

## 我们推荐的4种方案

Four variations of optimal system configurations

作业环境：温度10℃~35℃、湿度20%~80%  
10-35℃, 20-80% humidity

### 》中倍率观测方案(印刷电路板等) Medium-magnification observation system (Printed circuit board, etc.)

发挥最大的性价比,追求操作简便

Maximizes cost performance, capability and ease of use.

- 300万像素CMOS相机(包含手动测量软件)  
3 million-pixel CMOS camera (Manual measuring software included)
- 中倍率变焦物镜(40-240倍)  
Medium-magnification zoom lens (40-240 times)
- 标准支架(含XY载物平台)  
Standard stand (XY stage included)
- 环形LED照明  
LED ring lighting
- 推荐电脑  
Recommended PC



### 》高倍率观测方案(金属、树脂等) High-magnification observation system (Metal, resin, etc.)

高倍率的观测,更增大了用途范围。自动对焦/3D合成软件(另外购买)

Allows high-magnification observation and wider applications. Also, applicable for focus / 3D synthesizing. (Sold separately)

- 300万像素CMOS相机(包含手动测量软件)  
3 million-pixel CMOS camera (Manual measurement software included)
- 高倍率多功能物镜(包含光导装置)  
High-magnification lens tube (Lighting guide included)
- 高倍率物镜(270-2700倍)  
High-magnification object lens (270-2700 times)
- 直视支架(含XY载物平台)  
Straight stand (XY stage included)
- 卤素光源  
Halogen light source
- 推荐电脑  
Recommended PC



### 》高精细中倍率观测方案(纸、织物等) High-precision medium-magnification observation system (Paper, fiber, etc.)

操作简单,采用高画质相机,追求更精密。

Simple, easy to use and high quality camera provides higher accuracy.

- 1200万像素CCD相机(包含手动测量软件)  
12 million-pixel CCD camera (Manual measurement software included)
- 中倍率变焦物镜(30-180倍)  
Medium-magnification zoom lens (30-180 times)
- 直视支架(含XY载物平台)  
Straight stand (XY stage included)
- 环形LED光源  
LED ring lighting
- 推荐电脑  
Recommended PC



### 》高精细高倍率观测方案(薄膜、微小部品等) High-definition, high-magnification observation system (Film, micro-components, etc.)

高倍率观测高精细画质的最高等方案。自动对焦/3D合成软件(另外购买)

This top-of-the line system allows high-magnification observation with high-definition imaging. Also applicable for focus/3D synthesizing (sold separately).

- 1200万像素CCD相机(包含手动测量软件)  
12 million-pixel CCD camera (Manual measurement software included)
- 高倍率多功能物镜(包含光导装置)  
High-magnification lens tube (Lighting guide included)
- 高倍率物镜(200-2000倍)  
High-magnification object lens (200-2000 times)
- 直视支架(含XY载物平台)  
Straight stand (XY stage included)
- 卤素光源  
Halogen light source
- 推荐电脑  
Recommended PC



安全注意事项  
Safety precaution

请在仔细阅读产品使用说明书之后,使用本产品。  
规格以及外观如有改良有可能不能事先通知。  
产品的颜色与实际产品的颜色因印刷关系,可能会有差异。

Creation & Harmony



SK-Electronics CO.,LTD.

