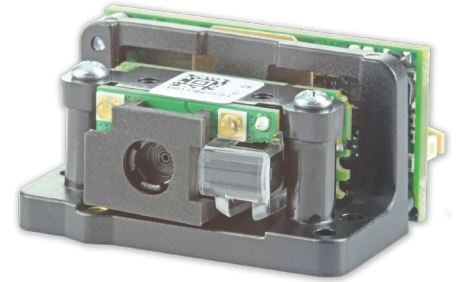


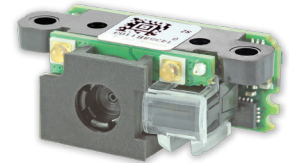
N5600 SERIES

Miniature 2D Imagers

Barcode reading has never been so simple. The N5600 Series miniature 2D imager engines set new standards of performance and ease of integration and use for OEM customers and end users with Honeywell's advanced Adaptus® 6.0 imaging technology.



N5680 Decoded 2D Imager



N5600 Undecoded 2D Imager

OPTIMUM BARCODE READING

Built on a proven imaging platform, Adaptus 6.0 provides an entirely new level of barcode and Optical Character Recognition (OCR) font reading performance, with enhanced speed and accuracy. At the heart of the system is a new proprietary imaging sensor designed specifically for optimum barcode reading. With an advanced illuminating design, this sensor captures images for barcode decoding with exceptional tolerance for motion. The patented color option captures color images, without sacrificing barcode reading performance.

BUILT-IN VERSATILITY

Adaptus 6.0 also includes a completely redesigned software architecture that leads the industry in its ability to decode hard-to-read barcodes. Built-in versatility with various available options enables the N5600 Series scan engines to meet the requirements of a wide range of applications. Backed by Honeywell's expert OEM integration support, and proven quality and reliability, the N5600 Series provides value to OEM customers by providing enhanced data capture solution, reducing development investment, and decreasing total ownership costs. The N5600 Series scan engines are available as imagers with either a hardware decoder, for easy integration, or a licensed software decoder for space and power-constrained applications such as mobile terminals.

FEATURES AND BENEFITS



High visibility laser or LED aiming option ensures crisp and accurate targeting, even in bright sunlight.



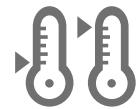
Supports TotalFreedom®, an open-system architecture for developing software plug-ins to implement value-added, custom features such as Honeywell's EasyDL™.



New wide angle optic is perfectly suited for slim, fixed mount designs where the minimum read distance from the barcode is only 2,3 cm [1 in].



Adaptus 6.0 Imaging Technology provides fast and accurate reading of barcodes and OCR fonts with best-in-class range and extraordinary motion tolerance on paper and smart phone screens.



Extended operating temperature support of -30°C to 60°C [-22°F to 140°F] provides application flexibility.

N5600 SERIES Technical Specifications

TABLE 1. MECHANICAL	
CHARACTERISTIC	PARAMETER
Dimensions (L x W x H)	Imager without mounting tabs (N5600, N5603): 12,5 mm x 20,8 mm x 17,2 mm [0.49 in x 0.82 in x 0.68 in] Decoder board (N56XX DB): 19,1 mm x 39,8 mm x 8,2 mm [0.75 in x 1.57 in x 0.32 in] Assembled imager and decoder board (N56X0, N56X3): 19,4 mm x 39,8 mm x 28,2 mm [0.76 in x 1.57 in x 1.11 in]
Weight	Imager: <7g [0.25 oz] Assembled imager and decoder board: <20g [0.7 oz]
Interface	Imager: 30-pin board-to-board (Molex 51338-0374) Decoder: 12-pin surface mount (Molex 52559-1252) or Micro-B USB

TABLE 2. PERFORMANCE	
CHARACTERISTIC	PARAMETER
Sensor technology	proprietary CMOS sensor with global shutter
Resolution	844 pixel x 640 pixel
Illumination	617 nm visible red LED
Aimer	N5600: 528 nm visible green LED N5603: 650 nm high-visibility red laser; maximum output 1 mW, Class 2
Motion tolerance	up to 584 cm [230 in] per second in total darkness with 100% UPC at 10 cm [4 in] distance
Imaging speed	60 fps
Field of view	HD Optics: 41.4° horizontal, 32.2° vertical SR Optics: 42.4° horizontal, 33.0° vertical ER Optics: 31.6° horizontal, 24.4° vertical WA Optics: 68° horizontal, 54° vertical
Scan angles	tilt: 360°, pitch: ±45°, skew: ±65°
Symbol contrast	20% minimum reflectance
Warranty	15-month limited warranty; the warranty period starts at date of shipment from Honeywell to customer

TABLE 3. HIGH DENSITY (HD OPTICS) ^{1, 2, 3}			
SYMBOLGY	NEAR DISTANCE (CM [IN])	FAR DISTANCE (CM [IN])	DELTA (CM [IN])
3 mil C39	3,1 [1.2]	11,4 [4.5]	8,3 [3.3]
5 mil C39	3,4 [1.3]	13,9 [5.5]	10,4 [4.1]
7.5 mil C128	2,1 [0.8]	13,7 [5.4]	11,6 [4.6]
5 mil PDF	3,1 [1.2]	11,6 [4.3]	8,5 [3.1]
5 mil Data Matrix	4,4 [1.7]	8,9 [3.5]	4,6 [1.8]

