Newland AIDC
SCANNING MADE SIMPLE




# NVH220 Lophius AI Bluetooth

Industrial Handheld Scanners

- 1.8m drop
- 1D & 2D
- Acuscan
- Advanced Scripting
- AI-Powered Barcode Detection
- Bluetooth 5.0
- DPM
- EasySet
- Ethernet
- GS1 Ready
- IP64
- Laser Aimer
- Micro USB
- RS-232
- Warranty 3 Years
- White Illumination



## Features

**AI-Powered Scanning Technology.**
The NVH220 Lophius AI BT is equipped with Newland's UIMG and AI-Powered Barcode Detection scanning technologies. These advanced systems enable rapid, accurate, and reliable decoding of both 1D and 2D barcodes, even when they are damaged or distorted, as well as on reflective and curved surfaces. AI-powered devices utilize computer vision and self learning to interpret barcodes accurately. They efficiently analyze images to detect, locate, and read barcodes. The NVH220 Lophius AI BT excels in challenging conditions, demonstrating advanced decoding performance and providing a reliable scanning solution that functions flawlessly in any situation.

**High-Performance DPM Scanning**
The NVH220 Lophius AI BT is distinguished by its outstanding ability to decode DPM barcodes, including those created using laser part marking and dotting techniques. Equipped with an upgraded dual-core processing platform, the NVH220 offers enhanced performance while consuming less power. This results in faster and more stable decoding, as well as improved image capture.

**Robust by Design.**
The NVH220 Lophius AI BT is built for durability, featuring a robust design that can endure challenging conditions. Its high-protection construction and IP64-sealed housing ensure reliable performance, even in environments with dust and water exposure, as well as after repeated drops from heights of up to 1.8 meters.

**Advanced Illumination.**
The NVH220 Lophius AI BT features both red and blue direct illumination and white diffuse lighting. These lighting options can be easily activated using the auto-learning function button located on the top of the device. With this feature, the NVH220 automatically adjusts brightness and light source to optimize barcode decoding, even on challenging materials. This includes reflective surfaces, curved shapes, varied backgrounds (ranging from low to high contrast), and different barcode colors.

**Reliable Data Transmission.**
The NVH220 Lophius AI BT, equipped with Bluetooth 5.0, ensures fast wireless communication with low latency. This stable and reliable connection supports data transmission over a range of up to 150 meters, providing all-day flexibility and efficiency on the work floor.

TECHNICAL SPECIFICATIONS

# NVH220 Lophius AI Bluetooth

## Data Capture

| | |
|---|---|
| 1D | EAN-13, EAN-8, UPC-A, UPC-E, ISSN, ISBN, Codabar, Code128, Code93, ITF-6, ITF-14, Interleaved 2 of 5, Industrial 2 of 5, Standard 2 of 5, Matrix 2 of 5, Code 39, AIM 128, GS1 Composite, GS1-128(UCC/EAN), ISBT 128, Code 11, MSI-Plessey, Plessey, etc. |
| 2D | QR Code, PDF417, Micro QR, Data Matrix, AZTEC. |
| Aiming | Cross laser (650nm) |
| Depth of Field Code 39 (20mil) | 65 mm - 350 mm |
| Depth of Field Code 39 (5mil) | 0 mm - 160 mm |
| Depth of Field EAN 13 (13mil) | 15 mm - 220 mm |
| Depth of Field QR (10mil) | 0 mm - 160 mm |
| Depth of Field QR (20mil) | 0 mm - 225 mm |
| Field of View Horizontal | 33˚ |
| Field of View Vertical | 22˚ |
| GS1 Ready | Yes |
| Illumination | Direct: red & blue LEDs, Diffuse: white LED |
| Image Sensor | 1280 x 800 CMOS |
| Minimal Print Contrast | 15% |
| OCR | Optional |
| Resolution | ≥1.25mil (1D), ≥2.82mil (2D) |
| Scan Angle Pitch | ±50˚ |
| Scan Angle Roll | 360˚ |
| Scan Angle Skew | ±50˚ |

## Physical

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|---|---|
| Battery Type | 2,900 mAh |
| Current @ 3.8VDC Operating | 370 mA (red LED by default) |
| Current @ 3.8VDC Standby | 90 mA |
| Dimensions | Scanner: 68(W) × 86(D) × 180(H) mm, Cradle: 103(W) x 127(D) x 123(H) mm |
| Expected Battery Life | ≥17 hours of continuous operation, up to 60,000 scans per charge |
| Expected Charge Time | 3 hours |
| Interfaces | RS-232, Ethernet, TCP/IP, ModbusTCP, Profinet, MELSEC/SLMP |
| Notifications | Beep, LED, Vibration |
| Power Consumption | 1400 mW (typical) |
| Weight | Scanner: 218g (with battery); Cradle:217g |

### Wireless

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| Radio Technology | Bluetooth 5.0 |
| Wireless Distance ( max.) | 150m (line of sight) |

### Environmental

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| Charge Temperature | 0°C to 45°C (32°F to 113°F) |
| Drop | 1.8 m |
| Electro Static Discharge (ESD) | ±16 kV (air discharge), ±8 kV (direct discharge) |
| Humidity | 5% to 95% (non-condensing) |
| IP Rating | IP64 |
| IP Rating with Cradle | IP42 |
| Operating Temperature | -20°C to 50°C (-4°F to 122°F) |
| Storage Temperature | -40°C to 70°C (-40°F to 158°F) |

### Software

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|---|---|
| Configuration Tools | EasySet |

### Certifications

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|---|---|
| Certifications Hardware | CE, CCC, FCC, RoHS 2.0, IEC 62471, IEC 60825, ISO16750 |

### Warranty

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|---|---|
| Comprehensive Service Contract | 3 Years, 5 Years |
| Warranty Extension | +2 Years |
| Warranty Standard | 3 Years |

### Accessories

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| Accessories Optional | USB cable, RS-232 cable, Multiplug adapter, Wall mount clip, Ethernet cable, Rubber boot |
| Accessories Standard | Stand/Docking station, USB cable, Power adapter |

### What's in the box?

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|---|---|
| NLS-NVH220B-V2-XD | NVH220 Lophius AI BT, Docking station, USB cable, 5V power supply |

## Accessories

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|---|---|
| Charging/Power | ADP220 Power Supply for NVH220 Lophius Series (ADP220) |
| Cables | CBL-0275E Ethernet cable for NVH220 AI series (CBL-0275E)<br>CBL017U RJ to USB-C Cable for HR, FR and FM Series (CBL017U)<br>CBL030UA USB Cable for HR, FM, and FR (CBL030UA)<br>CBL036UA USB Cable for HR, FM, and FR Series (CBL036UA)<br>CBL037R RS232 Cable for HR, FR, and FM Series (CBL037R)<br>CBL042UA USB Cable for HR, FM, and FR Series (CBL042UA)<br>CBL048U USB Cable for Ingenico iCT220 (CBL048U)<br>CBL105U USB White Cable for HR Series (CBL105U)<br>CBL128R Cable for Magellan Connection (CBL128R) |
| Peripherals | EX232 Remora (NLS-EX232-01) |

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**Newland AIDC EMEA**
Feel free to contact us or a partner near you.
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