A new era of microscopy: “Shuttle style.”
ShuttlePix, a revolutionary portable digital microscope

**ShuttlePix HEAD**

- Cordless setup enabling image capture in the lab or in the field  
  (Battery-powered with built-in illumination and SD card slot)
- Digital camera-like ease of use
- 20x optical zoom spans low to high magnification  
  (Magnification range of 20x to 400x*)
  *on dedicated 17" Touch Panel Monitor
- 0.2 NA (Optical Lens Numerical Aperture) achieves high-resolution image capture

Suitable for capturing images of large and heavy samples
- Automotive, Aerospace, Steelmaking, Shipbuilding, etc.

Ideal for testing, analysis and research
- Electronic Components, Devices, Assembled Parts, etc.

For wide-range use in the field
- Plant and Equipment Maintenance, Art Museums, History Museums, Forensic Science, etc.

Aerospace | Energy industry

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* ShuttlePix P-400R
ShuttlePix STAND

- Extended Depth-of-Focus (EDF) image capture
- Intuitive stylus and icon-driven operation uses dedicated Touch Panel Monitor (advanced image capture, simple measurement, etc.)
- Dedicated PC software expands operation and possibilities (image processing, 3D/color height-maps, etc.)

Forensic science  Archeology  Art objects  Automotive  Production line  Plant maintenance
ShuttlePix HEAD
Capture digital microscopy images at any location

- Image capture with the ease of a digital camera
  Zoom Camera Head
  Image capture with ShuttlePix is simple, with just three steps: 1 Hold the Zoom Camera Head in one hand and place against the sample; 2 Adjust focus by turning the Contact Observation Adapter while checking the Focus Indicator; 3 Press the capture switch (Trigger). No special knowledge or complicated operations required! The lightweight and ergonomic camera head allows for easy handling for all users.

- Compact body with no lens changing
  20x optical zoom
  ShuttlePix’s observation magnification of 20x to 400x* spans low to high magnification without the trouble of changing lenses. Magnification information is linked to scale functions and simple measurement functions.

  * Magnification on dedicated monitor used with Motorized Focusing Stand.

- Newly-developed design for bright, even illumination
  4-segment LED Ring Light
  ShuttlePix’s new illumination technology achieves consistent brightness at all levels of magnification. Capture shaded images as well, through split-half illumination switchable among top, bottom, left, and right.

- Automatically displays luminance value (focus index) during image capture
  Focus Indicator

- Achieving optimal image capture
  Best Shot Selection mode
  When capturing images, up to 10 continuous frames are recorded and only the optimal shot is kept. This guarantees capturing sharp images even at high magnifications.

- Full illumination yields bright, evenly-lit images, while half illumination enables images with shadows.

- High NA / High definition / Wide field of view
  Maximum optical performance
  Nikon’s proprietary optics achieve precise observation and imaging with NA up to 0.2 (at 400x magnification) and 20mm-diagonal wide field of view (at 20x magnification). Changing of Resolution Preferred Mode and Depth-of-Focus Preferred Mode is also possible.
ShuttlePix STAND

High-magnification image measurement (no PC required), Extended Depth-of-Focus image capture

Image capture and measurement with intuitive stylus and icon operation

Motorized Focusing Stand plus Touch Panel Monitor

ShuttlePix is equipped with a vertical-movement Motorized Focusing Stand and 17” 1280x1024 color LCD Touch Panel Monitor. Through the intuitive operation of touching icons or using the screen stylus, precise image capture and simple measurement are effortless and convenient.

Easy, icon-driven GUI

User interface

The Zoom Camera Head’s GUI uses the same icons as Nikon’s COOLPIX compact digital cameras. The Motorized Focusing Stand and Touch Panel Monitor also employ visual design that makes features clear instantly.

Automatic sample-optimized camera settings

Scene Mode

Ensure optimal settings for image capture through four types of Scene Mode: wafer/IC chip, metal, printed circuit board, and flat panel display.

PC-less, EDF image capture

One-Touch EDF

Image capture for large samples (up to 75mm x 50mm x 148mm) is possible with the Zoom Camera Head and with the Motorized Focusing Stand. Select from three dedicated Stages matched to the observation subject.

Stage Lineup

Stage options for every application

P-SSL Sliding Stage
P-STR Tilting Stage
P-S32 3x2 Stage

EDF image capture

Vertical image

Slanted image

Printed circuit board
Metal
Unlock a Wide Range of Features Using the Dedicated Software

- **ShuttlePix Editor**
Conveniently output simple measurements and EDF image 3D or cross-section displays directly into Excel via dedicated ShuttlePix Editor software. Software download from the Nikon website and user registration are free.

*Compatible with Windows XP and Windows 7

- **Various measuring performance**

**Simple measurement**
Add comments and markers to key measurements such as distance, angle, and area. Measurement results can be output in tabular form.

for details and download information regarding ShuttlePix Editor software.

