C [73°F]
VIBRATION	3 axes, 1 hour per axis: 2,54 cm [1 in] peak-to-peak displacement (5 Hz to 13 Hz), 10 G acceleration (13 Hz to 500 Hz), 1 G acceleration (500 Hz to 2,000 Hz)
MEAN TIME BETWEEN FAILURE (MTBF)*	2.49 Mhr
WARRANTY	15 months

* Based on MIL-HDBK-217F (released December 1, 1991). The calculation is based on the part count method for the Ground Benign (GB) environmental conditions.

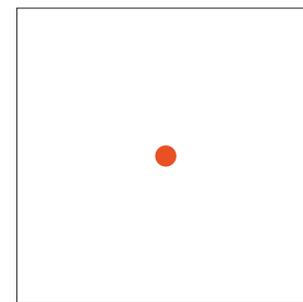


Figure 1. Red Dot LED Aimer

TABLE 4. SYMBOLOGIES

LINEAR
Codabar, Code 11, Code 128, Code 2 of 5, Code 39, Code 93 and 93i, EAN/JAN-13, EAN/JAN 8, IATA Code 2 of 5, Interleaved 2 of 5, Matrix 2 of 5, MSI, GS1 Databar, UPC-A, UPC E, UPC-A/EAN-13 with Extended Coupon Code, Coupon GS1 Code 32(PARAF), EAN-UCC Emulation, GS1 Data Bar
2D STACKED
Codablock A, Codablock F, PDF417, MicroPDF417
2D MATRIX
Aztec Code, Data Matrix, MaxiCode, QR Code, Chinese Sensible (Han Xin), Grid Matrix, Dot Code
POSTAL
Australian Post, British Post, Canadian Post, China Post, Japanese Post, Korea Post, Netherlands Post, Planet Code, Postnet

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgment or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items that Honeywell, in its sole discretion, finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

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Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this writing. However, Honeywell assumes no responsibility for its use.

ADDITIONAL INFORMATION

- Integration manual is available upon request; contact your Honeywell representative.
- For a listing of common compliance approvals and certifications, please visit our [website](#).

NOTICE

MISUSE OF DOCUMENTATION

- The information presented in this datasheet is for reference only. Do not use this document as a product installation guide.
- An installation manual is available by request on our [website](#). Please contact your Honeywell sales representative.

FOR MORE INFORMATION

To learn more about Honeywell scan engines and barcode decoding software, visit our [website](#).

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