

# HF520

## 2D Imager Module

The Honeywell HF520 new generation, compact module for fixed-mount applications with the latest Gen7 decoding core, provides a powerful scanning performance for all 1D, PDF, and 2D barcodes on mobile phone screens or on paper.



*The HF520 is a self-contained unit that includes decoded 2D optics, housing, exit window, and a TTL-RS232 interface board.*

The HF520 provides a plug-and-play, integrated module solution for verifying barcodes, collecting payments, and billing customers. Designed with a wide viewing angle and shallow depth of field to help ensure optimized performance for reading screen barcodes in near field. The broad decoding capabilities include rapid decoding of all 1D and 2D barcodes with particularly powerful reading capability of highly-reflective mobile phone screens, reducing process time and helping to improve the user experience.

While preserving the same look and seamless interface of its predecessors, the HF520 offers faster motion tolerance vs. previous models, enabling greater flexibility and convenience for customers. Combined with the Gen7 decoder, the HF520 may be supported by menu commands and EZConfig which is compatible with mainstream Honeywell scan modules and engines.

The HF520 operates with white LED illumination to improve the reading performance of label barcodes in a low lighting environments. The HF520 has optimized performance for both screen barcodes and label barcodes, reducing customer cost and helping to improve the user experience.

## FEATURES AND BENEFITS



Electrical and mechanical backwards compatibility with predecessor provides easy migration.



Supports menu command and EzConfig online configuration tool to allow greater set-up convenience.



Enhanced motion tolerance of 3,9 m/s (12.8 ft) reads moving barcodes, enabling increased scanning speed and productivity.



Uses TTL-RS232 and USB standard interfaces; USB compliance with support of Windows drivers.



Flexible enclosure options: Engine option is available for customers who wish to build their own housings.

# HF520 Technical Specifications

## MECHANICAL

**Scanner head dimensions (L x W x H):**  
41,7 mm x 41,7 mm x 32,5 mm  
(1.64 in x 1.64 in x 1.28 in)  
**Weight:** 58 g (2.05 oz)  
**Host interface:** USB, TTL-RS232

## ENVIRONMENTAL

**Operating temperature!:**  
-10°C to 50°C (14°F to 122°F)  
**Storage temperature:**  
-40°C to 70°C (-40°F to 158°F)  
**Humidity:** 0 %RH to 95 %RH,  
no condensation  
**Drop:** withstands two falls onto cement  
floor from height of 1,5 m [4.52 ft]  
**Ambient light<sup>2</sup>:** 0 lux to 100,000 lux  
**Sealing:** IP40

## PERFORMANCE

**Resolution:** 640 x 480 pixels  
**Illumination<sup>2</sup>:** white LED  
**Motion tolerance:** up to 3,9 m (12.8 ft)  
**Field of view:** 83° x 66.2°  
**Resolution:** 640 x 480 pixel  
**Scan angles:** pitch: ±55°, skew: ±65°  
**Minimum contrast:** 25%  
**Indicator:** buzzer

## Minimum resolution precision:

**ID:** 3 mil (Code 39, P#100001555)  
**2D:** 6.7 mil (QR, P#100001485)  
**Warranty:** 15-month limited warranty;  
the warranty period starts at date of  
shipment from Honeywell to customer

## ELECTRICAL

**Input voltage:** 4.5 Vdc to 5.5 Vdc  
**Power:**  
**Working:** 2.1 W (420 mA at 5 Vdc)  
**Standby:** 0.7 W (140 mA at 5 Vdc)

