OMRON

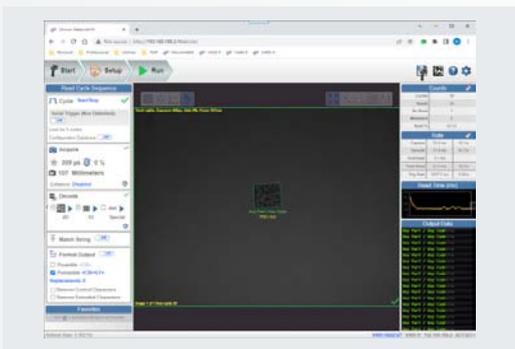# An Intelligent Barcode Reader for Direct Part Marks and Labels

An intuitive out-of-box reading experience, as well as seamless PLC connectivity. Its durable and long-lasting body ensures reliable performance in industrial environments.

- All in one rugged industrial handheld barcode reader
- Reliably reads while automatically adjusting for barcodes of different sizes, types, surfaces or distances
- Simple PLC connection and integration with pre-built function blocks
- Hands Free Intelligent Presentation Mode

Performance

Plug & Play

Applications

Handheld Barcode Reader Lineup

A barcode reader that automatically adjusts for variations in size, type, and distance

In industry, having a mixture of both low-contrast Direct Part Marks and high-contrast printed barcodes is common. With the V460, there's no need to purchase multiple units for different size barcodes, surfaces or types, as the reader automatically adjusts to decode the direct part mark or label presented. It's never been easier to improve your traceability solution.

Predictive Autofocus for variable distances
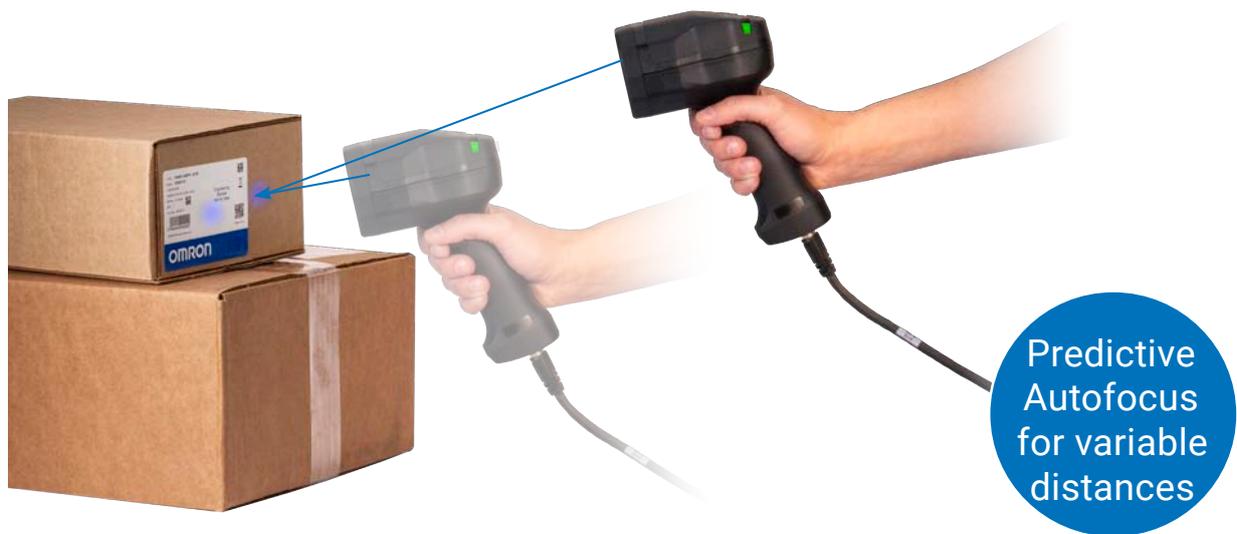
Predictive Autofocus & Intelligent Lighting for Labels

Example 1

Automatically adjusts focus for labels at different distances.

Example 2

Automatic lighting adjustment to properly capture barcode Labels.

Intelligent Lighting for Difficult Direct Part Marks

Example 1

Intelligent Lighting adjusts automatically for direct part marks on cylindrical or curved surfaces.

Example 2

Intelligent lighting corrects for Low contrast direct part marks on metallic surfaces.

"Auto-Everything":
Just click and read

This intelligent handheld allows reading of a very broad range of challenging DPM codes and labels with variable code densities, sizes, part geometries, surface conditions and working distances without any user intervention or adjustment. A superior out-of-box reading experience in a wide variety of traceability applications.

