HS—21

2D Handheld Imager

The HS-21 2D handheld imager provides fast decode rates and long range reading in a light-weight, durable package. Its dual field optics decode most 1D and 2D symbols in any orientation at short and long distances.

The HS-21 combines a compact form factor with ruggedness and high performance. It can sustain multiple drops from 6 feet (1.8 meters) and is ideal for applications from the clean room to the factory floor.

LED Indicator

Dual Field Optics

IP54 Enclosure

Ergonomic Design

RoHS • WEEE COMPLIANT

HS—21: At a Glance

- Reads most 1D and 2D symbols
- Dual field optics for wide and high density fields
- USB 2.0 or RS-232 communication options
- Low power draw
- Optional stand and Motion Detect mode for hand presentation

ESP® Easy Setup Program: Single-point software solution provides quick and easy setup and configuration of all Microscan readers.

Visible Indicator: "Good read" green LED performance indicator.

For more information on this product, visit **www.microscan.com.**

High Performance
The HS-21 features computing power and advanced image processing to decode challenging 1D and 2D symbols.

Large Scan Width
With a 4 inch (102 mm) focal distance and generous scan width, the HS-21 is optimal for decoding symbols on laboratory sample tubes and reagent tubes.

Easy to Clean
The reader's sensitive components are protected by an IP54-rated enclosure, easily cleaned by common hospital disinfectants.

User-Friendly Design
The housing is ergonomically designed for user comfort in repetitive and heavy duty applications. In addition to a beeper, visual and vibrating indicators provide silent confirmation of successful reads for noisy or sensitive environments.

Simple Configuration
The HS-21 can be easily set up and configured using Microscan's ESP software.
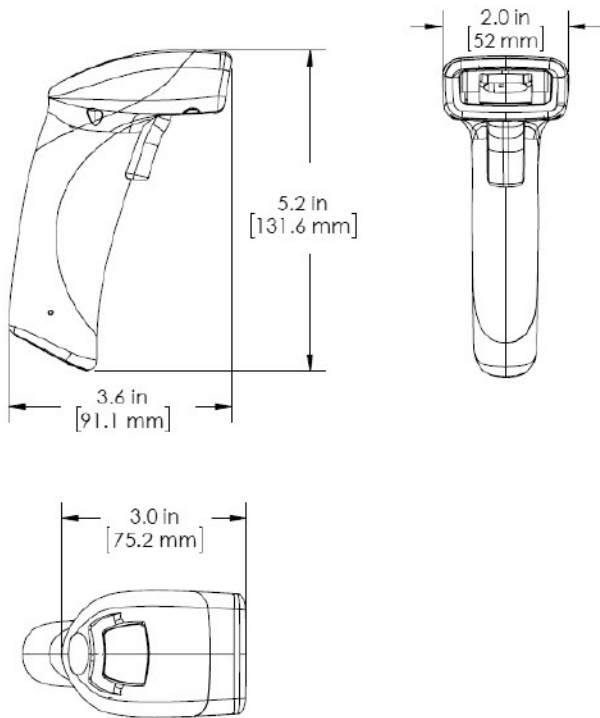
Application Examples
- Life sciences
- Manufacturing
- Health care

HS—21: Available Symbologies

Linear	All Standard	Postal Codes

Stacked	MicroPDF	PDF417	GS1 Databar

2D	Data Matrix	QR	Micro QR	Aztec

MICROSCAN®

2.0 in [52 mm]

5.2 in [131.6 mm]

3.6 in [91.1 mm]

3.0 in [75.2 mm]

READ RANGE TABLE

Narrow-Bar	Read Range
STANDARD DENSITY	
1D	
.0050" (.127 mm)	3.7 to 5.0" (94 to 127 mm)
.0075" (.191 mm)	2.2 to 6.5" (56 to 165 mm)
.010" (.254 mm)	1.5 to 8.0" (38 to 203 mm)
.020" (.508 mm)	2.3 to 15.5" (58 to 394 mm)
2D	
.0050" (.127 mm)	3.7 to 4.6" (94 to 117 mm)
.0075" (.191 mm)	1.5 to 6.0" (38 to 152 mm)
.010" (.254 mm)	1.6 to 7.7" (41 to 196 mm)
.020" (.508 mm)	1.6 to 9.4" (41 to 239 mm)

Note: Specifications are subject to change. Working ranges are a combination of both the wide and high density fields.

Note: Inches [millimeters]. Nominal dimensions shown. Typical tolerances apply.

MECHANICAL
Height: 5.2" (131.6 mm)
Width: 2.0" (52 mm)
Depth: 3.6" (91.1 mm)
Weight: 3.9 oz. (110 g)

ENVIRONMENTAL
Operating Temperature: -20° to 55° C (-4° to 131° F)
Storage Temperature: -30° to 65° C (-22° to 150° F)
Humidity: 5% to 95% (non-condensing)
Shock: Withstands multiple drops of 6' (1.8 meters)

CE STANDARDS
Immunity: EN 55024
ESD: EN 61000-4-2
Radiated RF: EN61000-4-3
Keyed Carrier: ENV50204
EFT: EN61000-4-4
Conducted RF: EN61000-4-6
Emissions: EN55022, Class B Radiated, Class B Conducted
CB Test Certificate: IEC 60950-1:2001, First Edition

LIGHT COLLECTION OPTIONS
Sensor: CMOS 1.2 megapixel grayscale
Sensor Array: 1280 by 960
Field Selection: High density or wide
Field of View: High density field: 30° horizontal by 20° vertical; wide field: 50° horizontal by 33.5° vertical
Focal Point: Approximately 100 mm
Optical Resolution: High density field: 960 x 640; wide field: 960 x 640

SYMBOLOGIES
2D Symbologies: Data Matrix, QR Code, Micro QR Code, Aztec Code
Stacked Symbologies: PDF417, MicroPDF417, Composite
Linear Symbologies: UPC, Code 39, Code 128, Interleaved 2 of 5, Codabar, GS1 DataBar, Code 93
Postal Symbologies: USPS OneCode (4CB), POSTNET, PLANET, Japanese Post, Australian Post, Royal Mail, KIX Code

COMMUNICATION PROTOCOLS
Standard Interface: RS-232, USB 2.0 (generic HID, HID keyboard, virtual COM port)

READ PARAMETERS
Pitch: ±60° (front to back)
Skew: ±60° (from plane parallel to symbol (side-to-side)
Rotational Tolerance: ±180°
Print Contrast Resolution: 25% (1D symbologies); 35% (2D symbologies) absolute dark/light reflectance differential, measured at 650 nm
Ambient Light Immunity: Sunlight: Up to 9,000 ft.-candles/96,890 lux
Target Beam: Dual, blue targeting bar

INDICATORS
Status Indicators: Beep, vibrate, LED flash

IMAGE OUTPUT OPTIONS
Format: BMP or JPEG

MEMORY CAPACITY
128MB Flash ROM, 32MB RAM

DATA EDITING
JavaScript (Additional License Required)

ELECTRICAL
Power Requirements: Reader @ 5VDC (mA):
Typical: Less than 450 mA; Idle: Less than 80 mA; Sleep: Less than 31 mA

SAFETY CERTIFICATIONS DESIGNED FOR
FCC, CE

ROHS/WEEE COMPLIANT

ISO CERTIFICATION
Certified ISO 9001:2008 Quality Management System