

DRV N Series

Digital Stereo Microscopy System

Vision
ENGINEERING



MAGNIFYING THE BENEFITS OF OPTICAL STEREO AND DIGITAL IMAGING INTO ONE GROUND BREAKING PACKAGE

DRV N Series combines the 3D view of optical stereo with the ease of use, enhanced collaboration and team working advantages of digital systems.

Using the Deep Reality Viewer (DRV) display head, teams can view capture, recall and share 3D images and video from optical stereo microscopes in real-time.

The patented glasses free ergonomic digital stereo display enhances the users' experience, including, for the first time, remote live 3D view of stereo microscope subjects.



DEEP REALITY VIEWER (DRV)



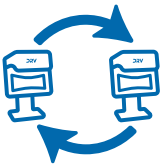
DIGITAL WORKING EFFICIENCY

Digital technology supports immediate information capture and share across teams.



INTUITIVE TECHNOLOGY

User friendly interface and common functions make DRV easy to understand and use.



SUPERVISOR OVERVIEW

One or multiple units can be linked to allow supervisors to oversee activity in 2D or 3D without interference in production activities.



IMPROVED DECISION MAKING

Common 3D view capability across teams speeds up sample and product validation, adding value and reducing cost through increased efficiency.

World leading Nikon SMZ series delivers up to 25:1 stereo zoom in a single unit. When combined with the intelligent nosepiece, a magnification ratio of 100:1 is possible without the need to change objectives. Super High Resolution optics with Plan Apo objectives deliver excellent images into the system for the DRV head to display.

DRV N Series offers users the choice of a range of system options, including motorized and manual zoom and focus options, range of lighting, including EPI fluorescence, quadrant ring lights and a diascopic OCC base.

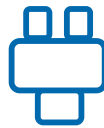
DEEP REALITY VIEWER (DRV)

BINOCULAR VISION



High quality binocular optics delivering clear, accurate visual images of your 3D subject.

STEREO MICROSCOPE



See incredible detail, and gain greater understanding of your subject with system magnification up to 800x.

CONNECTING HAND TO EYE



See more, do more. Use of tools is enhanced by superb visual accuracy, combined with real depth perception.

OPTICAL PERFORMANCE



Large field of view and long working distance make the DRV N Series ideal for working with tools and further support equipment.

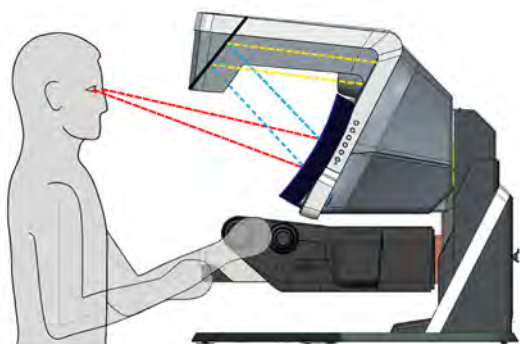
3D IMPROVES THE INSPECTION PROCESS



Viewing 3D subjects in 3D enhances understanding of the subject, its depth as well as length and height. Improved depth perception allows users to easily understand subject texture, the difference between a shadow and a raised or recessed area of a component. This results in improved visual inspection routine accuracy and speed.