# New Digital MicroScope

新型数码显微镜  
Area P III-FX

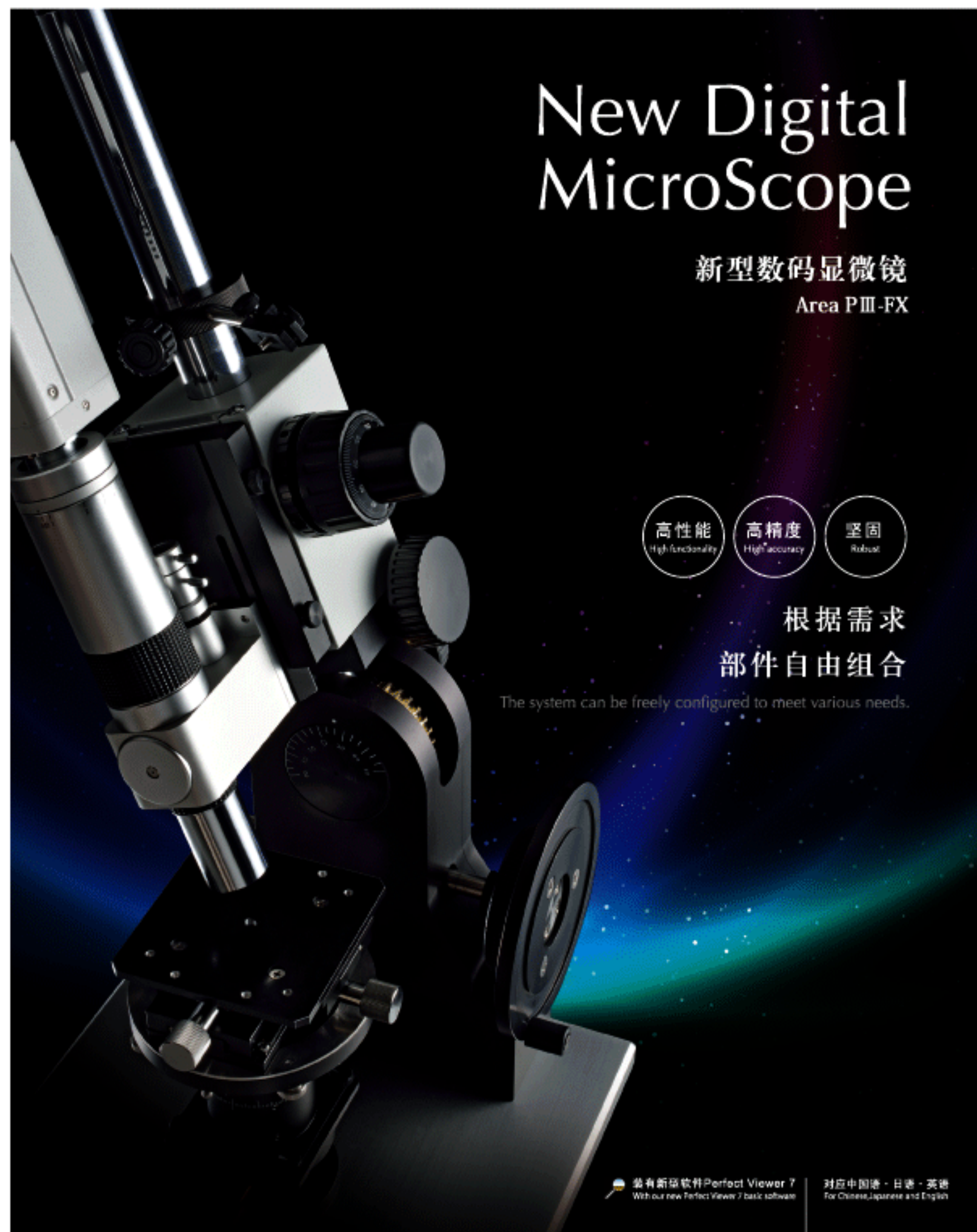
高性能  
High functionality

高精度  
High accuracy

坚固  
Robust

根据需求  
部件自由组合

The system can be freely configured to meet various needs.



**[进口销售商]**  
爱史科电子贸易(上海)有限公司  
SK-Electronics Shanghai CO.,LTD.  
200336 上海长宁区仙霞路 369 号现代广场 1 号楼 905 室  
TEL.86(21)6125-0108 FAX.86(21)6125-0109  
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株式会社 エスケーエレクトロニクス  
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装有新版软件Perfect Viewer 7  
With our new Perfect Viewer 7 basic software

对应中国语・日语・英语  
For Chinese, Japanese and English

# 高精度・多功能、自由组合・方案多样。可以满足顾客需要的数码显微镜。

"Highly accurate and functional modular microscope with a flexible configuration system to meet your needs"

## 》特点 Features

### ①超高分辨率 Ultra high resolution

使用超高分辨率的1200万像素MX相机,实现超精细画面品质;根据观测目的的不同,300万像素的CMOS相机同样是经济、实用的选择。

A 12 million-pixel MX camera of ultra high resolution provides ultra high definition images. 3 million-pixel CMOS is also applicable depending on observation objectives.

