# C21 SERIES

## Compact 2D Camera

## The brand-new Camera Series offering from Honeywell provides barcode scanning coupled with SwiftDecoder™ software

The Honeywell C21 Camera Series offers barcode scanning that addresses the need for lightweight, compact form factors, with multi-platform support for Android™, Windows®, and Linux®. The C21 Camera Series allows end-users to acquire and process images quickly and reliably in the most complex workflows. Working with Honeywell proprietary SwiftDecoder™ software, enterprise algorithms deliver speed, range, and accuracy to boost performance across a wide range of camera-enabled devices and operating systems.

Designed to simplify complex integrations, the C21 Camera Series is providing the support of MIPI interface with optional Micro USB or FPC USB interface support by using C2 Interface board. The C2105/2101 with MIPI interface support while its compact dimensions (15 mm [0.59 in] height × 7 mm [0.28 in] width) free up more room for other technology integration. The C2 Interface board is on the same height and width as the Honeywell GEN7 DB and Gen8 DB, allowing customers to reduce time and design costs while increasing design flexibility and choice.

Optics design has been leveled up in the C21 Camera Series. Based on 5Mpx rolling shutter sensor, the C2105 can provide the wide-read field-of-view at horizontal 71°. Its white LED illumination enhances image capture accuracy while the wide-angle optics allow reading of large codes in near field. Equipped with a VGA global shutter sensor, the C2101 features a high motion tolerance (0.5 m/s max.) with a image capture rate of 180 fps. Its also features white LED illumination.

Combining the power of the C21 Camera with Honeywell SwiftDecoder™, our easy-to-use SDK, enables customers to develop native or hybrid apps that perform barcode decoding. The apps are used to acquire data quickly and reliably in the most complex workflows in various industries, including Healthcare, Retail, T&L, Warehouse, Hospitality and more.

Applications developed using the SwiftDecoder™ proprietary, field-proven algorithms improve productivity by increasing both the speed and accuracy of scanning and



*C2105WA*

decoding barcodes. SwiftDecoder™ offers comprehensive support for barcode symbologies which translates into higher productivity, reduced costs, and ultimately satisfied returning customers.

The wide operational temperature range (-20°C to 50°C [-4°F to 122°F]) enables expansion into a variety of demanding applications with lower power consumption (425 mW min.) to increase the battery life provided by a single charge.

### APPLICATIONS

Contactless technology and automation are transforming the way we live and work. Honeywell Logistics Sensing is developing the latest vision solutions to support a wide range of applications for: mobile payment device, fixed mount scanner, wearable device and logistics, warehouse and distribution, and hospitality.

## FEATURES AND BENEFITS

| | | | | |
|---|---|---|---|---|
| Extremely compact form factor to make it easier to fit into any scanning devices | Affordable cost structure for light- to medium-level barcode scanning applications | Multi interfaces (MIPI/Micro USB/FPC USB) availability enables a more seamless and simple integration | Wide operational temperature range adds application versatility Lower power consumption increases battery life | Supports optional Honeywell functionalities such as OCR and EasyParse™ for potential use with driving licenses and boarding passes |

**Honeywell**

# COMPACT 2D CAMERA
# C21 SERIES

## TABLE 1. TECHNICAL SPECIFICATIONS

| Characteristic | C2101 | C2105 |
|---|---|---|
| Sensor technology | global shutter | rolling shutter |
| Resolution | VGA 640*480 | 5 Mpx 2592*1944 |
| FPS | 180 max. | 30 max. |
| Illumination | white LED | white LED |
| Motion tolerance | 0.5 m/s | 0.03 m/s |
| Field of view | horizontal: 42° vertical: 32° | horizontal: 71° vertical: 57° |
| Symbol contrast | 20 % | 20 % |
| Resolution 1D | 5 mil | 5 mil |