INNOVATIVE TECHNOLOGY ENABLING NEW OPPORTUNITY

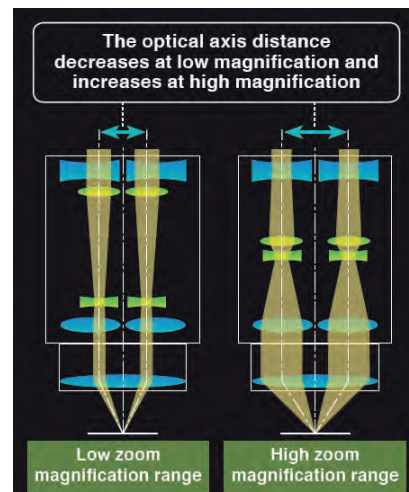


WORLD LEADING DIGITAL STEREO DISPLAY

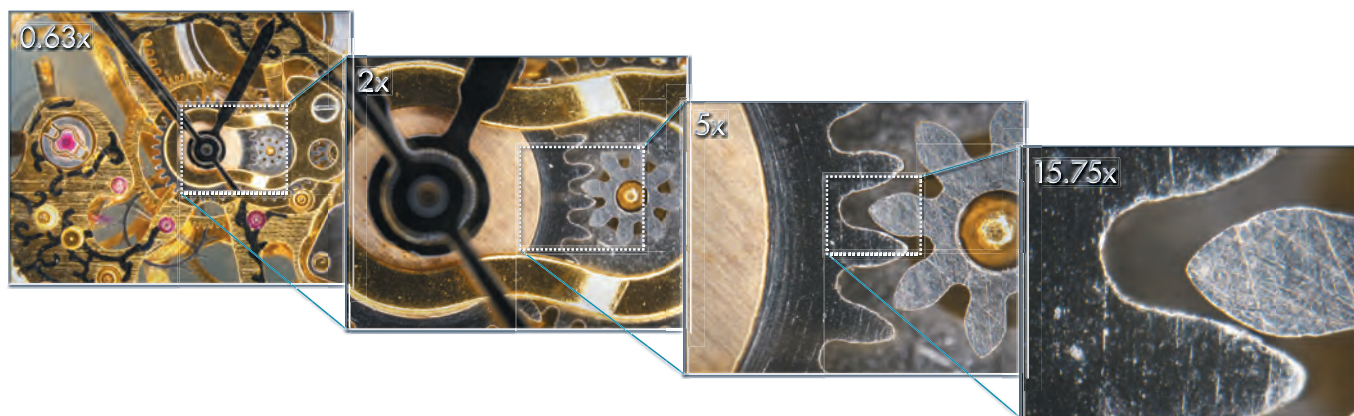
Groundbreaking technology in the DRV delivers 3D stereo images comfortably to the user. Without the need for ergonomic compromise the glasses-free stereo view gives users unprecedented eye-comfort, freedom of head movement and the ability to wear their own spectacles.

PERFECT ZOOM

The Nikon SMZ Perfect Zoom System is a breakthrough in stereoscopic design. Dynamically changing the optical axis separation during zooming enables maximization of light entry into the optical system. The result is a large zoom range with high resolution in both optical paths without compromise. (DRV N25)



DYNAMIC ZOOM RATIO OF 25:1



An innovative optical system known as "Perfect Zoom Optics" offers the world's first zoom ratio of 25:1 (zoom range: 0.63x - 15.75x). The DRV N25 can seamlessly capture the entire subject while simultaneously delivering microscopic details

PLAN APO

Plan Apo objectives with high numerical aperture, wide field of view, superior flatness color aberration correction. When used with the intelligent turret, offer up to 100:1 magnification in a single system.

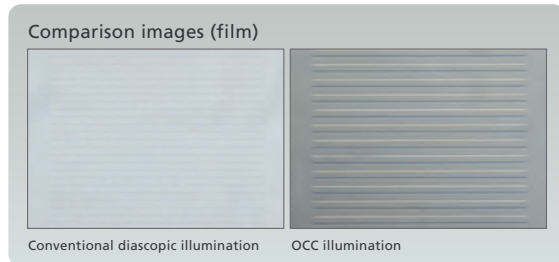


The brightness of the LCD monitor and LED indicators is adjustable



SIMPLE EFFECTIVE REMOTE CONTROL

Providing easy access to zoom and focus, the remote control keeps the settings right at hand. Providing information on zoom factor, focus position, lens, filter cube and additional control of the diascopic base.

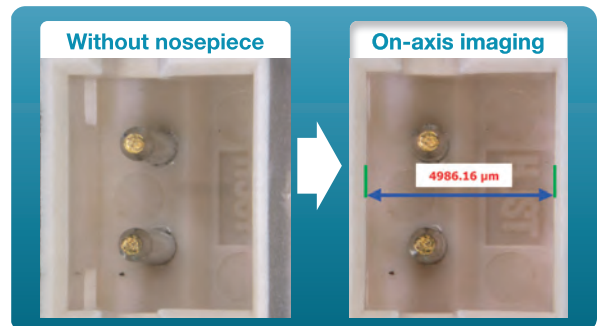
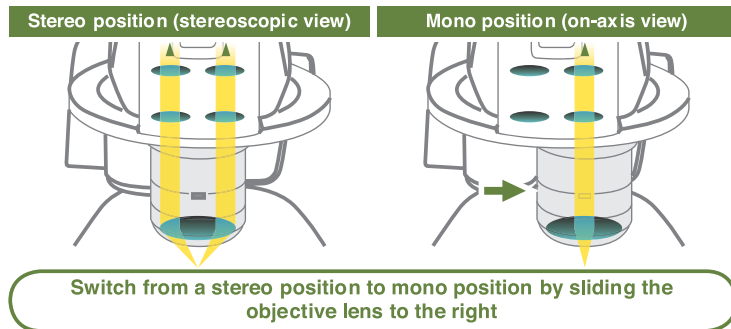


OCC ILLUMINATOR

Oblique coherent contrast is a form of lighting which enhances contrast seen in the subject. Ideal for low contrast subjects such as plastics and glass.

