

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

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



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.



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)
MTBF¹	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

¹Note: 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]

ADDITIONAL INFORMATION

- Integration Manual is available upon request; contact your Honeywell representative
- For a listing of common compliance approvals and certifications, visit our [website](#).

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]

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For more information about warranty, please visit

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