### ②表现力 Excellent representation

自动对焦/3D合成、全景合成、图像处理软件;倾斜载物台、自由视角支架等等;丰富的软件和硬件的结合,可以灵活应用在各个领域。Applicable for a wide variety of purposes by combining synthesized focusing, 3D synthesizing, panoramic synthesizing, image processing software, tilted stage, multi-angle stand, etc.

### ③丰富的功能 Versatile functions

现行市场主流配置电脑即可使用。自动标尺、偏光观察、冷却/加热载物台等等备有多样选择。

By using a commercially available PC, original functions such as e-mailing may be utilized for this system. Moreover, a wide variety of options are also available such as an auto scaling function, a polarized observation function, cooling/heating stages, etc.

### ④坚固的设计 Robust design

源于精密的制作技术,配置了坚固、精密、高精度的硬件部件。也可以根据客户要求要求进行量身定制。

A robust and accurate stand system has been achieved by means of our precision tool technology. Custom design based on request is available.

## 新型基本软件Perfect Viewer 7的优越功能

New operating system, Perfect Viewer 7 allows excellent functionality.

### 》自由选择7种相机 Select from 7 cameras



#### FS型USB输入相机 FS type USB input cameras

- ①125万像素CCD相机  
1.25 million-pixel resolution CCD camera
- ②130万像素CMOS相机  
1.30 million-pixel resolution CMOS camera
- ③150万像素CCD相机  
1.50 million-pixel resolution CCD camera
- ④200万像素CCD相机  
2.00 million-pixel resolution CCD camera
- ⑤300万像素CMOS相机  
3.00 million-pixel resolution CMOS camera
- ⑥500万像素CCD相机  
5.00 million-pixel resolution CCD camera

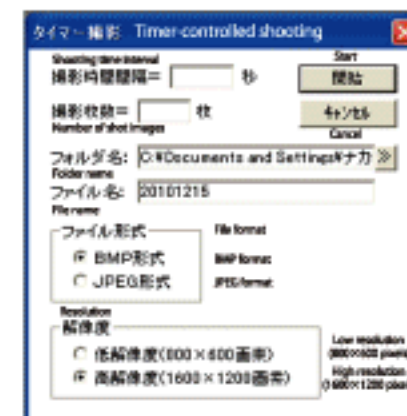
#### MX型PCI(图像输入)相机 MX type PCI (image input) camera

- ①MXCCD相机  
MX CCD camera



### 》定时摄影功能

Taking a picture function with timer



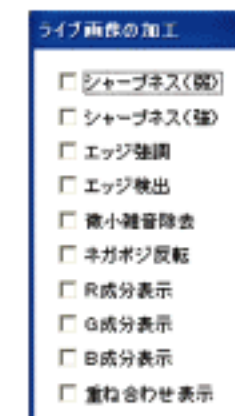
#### 对于动态样本摄影的新功能

可捕捉动态变化或动态变化的样本随时间的推移所发生的图像变化。图像可以是BMP格式或JPEG格式。图像可命名并保存到指定的文件夹中。

New features for taking a picture of a moving sample. Thermal changes and/or dynamic changes, etc. within samples can be captured in the image. As for the image, both BMP and JPEG formats are possible. The image is saved in a folder specified by name.

