# HONEYWELL GEN8 DB

**007643**
*Issue 1*

## Miniature Decoder Board


*Honeywell GEN8 DB, front and back views*

**Honeywell's next generation, miniature decoder board is packed with powerful processing and performance that unleashes Honeywell's Smart Adaptus™ 8.0 platform through its dual core processors and 4x memory speed.**

Honeywell's Gen8 DB Decoder Board is the next generation platform that follows the successful Gen7 DB and MINI DB Decoder Boards. With its ultra-powerful processor, combined with Honeywell's comprehensive barcode symbology support, the GEN8 DB delivers superior decoding performance for all barcode types and beyond, including OCR applications.

Through its 1.2 GHz dual processor and 4x memory speed, the GEN8 DB enables near-term and future application flexibility over the total cost of ownership, further providing flexibility tailored to changing development needs. It is also flash-upgradable, catering to maintenance needs, continuous innovation and support.

Designed to simplify complex integrations and streamline OEM configurations, the GEN8 DB is equipped with MIPI interface with optional TTL or USB interface support. Customers may choose either a TTL serial or USB interface for board-to-board, snap-on installation to the customer's main board which is then secured using additional hold-down screws. This "cable-less" solution eliminates the need for an additional flex cable and connector while providing a more compact footprint. This product is also built on the same form factor footprint as the GEN7 DB and MINI DB, providing drop-in mechanical fit, allowing customers to expect frictionless migration from current designs to the GEN8 DB platform.

## FEATURES AND BENEFITS

- Powerful 1.2 GHz dual processor and 4x memory enable future proofing of your end applications to maximize your total cost of ownership.
- Packaged in a compact and sleek 20 mm x 14 mm [0.79 in x 0.55 in] form factor that provides design and real estate flexibility.
- MIPI interface reduces development costs and simplifies integration.
- Frictionless migration at your own ease and convenience from GEN7 DB to GEN8 DB.
- Supports beyond barcodes functionalities such as OCR and Swiftdecoder microservices to implement value-added custom features such as Honeywell's EasyDL™.

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# HONEYWELL GEN8 DB DECODER BOARD Technical Specifications

## TABLE 1. MECHANICAL

| Characteristic | Parameter |
|---|---|
| Dimensions (L x W x H) | 20 mm x 14 mm x 4,8 mm [0.79 in x 0.55 in x 0.19 in] |
| Interface:<br>input<br>output | <br>34-pin connector for scan engine MIPI interface<br>board-to-board connector with RS TTL and USB HS (480 Mbit/s) available |

## TABLE 2. PERFORMANCE

| Characteristic | Parameter | |
|---|---|---|
| | Gen8 DB + N6803MR Scan Engine | Gen8 DB + N6803FR Scan Engine |
| Input voltage | 3.15 V to 3.45 V | |
| Operating current at 3.3 V:<br>RS mode<br>USB full speed<br>USB high speed<br>INRUSH (maximum) | <br>475 mA (RMS, exposure time: 12.5 ms)<br>490 mA RMS, exposure time: 12.5 ms)<br>490 mA (RMS, exposure time: 12.5 ms)<br>700 mA | <br>417 mA (RMS, exposure time: 9 ms)<br>422 mA RMS, exposure time: 9 ms)<br>432 mA (RMS, exposure time: 9 ms)<br>650 mA |
| Idle current at 3.3 V (scan engine powered):<br>RS mode<br>USB full speed<br>USB high speed | <br>175 mA (RMS)<br>190 mA (RMS)<br>200 mA (RMS) | <br>148 mA (RMS)<br>155 mA (RMS)<br>165 mA (RMS) |
| Idle current at 3.3 V (scan engine not powered):<br>RS mode<br>USB full speed<br>USB high speed | <br>125 mA<br>130 mA<br>135 mA | <br>125 mA<br>130 mA<br>138 mA |
| Standby/suspend at 3.3 V:<br>RS mode<br>USB full speed<br>USB high speed | <br>4.5 mA (RMS)<br>3.8 mA (RMS)<br>4.2 mA (RMS | <br>8 mA (RMS)<br>8.1 mA (RMS)<br>8.3 mA (RMS) |
| Working mode | • operation (scanning/decoding)<br>• idle | • standby (RS)/suspend (USB)<br>• power off |
| Indicators | beeper and green LED signals available on the output connector | |
| Supported scan engines | N6803MR, N6803FR | |
| Supported software | EZConfig, HSM USB Serial Driver | |
| MTBF* | 1,741,553 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.

## TABLE 3. DECODER BOARD COMPARISON

| Characteristic | GEN8 DB | GEN7 DB | MINI DB | GEN6 DB |
|---|---|---|---|---|
| Scan engine compatibility | N6803MR/FR, N670X MIPI | Extended FlexRange EX30, N670X Series, N3601 | N560X Series, N660X Series | |
| Dimensions | 20 mm x 14 mm [0.79 in x 0.55 in] | | | 39,8 mm x 19,1 mm [1.6 in x 0.75 in] |
| Input Voltage | 3.3 V | | | 3.3 V, 5 V |
| Processor | Ingenic, 1.2GHz | Ingenic, 1GHz | IMX25, 400MHz | IMX25, 400MHz |
| Connection | board-to-board, board-to-ZIF | | | micro USB, board-to-ZIF |
| Interface | TTL, USB | | | TTL, USB 1.1, USB 2.0 |

## TABLE 4. ENVIRONMENTAL

| Characteristic | Parameter |
|---|---|
| Temperature ranges:<br>operating<br>storage | <br>-30°C to 60°C [-22°F to 140°F]<br>-40°C to 70°C [-40°F to 158°F] |
| Humidity | 95 %RH at 60°C [140°F] |
| Shock | 18 shocks at 3500 G/0.4 ms |
| Compliance and regulatory requirements | EMC Class B, FCC Class B |
| Safety | • CB Scheme: IEC 62368-1: 2018<br>• UL/C-UL (Recognized Component)<br>• UL 62368-1 Third Edition<br>• CSA C22.2 NO. 62368-1, 3rd Edition |

**FIGURE 1. HONEYWELL GEN8 DB WITH THE N6803MR SCAN ENGINE**

**FIGURE 1. HONEYWELL GEN8 DB WITH THE N6803FR SCAN ENGINE**

## TABLE 5. 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, 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, 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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