Direct Part Mark
Flat Parts

Tiny Code Reading

Labels 1D/2D
Shiny Labels

Direct Part Mark
Access Constraints

No tuning required. Just click.

Direct Part Mark
Cylindrical or Curved Parts

Labels 1D/2D
Including Metallic

1234567890

Intelligent Presentation Mode - Hands Free Operation

Intelligent Presentation Mode allows direct part marks and barcodes to be presented to the reader and it will automatically begin reading while adjusting for optimal settings without any user intervention.

Reliable reading of direct part marks — every time

While Traceability requires 100% reading of every part marked, variations in barcode size, surface texture, and reflectivity can make reading direct part marks a significant challenge. The V460's game-changing technology, allows the handheld to tackle even the most difficult-to-read Direct Part Marks with ease!

V460H Can read even the most challenging part marks

Iron gear, with base processing

Cell size: 0.127mm

Aluminum hairline processing, unclear, no base processing
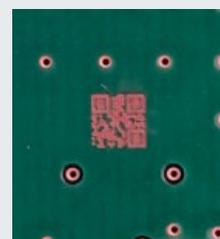
Cell size: 0.127mm

Aluminum buffing (mirror surface), with groundwork

Cell size: 0.127mm

Aluminum casting, no base treatment

Cell size: 0.127mm

Iron gear, with base processing

Cell size: 0.127mm

Substrate, no base treatment with many high contrast pattern

Cell size: 0.127mm

Experience the advanced rugged design for uninterrupted performance

The V460 is a ruggedized handheld designed for long life in industrial situations. The barcode reader is built to withstand the harsh treatment of the manufacturing environment. Thanks to the V460's longevity, you can dramatically reduce the cost of repairing or replacing your barcode readers.

Rugged design at a glance

Extreme Durability

- **50 drops**
  to concrete from 6.6 feet/2 meters
- **3,000 tumbles**
  from a height of 3.3 feet/1 meter
- **Exceeds IEC 60068-2-31**

Ingress Protection

- Protection against dust and water ingress
- **IP65-rated**

Oil & Chemical Resistance

- Motor/engine oil, automatic transmission fluid (ATF), continuously variable transmission fluid (CVT), industrial de-greaser (Engine Brite Heavy Duty), brake fluid (DOT4) per ISO 16750-5
- **ISO 16750-5 Compliant**

The game-changing technologies behind the V460's "Auto-everything"
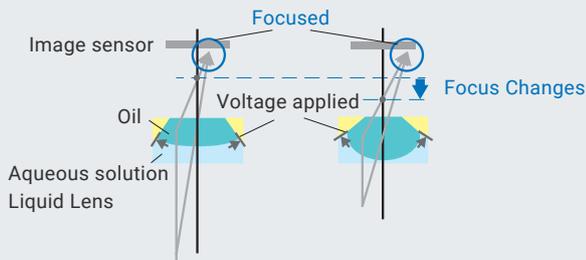
Intelligent Lighting `PATENT PENDING`

Dome   High-intensity Torch   Low-Angle

Our intelligent lighting ensures that all Direct Part Marks can be read.

Predictive Autofocus

Image sensor — Focused
Voltage applied — Focus Changes
Oil
Aqueous solution Liquid Lens

Predictive autofocus automatically adjust for the distance the barcode reader is from the surface and makes reading various sizes of codes, simple.

The V460's incredible ability to automatically read a broad range of challenging direct part marks and printed labels without adjustment, is built upon three key technologies: predictive autofocus, X-Mode decoding algorithms, and intelligent lighting.

Dome lighting can be selected in several color options

X-Mode Algorithms

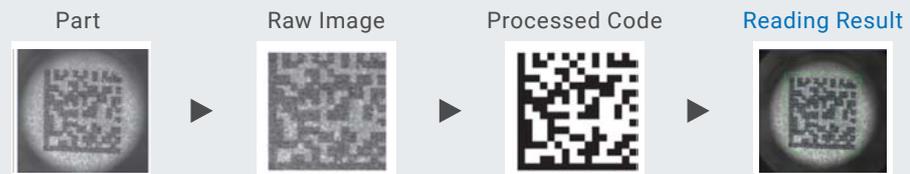|	Part	Raw Image	Processed Code	Reading Result
Example 1 Dot Peen on Curved Surface	▶	▶	▶	
Example 2 Laser Etch	▶	▶	▶	
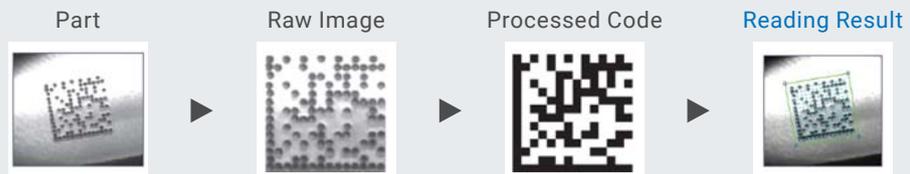
X-Mode algorithms ensures that all Direct "Part Marks can be read as easily as a printed label.

