CM SERIES

Compact 2D Imager Module for Kiosk Data Capture Operations

The Honeywell CM Series Compact 2D Imager Module provides a self-contained 1D and 2D barcode scanning solution, whether decoding mobile phone screens or paper. Its all-in-one, easy-to-mount design simplifies integration into your fixed mount enclosure. A selection of optics allow you to meet the performance requirements your application requires.



The CM Series Compact 2D Imager Module's integrated design simplifies installation and deployment for a wide range of kiosk applications.

- **CM4680SR-XXX:** Standard Performance (Standard Range)
- **CM5680SR-XXX:** Enhanced Performance (Standard Range)
- **CM5780SR-XXX:** Advanced Performance (Standard Range)
- **CM5780WA-XXX:** Specialized Performance (Wide Angle)
- **CM2180MP-XXX:** Specialized Performance (Megapixel)

The CM Series offers many differentiating features that simplify installation (e.g., cable connector compatibility, more mounting options) and enhance performance (e.g., Wide Angle and Megapixel optics options, wider choice of non-laser aimers and illumination, enhanced scan time and print contrast, higher operating temperature range).

INTEGRATED DESIGN SIMPLIFIES INSTALLATION AND DEPLOYMENT

- **Compact size:** Cable connector extends off the side of the device instead of the back, reducing the depth of the product, which simplifies installation (28 mm H × 55 mm W × 48 mm D [1.10 in H × 2.17 in W × 1.89 in D] including connector) (see Figure 1).
- **Slider bracket:** Holds the customer-supplied micro-USB cable securely in place so it does not become disconnected easily (see Figure 2).
- **Ten mounting holes (five groups of two):** Positioned on the two sides, upper, lower, and front allow for vertical or horizontal mounting without the need for additional accessories, enhancing integration flexibility (see Figure 3).
- **Standard micro-USB cable connector:** Allows customers the ability to purchase a standard cable locally and in the length they need for their application, simplifying
- **Reads UPC (Universal Product Codes) at below 20mm [0.78 in] range (CM5780WA – specialized performance [Wide Angle]):** Allows the ability to fit smaller enclosures, providing design flexibility.

FEATURES AND BENEFITS

Next-generation device provides 1D and 2D barcode scanning, whether decoding mobile phone screens or paper.

All-in-one design, compact size, standard micro-USB cable connector and ten mounting holes simplify installation and deployment.

Industrial-grade technology allows these modules to withstand both extreme hot and cold temperatures.

Motion tolerance provides snappy scanning and white illumination option helps to expedite read rate.

IP54 ingress protection rating and USB retention mechanism enhance reliability and help to minimize service or replacement calls.

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ENHANCES PERFORMANCE

- **Four optics options:** Allow customers the ability to choose the optics needed to meet their performance requirements (see Table 1).
  - Improves the customers' design cycle time because they can upgrade or change the optics without having to change mechanical constraints due to the same housing.
  - Allows customers the ability to choose from enhanced or specialized performance to meet the needs of the application without having to change suppliers (one-stop-shop).
- **Wide operating temperature range:** Customers can design solutions for use in more extreme hot and cold environments (see Table 9).
- **Motion tolerance:** Provides enhanced operational efficiency (see Table 1).
- **Barcode value-adds:** Offer optional functionalities beyond barcode scanning, including image capture, OCR (Optical Character Recognition) and software add-ons (Honeywell TotalFreedom™ Formatting Plug-In for automotive parts, boarding passes, and motor vehicle documents), which increases operational efficiencies and allows for multiple functions with one device.

ENHANCES RELIABILITY

- **IP54 ingress protection rating (with the use of a standard cable):** The enclosure has been designed to provide enhanced resistance to dust and splashing water, minimizing the risk of operation shutdown and service or replacement calls.
- **USB retention mechanism:** Located at the back of the unit, this mechanism provides up to 5 kg [11.0 lb] of pulling force, minimizing the risk that the device will become unplugged when the kiosk is moved or serviced.



