Honeywell

N5600 Series

N5600, N5603, N56X0, N56X3, N56XX DB

Miniature Area-Imaging Engines

Bar code reading has never been so simple. N5600 series miniature area-imaging 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.

Built on an industry-leading imaging platform, Adaptus 6.0 delivers an entirely new level of bar code and OCR font reading performance, with unmatched speed and accuracy. At the heart of the system is a brand new proprietary imaging sensor—the world's first designed specifically for optimum bar code reading. With an advanced illuminating design, this unique sensor captures images for bar code decoding with exceptional tolerance for motion. The patented color option captures color images, without sacrificing bar code reading performance. Adaptus 6.0 also includes a completely revamped software architecture that leads the industry in its ability to decode hard-to-read bar codes.

Superior built-in versatility with various available options enables N5600 engines to meet the requirements of a wide range of applications. Backed by Honeywell's expert OEM integration support, and proven quality and reliability, N5600 engines deliver tremendous value to OEM customers by providing a best-in-class data capture solution, reducing development investment, and decreasing total ownership costs.

N5600 series 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

- Adaptus 6.0 Imaging Technology: Provides fast and accurate reading of bar codes and OCR fonts with best-in-class range and extraordinary motion tolerance, even on hard-to-read codes and those displayed on mobile phone screens
- Available Color Option: Patented technology allows color images of signatures, packages, vehicle license plates, identification cards and other objects to be captured, eliminating the need for a separate camera
- High Visibility Laser 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™
- Remote MasterMind ® Ready: Reduces total cost of ownership by providing a turnkey remote device management solution that easily manages and tracks usage of installed devices

N5600 Series Technical Specifications

Performance	
Sensor	Proprietary CMOS sensor with global shutter and 844 × 640 pixel resolution; 60 frames per second; optional color
Illumination	617 nm visible red LED
Aiming	N5600 Imager: 528 nm visible green LED N5603 Imager: 650 nm high-visibility red laser; maximum output 1 mW Class 2 Laser
Motion Tolerance	Up to 584 cm (230″) per second in total darkness with 100% UPC at 10 cm (4″) distance
Field of View	SR Optics: 42.4° (Horizontal), 33.0° (Vertical); ER Optics: 31.6° (Horizontal), 24.4° (Vertical); HD Optics: 41.4° (Horizontal), 32.2° (Vertical)
Scan Angles	Tilt: 360°, Pitch: ± 45°, Skew: ± 65°
Symbol Contrast	20% minimum reflectance
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)
Mechanical/Electrical	
Dimensions (HxWxD)	Imager without mounting tabs (N5600, N5603): 12.5 mmx 20.8 mm x 17.2 mm (0.49″ x 0.82″ x 0.68″) Decoder board (N56XX DB): 19.1 mm x 39.8 mm x 8.2 mm (0.75″ x 1.57″ x 0.32″) Assembled imager and decoder board (N56X0, N56X3): 19.4 mm x 39.8 mm x 28.2 mm (0.76″ x 1.57″ x 1.11″)
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
Input Voltage	Imager: 3.3VDC ± 5%; Decoder: TTL-RS232: 3.0 – 5.5 VDC; USB: 5.0 VDC ± 5%
Typical Current Draw @3.3VDC	N5600: 276 mA (manual trigger); 142 mA (presentation); 90 µA (sleep) N5603: 228 mA (manual trigger); 142 mA (presentation); 90 µA (sleep)
Environmental/Other	
Temperature	Operating: -25°C to 50°C (-13°F to 122°F); Storage: -40°C to 85°C (-40°F to 185°F)
Humidity	0 to 95% relative humidity, non-condensing, at 50°C (122°F)
Ambient Light	0–100,000 lux (total darkness–bright sunlight)
Shock Rating	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″) 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)
MTBF	N5600 > 2,000,000 hours N5603 > 375,000 hours
Warranty	15 month limited warranty

For a complete listing of all compliance approvals and certifications, please visit www.honeywellaidc.com/compliance
For a complete listing of all supported bar code symbologies, please visit www.honeywellaidc.com/symbologies

High Density (HD) Optics	
Symbology/X-Dim	Typical Range*
3 mil Code 39	48 mm to 91 mm (1.9″ to 3.6″)
5 mil Code 39	30 mm - 127 mm (1.2″ - 5.0″)
7.5 mil Code 39	33 mm - 152 mm (1.3″ - 6.0″)
5 mil MicroPDF417	43 mm - 84 mm (1.7″ - 3.3″)
5 mil Data Matrix	41 mm - 86 mm (1.6″ - 3.4″)
Resolution, linear bar codes: 0.076 mm (3.0 mil) Resolution, 2D matrix codes: 0.127 mm (5.0 mil)	

Standard Range (SR) Optics	
Symbology/X-Dim	Typical Range*
100% U.P.C.	46 mm to 419 mm (1.8″ to 16.5″)
5 mil Code 39	64 mm - 163 mm (2.5″ - 6.4″)
10 mil Code 39	28 mm - 338 mm (1.1″ - 13.3″)
6.7 mil PDF417	46 mm - 185 mm (1.8″ - 7.3″)
10 mil Data Matrix	53 mm - 203 mm (2.1″ - 8.0″)
Resolution, linear bar codes: 0.127 mm (5.0 mil) Resolution, 2D matrix codes: 0.169 mm (6.7 mil)	

Extended Range (ER) Optics	
Symbology/X-Dim	Typical Range*
100% U.P.C.	61 mm to 533 mm (2.4″ to 21.0″)
10 mil Code 39	61 mm - 442 mm (2.4″ - 17.4″)
15 mil Code 39	38 mm - 549 mm (1.5″ - 21.6″)
10 mil PDF417	56 mm - 396 mm (2.2″ - 15.6″)
MaxiCode	79 mm - 528 mm (3.1″ - 20.8″)
Resolution, linear bar codes: 0.127 mm (5.0 mil) Resolution, 2D matrix codes: 0.191 mm (7.5 mil)	

*Performance may be impacted by bar code quality and environmental conditions.

For more information:
www.honeywellaidc.com

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N5603 and N56X3 laser-aimer models only

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