TABLE 4. STANDARD RANGE (SR OPTICS) ^{1, 2, 3}			
SYMBOLGY	NEAR DISTANCE (CM [IN])	FAR DISTANCE (CM [IN])	DELTA (CM [IN])
5 mil C39	4,7 [1.8]	19,6 [7.7]	14,9 [5.9]
10 mil C39	1,5 [0.6]	43,8 [17.2]	42,3 [16.6]
100% UPC	3,8 [1.5]	43,3 [17.0]	39,6 [15.6]
5 mil PDF	5,3 [2.0]	13,2 [5.1]	7,9 [2.7]
10 mil Data Matrix	3,9 [1.5]	19,9 [7.8]	16,0 [6.3]

TABLE 5. EXTENDED RANGE (ER OPTICS) ^{1, 2, 3}			
SYMBOLGY	NEAR DISTANCE (CM [IN])	FAR DISTANCE (CM [IN])	DELTA (CM [IN])
100% U.P.C	6,1 [2.4]	53,3 [21.0]	47,2 [18.6]
10 mil Code 39	6,1 [2.4]	44,2 [17.4]	36,1 [15.0]
15 mil Code 39	3,8 [1.5]	54,9 [21.6]	51,1 [20.1]
10 mil PDF417	5,6 [2.2]	39,6 [15.6]	34,0 [13.4]
MaxiCode	7,9 [3.1]	52,8 [20.8]	44,9 [17.7]

TABLE 6. WIDE ANGLE RANGE (WA OPTICS) ^{1, 2, 3}			
SYMBOLGY	NEAR DISTANCE (CM [IN])	FAR DISTANCE (CM [IN])	DELTA (CM [IN])
3 mil C39	2,3 [0.9]	7,3 [2.9]	5,0 [2.0]
5 mil C39	2,3 [0.9]	12 [4.7]	2,3 [0.9]
10 mil Code 39	1,9 [0.7]	22 [8.7]	1,9 [0.7]
13 mil 100% UPC-A	2,8 [1.1]	25,6 [10.1]	2,8 [1.1]
6.7 mil PDF 417	2,2 [0.9]	11 [4.3]	2,2 [0.9]
10 mil Data Matrix	1,7 [0.7]	11,7 [4.6]	1,7 [0.7]

TABLE 7. ELECTRICAL	
CHARACTERISTIC	PARAMETER
input voltage	Imager: 3.3 Vdc ±5% Vdc Decoder: TTL-RS232: 3.0 Vdc to 5.5 Vdc USB: 5.0 Vdc ±5% Vdc
Typical current draw at 3.3 Vdc	N5600: manual trigger: 276 mA presentation: 142 mA sleep: 90 µA N5603: presentation: 142 mA sleep: 90 µA

TABLE 8. ENVIRONMENTAL	
CHARACTERISTIC	PARAMETER
Operating temperature ⁴	-30°C to 60°C [-22°F to 140°F]
Storage temperature	-40°C to 85°C [-40°F to 185°F]
Humidity	0% to 95% RH, non-condensing at 50°C [122°F]
Shock	3,500 G for 0.4 ms at 23°C [73°F] to 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)
Ambient light	0 lux to 100,000 lux (total darkness–bright sunlight)
MTBF	N5600: >2,000,000 hours N5603: >375,000 hours

¹ Resolution for linear barcodes: 0,127 mm [5.0 mil].
² Resolution for 2D matrix barcodes: 0,191 mm [7.5 mil].
³ Barcode quality and environmental conditions may affect performance.
⁴ Extreme temperatures will reduce the depth of field.

FIGURE 1. GREEN LED AIMER

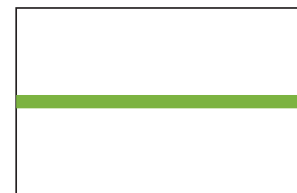


FIGURE 2. RED LASER AIMER



TABLE 9. SYMBOLOGIES

LINEAR

UPC/EAN/JAN, GS1 DataBar, Code 39, Code 128, Code 32, Code 93, Codabar/NW7, Interleaved 2 of 5, Code 2 of 5, Matrix 2 of 5, MSI, Telepen, Trioptic, China Post

2D STACKED

PDF417, MicroPDF417, GS1 Composite

2D MATRIX


Aztec Code, Data Matrix, QR Code, Micro QR Code, MaxiCode, Han Xin Code

POSTAL

Intelligent Mail Barcode, Postal-4i, Australian Post, British Post, Canadian Post, Japanese Post, Netherlands (KIX) Post, Postnet, Planet Code

OCR OPTION

OCR-A, OCR-B, E13B (MICR)

**LASER LIGHT-DO NOT STARE INTO BEAM
RAYONNEMENT LASER-NE PAS REGARDER
DANS LE FAISCEAU.** MAX. 1 mW: 650 nm.
IEC 60825-1:2007 and IEC 60825-1:2014.
Pulse duration of 15.5 mSec. Complies with
21CFR 1040.10 and 1040.11 except for
deviations pursuant to Laser Notice No. 50,
dated June 24, 2007.
CLASS 2 LASER PRODUCT.
APPAREIL À LASER DE CLASSE 2. 

Applies to N5603 and N56X3 laser-aimer models only.

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.

While Honeywell may provide application assistance personally, through our literature and the Honeywell web site, it is buyer's sole responsibility to determine the suitability of the product in the application.

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

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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