N5780 SERIES

Compact, Decoded 2D Scan Engines

Honeywell continues to revolutionize scan engine performance with its sleek, one-piece, compact N5780 Series 2D scan engines.

The N5780 Series decoded 2D scan engines are purpose-built for everyday interactive and unattended applications such as those found in kiosks and worker-assisted solutions such as hand-held scanners. This product provides an intuitive, end user experience while delivering excellent motion tolerance and snappiness that helps increase workflow productivity.

Built on the same platform as the N4680 Series, the N5780 series leverages the Smart Adaptus™ 7.0 hardware platform and powerful decoding architecture. The N5780 Series' similar form factor features the same mounting holes as the N4680 Series, as well as an industry standard 12-pin connector, helping to accelerate product development with ease and reliability, further improving time to market.

The N5780 series also comes with a bracketed version to provide a seamless transition from its predecessor, the N568X series.

This product is a follow-on to the popular N5680 Series. Customers experience a sleeker, one-piece, packaged solution with advanced performance. The 2.5 times faster processor speed and support of a wide variety of barcode symbologies, including 1D and 2D, help future-proof applications, whether they be fixed or mobile.

The N5780 Series features superb motion tolerance, reaching 6 m/s with an image capture rate of 60 FPS, upwards to 120 FPS with a firmware upgrade.

The powerful imaging processor provides beyond barcode reading capabilities for OCR, as well as optimized reading performance of QR codes.



N5780WA



N5780SR



N5780SR Bracket

White or red illumination and the green cross target aimer provide the end user with a superior and intuitive scanning experience that helps to boost transaction speed and productivity.

FEATURES AND BENEFITS

Small, lightweight form factor with 12-pin connector or Micro USB 2.0 provides mechanical compatibility for frictionless migration.

Powerful decoding and imaging processor of the Smart Adaptus™ 7.0 platform and form factor enables rapid development and reduces time to market.

1 Mpx or 1.3 Mpx resolution and global shutter technology enables excellent snappiness and motion tolerance to provide greater productivity and throughput in kiosk applications.

Lower power consumption enhances application performance and functionality in the application's workflow.

Supports beyond barcode reading capabilities such as OCR, as well as the microservices that provide implementation of value-added custom features such as Honeywell's EasyDL™.

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N5780 Series Technical Specifications

TABLE 1. SCAN PERFORMANCE		
CHARACTERISTIC	**N5780SR**	**N5780WA**
Sensor technology	Global Shutter	Global Shutter
Resolution (pixels)	1280x800 px	1280x1080 px
Frames per second (FPS)	60 FPS	60 FPS
Illumination	White LED	Visible RED LED
Aiming	Green cross LED	Green cross LED
Motion tolerance	6 m/s	6 m/s
Field of view	47° horizontal × 30° vertical	69° horizontal × 60° vertical
Symbol contrast	20 %	20 %
Resolution 1D	3 mil	3 mil
Scan angles	tilt: 360°, pitch: ±60°, skew: ±60°	tilt: 360°, pitch: ±60°, skew: ±65°

TABLE 2. MECHANICAL/ELECTRICAL N5780			
CHARACTERISTIC	**N5780SR**	**N5780SR Bracket**	**N5780WA**
Dimensions (H × W × D)	11,7 mm × 21,15 mm × 14,6 mm [0.46 in × 0.83 in × 0.57 in]	39,7 mm × 19,4 mm × 28,2 mm [1.56 in × 0.76 in × 1.11 in]	11,7 mm × 21,15 mm × 14,6 mm [0.46 in × 0.83 in × 0.57 in]
Weight	3.7 g [0.13 oz]	12.0 g [0.42 oz]	3.7 g [0.13 oz]
Interface	USB or TTL	USB 2.0	USB or TTL
Input voltage	TTL Serial: 3.3 Vdc ±5 %; USB: 5.0 Vdc ±5 %	Micro USB: 5.0 Vdc ±5%	TTL Serial: 3.3 Vdc ±5 %; USB: 5.0 Vdc ±5 %
Typical current	TTL Serial: 3.3 V - 250 mA; USB: 5 V - 200 mA	Micro USB: 190 mA	TTL Serial: 3.3 V - 275 mA; USB: 5 V - 243 mA

TABLE 3. ENVIRONMENTAL/OTHER			
CHARACTERISTIC	**N5780SR**	**N5780SR Bracket**	**N5780WA**
Operating temp.	-30°C to 60°C [-22°F to 140°F]		
Storage temp.	-40°C to 70°C [-40°F to 158°F]		
Humidity	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] applied via the mounting surface	1500G for 0.4ms at 23°C [73°F])	3500 G for 0.4 ms at 23°C [73°F] applied via the mounting surface
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)*	1.55 million hours	1.36 million hours	2.35 million hours
Warranty	15-month limited warranty; the warranty period starts at date of shipment from Honeywell to customer.		

** 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.*

N5780 Series Technical Specifications

TABLE 4. READ RANGES N5780SR

Symbology	Near Distance (mm [in])	Far Distance (mm [in])	Delta (mm [in])
13 MIL UPC (100%)	40 [1.6]	490 [19.3]	450 [17.7]
5 MIL C39	60 [2.4]	275 [10.8]	215 [8.4]
10 MIL C39	35 [1.4]	475 [18.7]	440 [17.3]
20 MIL C39	61 [2.4]	790 [31.1]	729 [28.7]
5 MIL CODE 128	65 [2.6]	245 [9.6]	180 [7]
20 MIL CODE 128	44 [1.7]	700 [27.6]	656 [25.8]
7 MIL QR	72 [2.8]	190 [7.5]	118 [4.6]
20 MIL QR	27 [1.1]	440 [17.3]	413 [16.2]
10 MIL DM	52 [2.0]	270 [10.6]	218 [8.5]
6.67 MIL PDF417	62 [2.4]	270 [10.6]	208 [8.2]

TABLE 5. READ RANGES N5780WA

Symbology	Near Distance (mm [in])	Far Distance (mm [in])	Delta (mm [in])
13 MIL UPC-A	23 [0.91]	365 [14.37]	342 [13.46]
3 MIL C39	31 [1.22]	81 [3.19]	50 [1.97]
5 MIL C39	25 [0.98]	166 [6.54]	141 [5.56]
20 MIL C39	38 [1.49]	669 [26.34]	631 [24.84]
10 MIL C128	19 [0.75]	295 [11.61]	276 [10.86]
20 MIL QR	19 [0.75]	329 [12.95]	310 [12.2]
10 MIL DM	14 [0.55]	160 [6.29]	146 [5.75]
6.67MIL PDF417	22 [0.87]	175 [6.89]	153 [6.02]
5 MIL DM	33 [1.29]	78 [3.07]	45 [1.77]
7MIL QR	20 [0.79]	109 [4.29]	89 [3.5]

TABLE 6. 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 AND CODE 32(PARAF), EAN-UCC EMULATION
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



Figure 1. Green Cross LED Aimer

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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ADDITIONAL INFORMATION

- Integration Manual is available upon request; contact your Honeywell representative
- For a listing of common compliance approvals and certifications, 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

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N5780 Series Datasheet | Rev C | 04/25
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