

N6603 Series

Ultra-Slim Area-Imaging Engine

High performance barcode imaging has never been so slim and compact. The N6603 series integrates Honeywell's Adaptus 6.0 technology for unparalleled 1D and 2D scanning performance, and also provides a better user experience and more integration convenience than ever before.

Built on an industry-leading imaging platform, Adaptus 6.0 technology delivers a superior barcode reading experience, with outstanding speed and unrivaled accuracy. Inside the ultra-compact N6603 series engine, a proprietary imaging sensor is embedded that is designed specifically for professional barcode reading. With its powerful white illumination, this compact but powerful sensor captures more detail and is exceptionally motion tolerant—making it easy to decode hard-to-read barcodes and tolerate challenging ambient light environments.

Interface flexibility was paramount in the design of the N6603 series. It supports both traditional parallel and MIPI interfaces for emerging technologies. This enables easier integration with the latest processors, saves space, reduces overall design cost and shortens the integration and development cycle. The N6603 series is also backwards-compatible with nearly all N5603 series designs, which reduces development complexity and makes it easier and faster to integrate.

The N6603 series is available with a laser-based aimer. This highly visible laser aimer provides an ultra-clear and sharp aiming pattern that makes targeting and scanning easy—even in challenging environments.

As the next-generation flagship product, the N6603 series inherits the most advanced imaging technology from both Honeywell and legacy Intermec. It is also a smart choice for enterprise mobility, tablet, sled and wearable device makers who do not want to compromise thermal management, power consumption, peak current control and EMI for unmatched 2D scanning performance.



Features

- **Ultra Compact Size:** The slimmest height in the industry at only 6.8 mm. Perfect for integration into tomorrow's ultra-slim devices.
- **MIPI Interface Available:** Supports the latest technology trends for shorter design cycles.
- **White Illumination & High Visibility Aimer:** Optimized white illumination helps you read all barcodes. Highly visible aimer gives a clear, sharp and easily observed target area.
- **Superior Scan Performance:** Delivers fast scan speed, ultra-fast motion tolerance up to 5 meters per second, excellent reading capability for poorly printed barcodes, support for color barcodes, and full symbology support.
- **Adaptus 6.0 Imaging Technology:** Provides fast and accurate reading of barcodes and OCR fonts with best-in-class range and extraordinary motion tolerance, even on hard-to-read codes as well as those displayed on mobile phone screens.

N6603 Series Technical Specifications

Performance

Sensor	Proprietary CMOS sensor with global shutter and 844 x 640 pixel resolution
Illumination	White LED (exempt risk group)
Aiming	650 nm high-visibility red laser (class 2 laser safety)
Typical frame rate	60 frames per second (max.)
Motion Tolerance	Up to 584 cm (230") per second in total darkness with 100% UPC at 10 cm (4") distance
Field of View	Horizontal Field Angle: 42.4° Vertical Field Angle: 33°
Scan Angles	Tilt: 360°, Pitch: ± 45, Skew: ± 60°
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 (LxWxH)	N6603: 23.5 x 16.2 x 6.8 mm typical
Weight	3 g
Interface	Imager: Parallel camera data, CSI-2 MIPI
Input Voltage	Imager: 3.3 VDC ± 5%
Typical Current Draw @ 3.3VDC	N6603-102: 175 mA (manual trigger); 90 µA (sleep) N6603-103: 195 mA (manual trigger); 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 to bright sunlight)
Shock Rating	3500 G for 0.4 ms at 23°C
Vibration	Displacement of 5.1 mm (0.20") p-p from 5 Hz to 22 Hz and with an acceleration of 5 g's peak from 22 Hz to 300 Hz
MTTF	375,000 hrs
Warranty	15 month limited warranty

Refer to the Honeywell Scanning & Mobility Compliance Center at www.honeywellaidc.com/compliance to review and download any publicly available documentation pertaining to the certification of this product in a given country.

Refer to the Honeywell Scanning & Mobility Supported Symbologies Datasheet at www.honeywellaidc.com/symbologies for a complete listing of all supported barcode symbologies.



Standard Range (SR) Optics	
Symbology/X-Dim	Typical Range*
100% U.P.C.	46 mm – 419 mm (1.8" – 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 barcodes: 0.127 mm (5.0 mil)	
Resolution, 2D matrix codes: 0.169 mm (6.7 mil)	

* Performance may be impacted by barcode quality and environmental condition.