Quick Connection and easy PLC setup

Save time and integration cost with V460's pre-built function blocks for the Ethernet & Fieldbus communications, eliminating the need for time consuming PLC communication setup and testing.

Designed with PLC connection in mind

The V460 offers a built-in Power over Ethernet (PoE) port with fieldbus connectivity. A single Ethernet cable connection for power and communications, eliminating the cost and complexity of additional modules, while fieldbus connectivity simplifies the communication to the PLC.

PLC
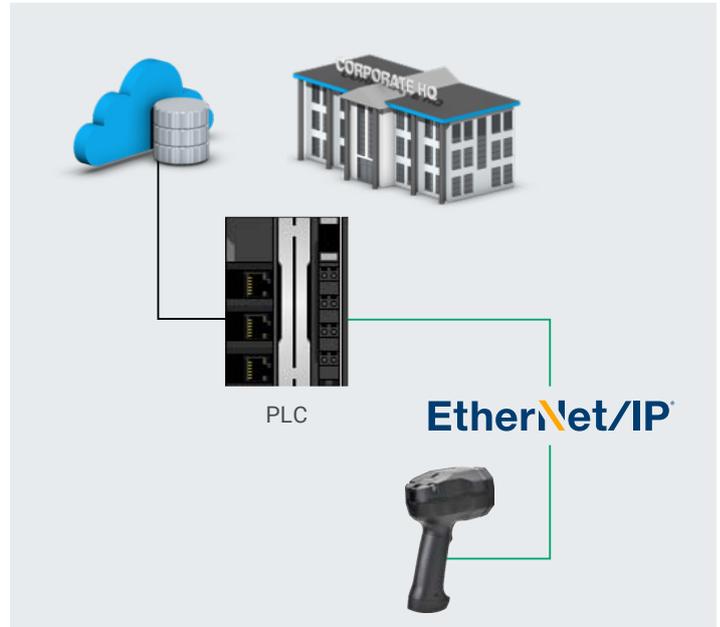
EtherNet/IP®

Ethernet & Fieldbus connectivity:

- EtherNet/IP™
- PROFINET

- TCP/IP
- FTP

Time and cost savings with pre-built function blocks[1]

With pre-built Function Blocks Installed

1 CONNECT BARCODE READER   2 SOLUTION READY FOR USE

Without pre-built Function Blocks Installed

LEARNING CURVE
Reader

SOLUTION IMPLEMENTATION
PLC

SOLUTION Evaluation
PLC

SOLUTION CORRECTION
PLC

SOLUTION READY FOR USE
PLC

OMRON Weblink

Plug and Play

The V460 is entirely plug-and-play. Simply plug in the reader to view images and explore setting options in real time with live, high resolution images using a standard web browser.

WEBLINK

WebLink HH Features:

- Web Browser Based Setup

- Supports standard browsers: Google Chrome®, Microsoft Edge®, Firefox®, Safari® etc.