## READ RANGES (TYPICAL, WHITE ILLUMINATION)<sup>3</sup>

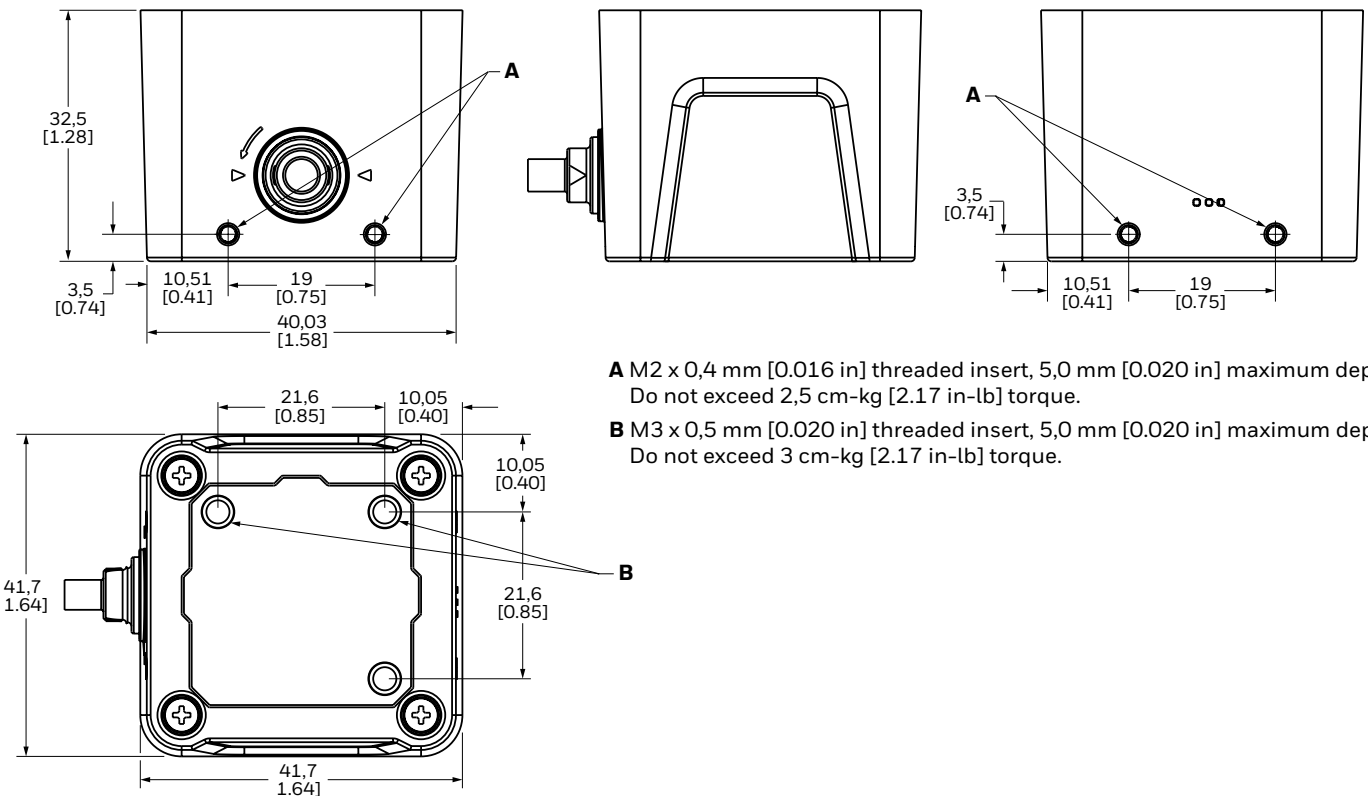
SYMBOLGY	NEAR DISTANCE (MM [IN])	FAR DISTANCE (MM [IN])	DELTA (MM [IN])
10 MIL C39	2 (0.08)	102 (4.01)	100 (3.94)
13 MILUPC-A	15 (0.59)	110 (4.33)	95 (3.74)
20 MIL C39	18 (0.71)	150 (5.91)	132 (5.20)
20 MIL QR	12 (0.47)	90 (3.54)	78 (3.07)

## 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  
**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

1. Extreme temperatures will reduce the depth of field.
2. Extreme ambient light conditions will reduce the depth of field.
3. Barcode quality and environmental conditions may affect performance.

## DIMENSIONAL DRAWINGS (FOR REFERENCE ONLY (MM/IN))



**For more information**

[automation.honeywell.com](http://automation.honeywell.com)

**Honeywell Industrial Automation**

855 South Mint Street  
Charlotte, NC 28202  
800-582-4263  
[www.honeywell.com](http://www.honeywell.com)

HF520 2D Imager Module Datasheet A4 | Rev E | 10/25  
©2025 Honeywell International Inc.

**Honeywell**