## TABLE 2. MECHANICAL/ELECTRICAL SPECIFICATIONS

| Characteristic | C2101 | C2105 | C2 I/F Board Micro USB | C2 I/F Board FPC USB |
|---|---|---|---|---|
| Dimensions (H × W × D) | 15 mm × 7 mm × 6,1 mm [0.59 in × 0.28 in × 0.24 in] | 15 mm × 7 mm × 5,3 mm [0.59 in × 0.28 in × 0.21 in] | 20 mm × 14 mm × 5,8 mm [0.79 in × 0.55 in × 0.23 in] | 20 mm × 14 mm × 4,6 mm [0.79 in × 0.55 in × 0.18 in] |
| Weight | 0.41 g | 0.46 g | 1.59 g | 1.4 g |
| Interface | MIPI | MIPI | Micro USB | FPC USB |
| Input voltage (AVDD) | 2.8 V | 2.8 V | – | – |
| Input voltage (DOVDD) | 1.8 V | 1.8 V | – | – |
| Input voltage (DVDD) | 1.2 V | – | – | – |
| Input voltage (PC5V) | 5.0 V | 5.0 V | 5.0 V | 5.0 V |
| Power consumption | 445 mW | 425 mW | – | – |

## TABLE 3. ENVIRONMENTAL/OTHER SPECIFICATIONS

| Characteristic | Parameter |
|---|---|
| Operating temperature | –20°C to 50°C [–4°F to 122°F] |
| Storage temperature | –40°C to 70°C [–40°F to 158°F] |
| Humidity (operating and storage | up to 95 %RH, non-condensing at 50°C [122°F] |
| Shock | C210X: 18 shocks of 2500 G/0.4 ms at 23°C [73°F] C210X with C2 I/F Board: 18 shocks of 1500 G/0.4 ms at 23°C |
| Vibration | 3axes, 1 hour per axis: 2,54 cm (1 in) peak-to-peak displacement (5 Hz to 13 Hz), 10G acceleration (13 Hz to 500 Hz), 1 G acceleration (500 Hz to 2,000 Hz) |
| MTBF[1] | C210X: 6.38M hours C210X with C2 I/F Board: 2.48M hours |
| Warranty | 15-month limited warranty; the warranty period starts at date of shipment from Honeywell to customer |

[1]Note: based upon MIL–HDBK 217F (release December 1, 1991). The calculation is based on the part count method for the Ground Benign (GB) environmental conditions.

## TABLE 4. 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 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
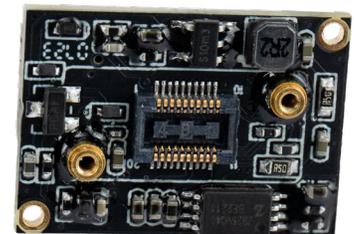


*C2 Interface Board*



*C2105 with C2 I/F Board*

## TABLE 5. C2101 SCAN RANGE

| Symbology | Near Distance (mm [in]) | Far Distance (mm [in]) | Delta (mm[in]) |
|---|---|---|---|
| **13 MIL UPC** | 46 [1.81] | 340 [13.39] | 294 [11.57] |
| **5 MIL C39** | 60 [2.36] | 160 [6.30] | 100 [3.94] |
| **10 MIL C39** | 36 [1.42] | 330 [12.99] | 294 [11.57] |
| **20 MIL C39** | 76 [2.99] | 695 [27.36] | 619 [24.37] |
| **20 MIL QR** | 28 [1.10] | 215 [8.46] | 187 [7.36] |
| **10 MIL PDF** | 44 [1.73] | 175 [6.89] | 131 [5.16] |

## TABLE 5. C2105 SCAN RANGE

| Symbology | Near Distance (mm [in]) | Far Distance (mm [in]) | Delta (mm[in]) |
|---|---|---|---|
| **13 MIL UPC** | 28 [1.10] | 600 [23.62] | 572 [22.52] |
| **5 MIL C39** | 85 [3.35] | 285 [11.22] | 200 [7.87] |
| **10 MIL C128** | 75 [2.95] | 550 [21.65] | 475 [18.70] |
| **20 MIL C39** | 41 [1.61] | 948 [37.32] | 907 [35.71] |
| **20 MIL QR** | 40 [1.57] | 435 [17.13] | 395 [15.55] |
| **40 MIL QR** | 32 [1.26] | 892 [35.12] | 860 [33.86] |
| **10 MIL PDF** | 84 [3.31] | 355 [13.98] | 271 [10.67] |

## ADDITIONAL INFORMATION

- Integration Manual is available upon request; contact your Honeywell representative

- For a listing of common compliance approvals and certifications, visit our website.

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*CONSULTING DISTRIBUTOR*

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For more information about warranty, please visit https://sps.honeywell.com/us/en/support/productivity/warranties

For a complete listing of all compliance approvals and certifications, please visit www.honeywell.com/PSScompliance

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