- No Software to install or maintain

- Easy and intuitive setup

- Live image viewing

- Optional custom programming code creation

Try scanning this programming code and the V460 will be able to read the barcode on the front cover picture. See User Manual to check other programming codes.
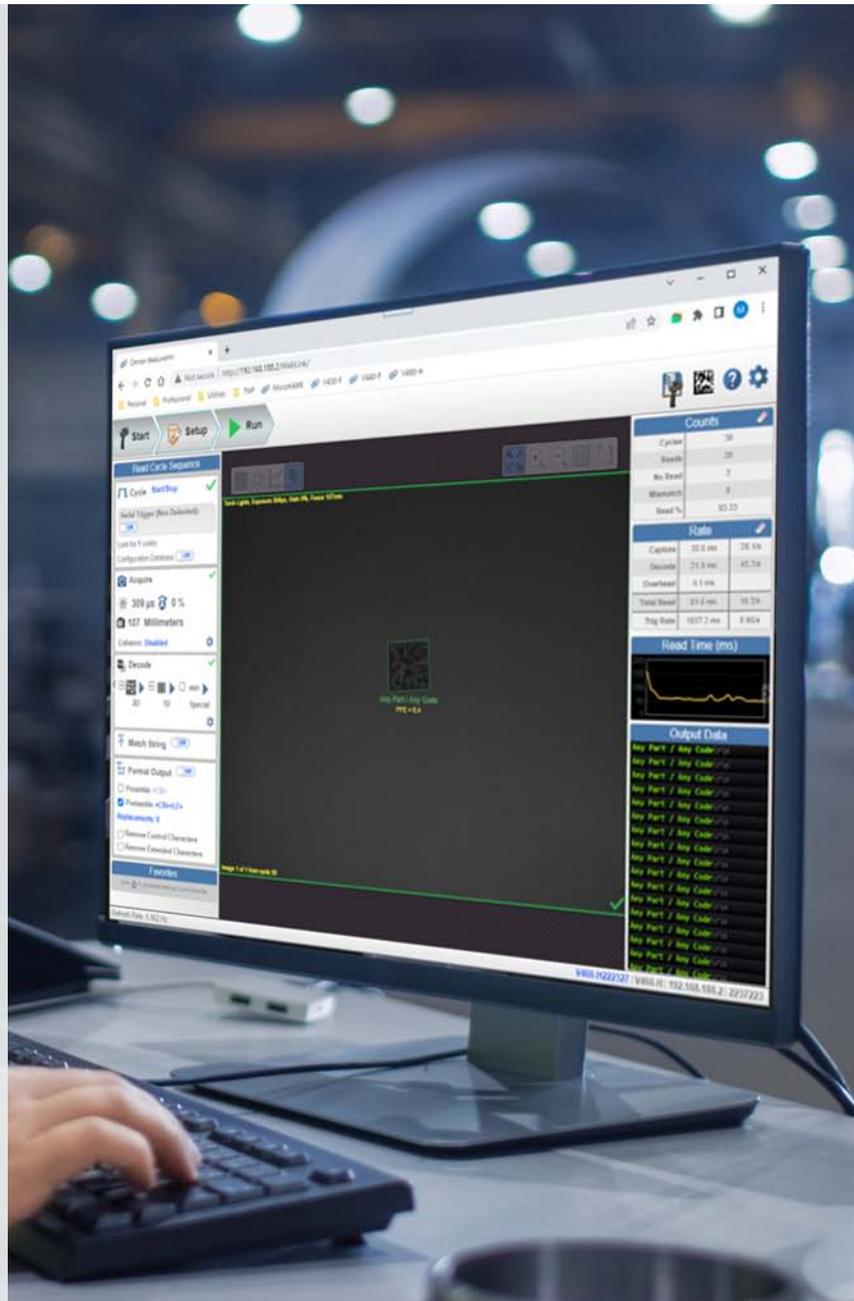
Applications

Automotive

The V460 will automatically adjust for the varying contrasts of different surfaces for both 1D or 2D direct part marks and labels.

Aerospace

Small direct part marks on turbine blades or other components are no problem for the V460's "Auto-everything" technology.

Life Science

Direct Part Marks on highly reflective surfaces may be a challenge for some, but the V460's Intelligent Lighting and X-Mode algorithms make this as easy as point & click.

Logistics

Different size barcodes at different distances are a snap with the V460's Predictive Autofocus, that's ready when you are.

Handheld Barcode Reader Lineup

OMRON has a full lineup of handheld barcode readers as part of your ideal traceability solution.

	V410-SR	V410-HC	V410-XD	V450-H	V450-H	V460-H
Communication	RS-232 / USB	RS-232 / USB	RS-232 / USB	RS-232 / USB	Bluetooth Wireless, Cradle: RS-232 / USB	• Ethernet (POE) • EtherNet/IP™ • PROFINET • TCP/IP • FTP
Application	Light Industrial for Labels	Health Care Model, for Labels (Disinfectant Resistant)	Light industrial for direct part marks and labels	Rugged industrial for direct part marks and labels	Rugged industrial for direct part marks and labels	Rugged Industrial for the most challenging direct part marks and labels
Model	V410-HDS4608SR	V410-HDS4608HC	V410-HDS4608XD	V450-HDS3608-0001	V450-HDS3678-0001	V460-H0PX

Notes

Notes

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