*Download of ShuttlePix Editor is limited to registered users of the product.*
System Diagram

Dimensions

Motorized Focusing Stand + Touch Panel Monitor

Zoom Camera Head
Specifications

**Zoom Camera Head (P-400R)**

- **Effective pixels**: Approx. 1.91 megapixels
- **CCD**: 1/1.8"-color-CCD, total pixels approx. 2.11 megapixels
- **Frame rate**: 28fps (selectable 28fps, 80fps, 160fps or 1600fps when connected to Motorized Focusing Stand)
- **Optics**: Magnification: Approx. 2x (magnification on built-in 2.7" monitor), 20x to 40x (magnification on dedicated 17" monitor), optical zoom ratio = 20:1
- **Working distance**: 29mm
- **TGV**: Maximum diagonal field of view 20mm (16mm x 12mm)
- **Illumination**: Light source: white LED
- **Illumination method**: Episcopic illumination from around the objective lens
- **Illumination area**: ø20mm, 4-segment ring LED (top/bottom/left/right)
- **Recording**: Storage media: SD memory card, SDHC memory card (max. 16GB), selectable USB memory or FTP when connected to Motorized Focusing Stand
- **File format**: TIFF (non-compressed), JPEG (3 compression levels)
- **Recording pixels**: 2M (1728x1080), 3M (1600x1200)
- **Shooting mode**: Scene mode (Standard, Wafer/IC chip, Metal Ceramic, Circuit Board, FPD), Shooting mode (BSS (Best Shot Select), timer (2 seconds fixed), interval, 4 custom settings, with focus indicator)
- **Exposure**: Photometry method: Average photometry/speak-hold photometry
- **Exposure control**: Program AE/shutter/priority manual exposure
- **Exposure compensation**: -2EV to +2EV in 1/3EV steps, camera gain and shutter speed can be set (manual exposure)
- **AF lock function**: Yes
- **Aperture**: Resolution preferred model/death-of-focus preferred mode

**Motorized Focusing Stand (PM-FSC)**

- **Stroke**: 2 axis strokes: 150mm (upward 148mm, downward 2mm), upper and lower limit can be adjusted
- **Stage**: 3D Stage/3D Sliding Stage/3D Sliding Stage
- **Image Edit**: EDP Still image display, 3D image display (with ShuttlePix Editor)
- **Rotation prevention**: live display (max. ø190x200, 600x600)
- **High dynamic range**: Still image display (1280x960/800x600)
- **Caption**: Zoom magnification conversion/user-registered calibration
- **Measurement function**: Distance between 2 points, point-to-line distance, distance between center points of 2 circles, angle, circle, area, pitch
- **Annotation**: Circle marking, text input, pen drawing, straight line, scale indication, cross-hairs, grid, XY scale, XY measurement

**Direct Printing**

- **Supported printer**: PictBridge printer

**Touch Panel Monitor (P-7PM)**

- **Display size**: 17.3" display area 333.9mm x 270.3mm
- **Resolution**: SXGA (1280x1024)
- **Connector**: Input image: Digital input: DVI-D-SXGA, video input: NTSC composite
- **USB host**: USB A 0 connector x3
- **USB device**: USB B 0 connector x1

**Image Camera Head Compensation**

- **Image quality adjustment**: Saturation/hue/contrast/sharpness/color effect
- **Shading correction**: Factory setting (switchable On/Off can be switched)
- **White balance**: Manual setting (adjustable red/blue gain can be adjusted)

**LCD Monitor**

- **2.7" TFT color LCD, turned off automatically when connected to Motorized Focusing Stand
- **Image playback**: Full-frame view, thumbnail view (9 frames), zoom view (scrollable)
- **Image deletion**: Quick delete, select image delete, folder delete, card format

**Video output**: NTSC/PAL

**Power supply**: 110V/100W rechargeable battery/AC adapter/Motorized Focusing Stand (when connected to Motorized Focusing Stand)

<table>
<thead>
<tr>
<th>Power supply</th>
<th>Voltage</th>
<th>Current</th>
<th>Power consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>220V/100W</td>
<td>2.3A</td>
<td></td>
<td>24VA</td>
</tr>
<tr>
<td>110V/100W</td>
<td>2.0A</td>
<td></td>
<td>20VA</td>
</tr>
</tbody>
</table>

**Power consumption (140VA)**

- **Dimensions**: Approx. 280(W)x450(H)x404(D)mm

**Touch Panel Monitor**

- **Display size**: 17.3" display area 333.9mm x 270.3mm

**Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. October 2010 ©2010 NIKON CORPORATION N.B. Export of the products in this catalog is controlled under the Japanese Foreign Exchange and Foreign Trade Law. Appropriate export procedure shall be required in case of export from Japan. *Products: Hardware and its technical information (including software)*

**WARNING**

TO ENSURE CORRECT USAGE, READ THE CORRESPONDING MANUALS CAREFULLY BEFORE USING THE EQUIPMENT.