Figure 1. Compact size

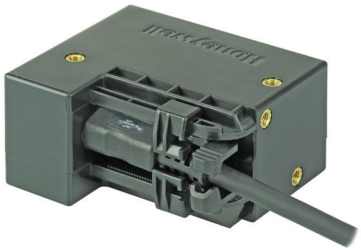


Figure 2. Slider bracket holding micro-USB cable



Figure 3. Ten mounting holes on five of six sides

CM Series Technical Specifications

TABLE 1. PERFORMANCE AND OPTICS

CHARACTERISTIC	CM4680SR	CM5680SR	CM5780SR	CM5780WA	CM2180MP
	Standard Performance (Standard Range)	Enhanced Performance (Standard Range)	Advanced Performance (Standard Range)	Specialized Performance (Wide Angle)	Specialized Performance (Megapixel)
100% UPC read range (typical)	see Table 2	see Table 3	see Table 6	see Table 4	see Table 5
Sensor technology	global shutter				rolling shutter
Image size	640 × 480 pixels	844 × 640 pixels	1280 × 800 pixels	1280 × 1080 pixels	1280 × 800 pixels
Motion tolerance	6 m/s [19.7 ft/s] max.	5,84 m/s [19.2 ft/s]	6 m/s [19.7 ft/s] max	6 m/s [19.7 ft/s] max	100 mm/s [4 in/s]
Scan angle	40° (horizontal), 30° (vertical) ±1°	42.4° (horizontal), 33.0° (vertical) ±1°	47°(horizontal), 30° (vertical) ±2°	69°(horizontal), 60° (vertical) ±2°	48° (horizontal), 31° (vertical) ±1°
Skew angle	±50°	±65°	±60°	±75°	±75°
Pitch angle	±50°	±45°	±60°	±60°	±55°
Illumination	white LED	624 nm red LED, white LED	white LED	visible red LED with 629 nm	617 nm red LED
Aimer	640 nm visible red LED	528 nm visible green LED	green cross LED	green cross LED	no aimer
Optional functionalities	OCR (A and B); EasyParse for automotive parts, boarding passes and motor vehicle documents				
Warranty	3-year limited warranty; the warranty period starts at date of shipment from Honeywell to customer				

TABLE 2. TYPICAL READ RANGES: CM4680SR (MM [IN])

BARCODE	NEAR	FAR
10 MIL C39	33 [1.3]	355 [14.0]
13 MIL UPC-A	43 [1.7]	385 [15.2]
20 MIL C39	68 [2.7]	742 [18.6]
20 MIL QR Code	33 [1.3]	362 [14.3]

TABLE 3. TYPICAL READ RANGES: CM5680SR (MM [IN])

BARCODE	NEAR	FAR
5 MIL C39	55 [2.2]	200 [7.9]
10 MIL C39	18 [0.7]	315 [12.4]
13 MIL UPC-A	45 [1.8]	420 [16.5]
15 MIL C39	27 [1.1]	445 [17.5]
6.7 MIL PDF417	40 [1.6]	185 [7.3]
10 MIL Data Matrix	42 [1.7]	205 [8.1]
15 MIL Data Matrix	25 [1.0]	295 [11.6]
20 MIL QR Code	35 [1.4]	380 [15.0]

TABLE 4. TYPICAL READ RANGES: CM5780WA (MM [IN])

BARCODE	NEAR	FAR
13 MIL UPC-A	19 [0.7]	357 [14.1]
5 MIL C39	21 [0.8]	160 [6.3]
20 MIL C39	34 [1.3]	655 [25.8]
10 MIL CODE 128	15 [0.6]	287 [11.3]
7 MIL QR	16 [0.6]	103 [4.1]
20 MIL QR	15 [0.6]	318 [12.5]
10 MIL DM	10 [0.4]	154 [6.1]
6.67 MIL PDF417	18 [0.7]	169 [6.7]

TABLE 5. TYPICAL READ RANGES: CM2180MP (MM [IN])

BARCODE	NEAR	FAR
6 MIL C39	105 [4.1]	325 [12.8]
10 MIL C39	65 [2.6]	465 [18.3]
13 MIL UPC-A	50 [2.0]	515 [20.3]
15 MIL C39	45 [1.8]	570 [22.4]
6.7 MIL PDF417	125 [4.9]	240 [9.4]
10 MIL Data Matrix	120 [4.7]	265 [10.4]
15 MIL Data Matrix	70 [2.8]	395 [15.6]
20 MIL QR Code	45 [1.8]	495 [19.5]

TABLE 6. TYPICAL READ RANGES: CM5780SR (MM [IN])

BARCODE	NEAR	FAR
13 MIL UPC (100%)	36 [1.4]	480 [18.9]
5 MIL C39	56 [2.2]]	268 [10.6]
10 MIL C39	31 [1.2]	466 [18.3]
20 MIL C39	57 [2.2]	777 [30.6]
5 MIL CODE 128	61 [2.4]	238 [9.4]
20 MIL CODE 128	40 [1.6]	688 [27.1]
7 MIL QR	68 [2.7]	183 [7.2]
20 MIL QR	23 [0.9]	431 [17.0]
10 MIL DM	48 [1.9]	263 [10.4]
6.67 MIL PDF417	58 [2.3]	263 [10.4]

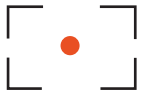


Figure 1. Red Dot LED Aimer



Figure 2. Green LINE LED Aimer



Figure 3. Green Cross LED Aimer

TABLE 7. ELECTRICAL

CHARACTERISTIC	CM4680SR	CM5680SR	CM5780SR	CM5780WA	CM2180MP
Operating voltage	5 Vdc ±0.25 V				
Current:					
Idle	65 mA	100 mA	57 mA	67 mA	80 mA
Standby (USB Suspend)	110 mA	2.5 mA	2.3 mA	2 mA	2.5 mA
Average (manual trigger)	220 mA	400 mA	190 mA	216 mA	250 mA
Average (streaming presentation)	220 mA	250 mA	190 mA	190 mA	250 mA
Average presentation (default mode)	220 mA	350 mA	190 mA	215 mA	250 mA
Host system interface	USB 2.0 full speed				

