VHS5000 INDUSTRIAL HANDHELD BARCODE READER

Data Sheet

Wired models — USB (VHS5000U) and Ethernet / Serial (VHS5000L). 1.4 MP global sensor, three-colour illumination, 30 codes per frame, IP54. Built for production traceability on battery, solar, consumer electronics, appliance and logistics lines.

1 · IMAGING & OPTICS

Parameter	VHS5000U (USB)	VHS5000L (RS-232 + RJ45)
Sensor resolution	1.4 MP, 1288 × 1088	1.4 MP, 1288 × 1088
Frame rate	60 fps	60 fps
Exposure	Automatic	Automatic
Field of view	54° (H) × 45.4° (V)	54° (H) × 45.4° (V)
Aiming	Red laser LED	Red laser LED
Illumination	Red direct + blue direct + white diffuse	Red direct + blue direct + white diffuse

2 · READING PERFORMANCE

Item	Distance	Item	Distance
HD · Code 39 (3 mil)	30 – 60 mm	NR · Code 39 (5 mil)	40 – 120 mm
HD · Code 128 (10 mil)	40 – 122 mm	NR · Code 128 (10 mil)	15 – 250 mm
HD · QR Code (5 mil)	30 – 80 mm	NR · EAN-13 (13 mil)	30 – 280 mm
HD · Data Matrix (5 mil)	35 – 74 mm	NR · QR Code (10 mil)	35 – 155 mm
SR · Code 39 (5 mil)	75 – 250 mm	NR · QR Code (15 mil)	15 – 215 mm
SR · Code 128 (3 mil)	80 – 150 mm	NR · QR Code (20 mil)	15 – 270 mm
SR · Code 128 (10 mil)	65 – 420 mm		
SR · QR Code (10 mil)	75 – 230 mm		
SR · QR Code (20 mil)	65 – 480 mm		

Distances are identical for the USB and Ethernet / Serial versions. HD = high density, NR = near range, SR = standard range. Up to 30 codes can be read in a single frame.

3 · SYMBOLOGIES

Symbology class	Supported
1D	Code 39, Code 93, Code 128, EAN-8, EAN-13, Interleaved 2 of 5, UPC, Pharmacode, Codabar
2D	QR Code, Data Matrix, MaxiCode, Aztec, Micro QR, Han Xin
Stacked	PDF417, MicroPDF417

4 · INTERFACES & ELECTRICAL

Parameter	VHS5000U (USB)	VHS5000L (RS-232 + RJ45)
Data interface	USB	RS-232, RJ45
Power supply	24 VDC / USB 5 V	24 VDC
Industrial protocols	—	TCP Server, TCP Client, Modbus TCP, Modbus RTU, PROFINET, EtherNet/IP, MELSEC/SLMP, FINS, UDP, MC, HTTP, FTP, Serial

5 · MECHANICAL & ENVIRONMENT

Parameter	VHS5000U / VHS5000L
Dimensions (handheld)	71.9 × 84.3 × 182.9 mm
Weight	180 g
Ingress protection	IP54
Operating temperature	0 – 45 °C
Humidity	5 – 95 % RH, non-condensing

6 · LASER SAFETY

Parameter	Specification
Laser class	Class 2
Wavelength	650 nm
Maximum output power	≤ 1 mW

7 · ORDERING INFORMATION

Model	Type	Interface	Cable
VHS5000U-05-HD-2M	High density	USB	2 m
VHS5000U-05-NR-2M	Near range	USB	2 m
VHS5000U-05-SR-2M	Standard range	USB	2 m
VHS5000L-05-HD-2M	High density	RS-232 + RJ45	2 m
VHS5000L-05-NR-2M	Near range	RS-232 + RJ45	2 m
VHS5000L-05-SR-2M	Standard range	RS-232 + RJ45	2 m

Model key: U = USB · L = Ethernet / Serial · HD = high density · NR = near range · SR = standard range.

8 · KEY FEATURES

Feature	What it does
Three-colour illumination	Red direct, blue direct and white diffuse light, switched per surface. UniBoost gradient optics: +180% uniformity and +120% brightness against a conventional lens under the same test conditions.
Adaptive computational imaging	Brightness, contrast, reflection and sharpness are evaluated in real time; exposure, gain and illumination are matched automatically.
Full-pipeline deep decoding	Image assessment, code localisation, geometric correction, structure recovery, decode and result verification — one pipeline, not fixed parameters.
One-key scene tuning	Place a sample code, press TUNE. The current scene is analysed and stored as a scene profile for repeatable reads on a fixed station.
Protocol-native integration	Direct connection to PLC and line control (see section 4) — no gateway box and no extra protocol conversion.
Fleet rollout	Every parameter is exported as a single configuration barcode; scan it on the next unit for identical settings. Firmware over MagLink in 1 – 2 minutes.
Throughput	Up to 30 codes in a single frame, four trigger modes, multilingual interface.

Notes: reading distances are measured with SmartMore standard test codes under controlled conditions; actual range depends on code size, print quality, surface and lighting. This data sheet covers the wired models only. For heavy oil mist, high drop risk or extreme DPM the VHS8000 remains the right tool. Specifications may be updated without notice.

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