COMPATIBLE FOR 2D AND 3D SYSTEMS

Easily switch between the optimal 3D viewing and 2D measurement by switching between stereoscopic and on-axis (mono) viewing position on the intelligent nosepiece. 2D digital images become optimized for measurement with our range of software.



SOFTWARE FOR A RANGE OF APPLICATIONS

Select from a range of easy to use image capture and on-screen image measurement software, where all of the necessary content has been refined for ultimate ease of use.

	DimensionOne	DimensionTwo	ViPlus
Image capture	✓	✓	✓
Annotation	✓	✓	✓
On screen measurement	✓	✓	✓
Overlays			✓
Reporting	✓	✓	✓
Advanced functions			✓
Focus stacking			✓
Edge detection		✓	✓
Shape detection		✓	✓



3D IMAGE CAPTURE



3D IMAGE SHARING



3D IMAGE RECALL



ON-AXIS IMAGING



GLASSES FREE



COLLABORATION



REMOTE VIEWING

THE RIGHT CONFIGURATION FOR YOU

NEW VISUAL FLEXIBILITY

Because the image capture and image displays are separated, DRV N Series is not constrained by the position of the optics. Users do not need to be positioned directly over the sample to view it clearly in 3D, so the system can be configured for a variety of applications. Position your image view wherever you like.

ENHANCE YOUR TRAINING

Show don't tell - by viewing, sharing and training in 3D, operators understand more information more quickly and utilize the enhanced 3D view to optimize their performance.

APPLICATIONS

- ✓ Detailed inspection - end of line quality control, batch checking, failure analysis
- ✓ Prototyping, soldering, assembly tasks
- ✓ Compliance/traceable industries - to store and recall in 3D
- ✓ Cleanroom/laminar flow/safety cabinets
- ✓ Hazardous/unpleasant environments
- ✓ Space limited environments

ENHANCE YOUR TRAINING

DRV N Series shares live or recorded 3D images and video. Connect your team, project group or supply chain in multiple locations and benefit from faster and better decision making. Alternatively, capture and share one off / hard to repeat events in 3D stereo for sharing locally or remotely.



DEPTH PERCEPTION

- Clear digital stereoscopic image

VIEWING BY OTHERS

- Live 3D images are shared remotely

CONNECTIVITY

- Real-time collaboration
- Simultaneous inspection (viewing and comment) opportunities across multiple locations

ACCURACY OF 3D VIEW

- Rapid decision making, approval and verification

FULL TRACEABILITY

- Faster product, sample and prototype validation



DISPLAY

Display size on concave mirror	400 mm x 225 mm, 16:9 aspect ratio
Image capture	USB2
Video capture	HDMI cable to an external video capture card
Connection to external mono monitor	HDMI 1920 x 1080
Connection to second or multiple DRV-D1s	2 x HDMI daisy chain / Wi-Fi connection (Wi-Fi requires additional 3rd party hardware)
Stand	Counterbalanced stand with 150 mm vertical travel

STEREO CAMERA

Camera resolution	2 x 2 megapixel channels
Sensor manufacturer	Sony
Sensor size	1/2.8" (back illuminated)
Magnification factor	25.4x

ZOOM BODY

DRV N25

DRV N18

Optical system	Parallel-optics (zooming type), Apochromatic optical system	
Zoom	Motorized	Manual
Zoom ratio	25:1	18:1
Zoom range	0.63 - 15.75x	0.75 - 13.5x

OBJECTIVE

Working distance (mm)	Min. Mag. (x)	Max. Mag. (x)	FoV (mm)	FoV (mm)	Min. Mag. (x)	Max. Mag. (x)	FoV (mm)	FoV (mm)
Plan Apo 2x (20)	33	800	0.5	12.3	37	727	0.6	10.8
Plan Apo 1.6x (30)	26	640	0.6	15.3	30	582	0.7	13.4
Plan Apo 1.0x (60)	16	400	1	24.5	19	364	1.1	21.5
Plan Apo 0.5x (71)	8	200	2	49	9	174	2.3	43.5

(Magnification as displayed on DRV N Series system)

FOCUS UNIT (Stroke from objective's parfocal point)

Motorized focus unit	(Up 96mm / Down 4mm)
Manual focus unit	(Up 97mm / Down 5mm)

FOCUS MOUNT ADAPTOR

Focus mount adaptor (1 objective)
Intelligent nosepiece (2 objectives)

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Intelligent nosepiece (2 objectives)

BASE

Plain base, LED Diascopic base (with OCC illuminator), Fiber Diascopic base

EPI-FLUORESCENCE ATTACHMENT

4 filter cubes mountable, Fly eye lens built-in

Motorized Epi fluorescence attachment, Manual Epi fluorescence attachment

OBSERVATION METHODS

Bright field, Epi fluorescence, simple polarising (with attachment), dark field (with attachment), oblique lighting



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