TABLE 8. MECHANICAL

CHARACTERISTIC	PARAMETER
Dimensions (L × W × H)	28 mm × 55 mm × 48 mm [1.10 in × 2.17 in × 1.89 in]
USB Cord pull force from retention mechanism	5 kg [11.0 lb]
Weight: CM4680SR CM5680SR CM5780SR CM5780WA CM2180MP	 50 g ±5 g [1.76 oz ±0.18 oz] 54 g ±5 g [1.90 oz ±0.18 oz] 50 g ±5 g [1.76 oz ±0.18 oz] 50 g ±5 g [1.76 oz ±0.18 oz] 52 g ±5 g [1.83 oz ±0.18 oz]
Termination	micro-USB connector

TABLE 9. ENVIRONMENTAL[1]

CHARACTERISTIC	PARAMETER
Operating temperature[2]	-30°C to 60°C [-22°F to 140°F]
Storage temperature: CM4680SR, CM5780SR CM5680SR, CM5780WA, CM2180MP	 -40°C to 85°C [-40°F to 185°F] -40°C to 70°C [-40°F to 158°F]
Humidity	5% to 95% RH, non-condensing
Drop	operational after 10 drops at 1,5 m [4.9 ft] to concrete
Vibration	random vibration, 5 G, from 22 Hz to 300 Hz, 2 hr/3 axes
Light level	0 lux to 100,000 lux [0 foot-candles to 9,290 foot-candles]
ESD Tolerance Direct discharge Air discharge	 ±8 kV ±15 kV
Sealing	IP54

1. Applies to all models unless otherwise noted.
2. Depth of field is reduced in extreme temperatures. Please contact your Honeywell representative for more information

TABLE 10. COMPLIANCE AND REGULATORY

CHARACTERISTIC	PARAMETER
Safety	EC 62368-1, EN 62368-1, UL 62368-1, FCC Part 15, Class B
LED	Risk exempt group LED product: IEC 62471:2006
EMC	FCC Part 15, ICES-003, CISPR 32, EN 55032
Immunity	CISPR 24, EN 55035

TABLE 11. SYMBOLOGIES

LINEAR
Codabar, Code 11, Code 128, Code 2 of 5, Code 39, Code 93, 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 DATABAR
2D STACKED
Codablock A, Codablock F, PDF417, MicroPDF417
2D MATRIX
Aztec Code, Data Matrix, MaxiCode, QR Code, Chinese Sensible (Han Xin) Code, GRID MATRIX, DOT CODE
POSTAL
Australian Post, British Post, Canadian Post, China Post, Japanese Post, Korea Post, Netherlands Post, Planet Code, Postnet

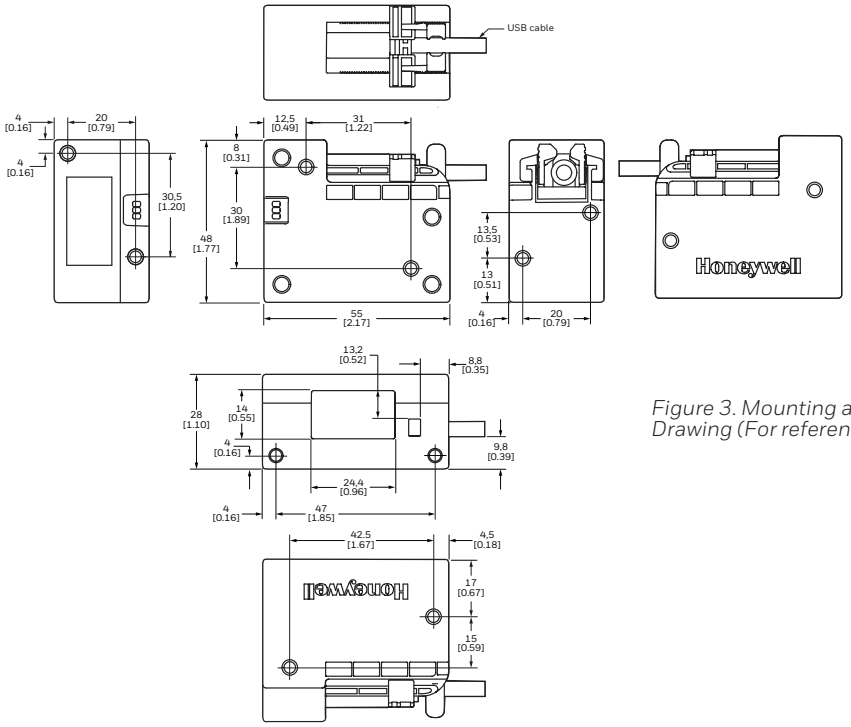


Figure 3. Mounting and Dimensional Drawing (For reference only: mm/[in])

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.

While Honeywell may provide application assistance personally, through our literature and the Honeywell web site, it is buyer's sole responsibility to determine the suitability of the product in the application.

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.

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

ADDITIONAL INFORMATION

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

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