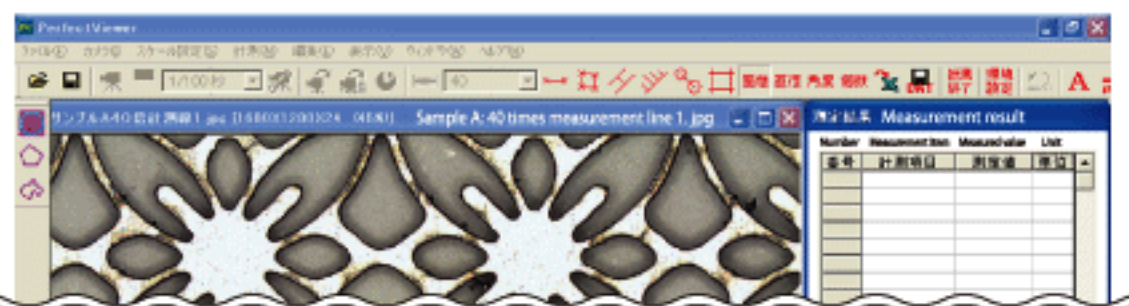
### 》即时图像加工功能

Live cam processing function



Sharpness (weak)  
Sharpness (strong)  
Edge reinforcement  
Edge detection  
Micro-noise removal  
Negative-positive inversion  
Indicate R ingredient  
Indicate G ingredient  
Indicate B ingredient  
Superimpose display

### 》12项目的手动测量功能 12 Manual measurement functions



| 2点距离<br>Between two points                                                                                | 直径<br>The diameter                                                                        | 多点距离<br>Between multiple points                                              | 圆心距离<br>Between two circles                                                                                                             | 平行线距离<br>Parallel lines                                                                                                                        | 角度(交点)<br>Angle (Intersection)                                                                                                       | X-Y距离<br>X-Y distance                                                                                                                                                                                       | 垂直<br>Perpendicular                                                                                                                     | 面积(圆・多边形)<br>Area (circle and polygon)                                                        | 面积(自由曲线)<br>Area (free-form curve)                                                            | 计数<br>Count                                                                                          | 批注<br>Comment                                                               |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
|                                                                                                           |                                                                                           |                                                                              |                                                                                                                                         |                                                                                                                                                |                                                                                                                                      |                                                                                                                                                                                                             |                                                                                                                                         |                                                                                               |                                                                                               |                                                                                                      |                                                                             |
| 测量任意指定2点之间的距离<br>Two arbitrary points are specified, and the distance between the two points is measured. | 测量任意3点所决定的圆的半径<br>The radius of the circle decided by three arbitrary points is measured. | 测量多点间的合计距离<br>The total of the distance between multiple points is measured. | 测量任意3点各自决定的2个圆心之间的距离<br>The center-to-center spacing between two arbitrary three point circles is measured with respect to one another. | 测量从任意2点决定的直线,到任意1点决定的平行线间的距离<br>The distance of a parallel straight line from another straight line decided by 2 arbitrary points is measured. | 测量由各自任意2点所决定的2直线的交点的角度<br>The angle at intersections of two straight lines decided respectively by two arbitrary points is measured. | 测量画面上被水平2直线和垂直2直线所包围的四边形的宽(X)、长(Y)、对角线(D)的长度<br>Side (X) quadrangle length (Y) and opposite angle (D) enclosed by two horizontal straight lines and two vertical straight lines on the screen are measured. | 测量从任意2点决定的直线到任意点的垂直距离<br>The recommended distance from a straight line decided by 2 arbitrary points to an arbitrary point is measured. | 测量任意点构成的圆或多边形的面积<br>A circle enclosed in an arbitrary point and a polygonal area is measured. | 测量任意点构成的圆或多边形的面积<br>A circle enclosed in an arbitrary point and a polygonal area is measured. | 一边做标记一边计算任意点的数量(最多3000点)<br>An arbitrary point is counted while striking the mark up to 3000 points. | 在画面上任意地方写入批注<br>The comment is written in an arbitrary place on the screen. |

# 新型基本软件Perfect Viewer 7 的优越功能

New operating system, Perfect Viewer 7 allows excellent functionality.

## >> 自由的画像保存功能 Flexible image-saving function

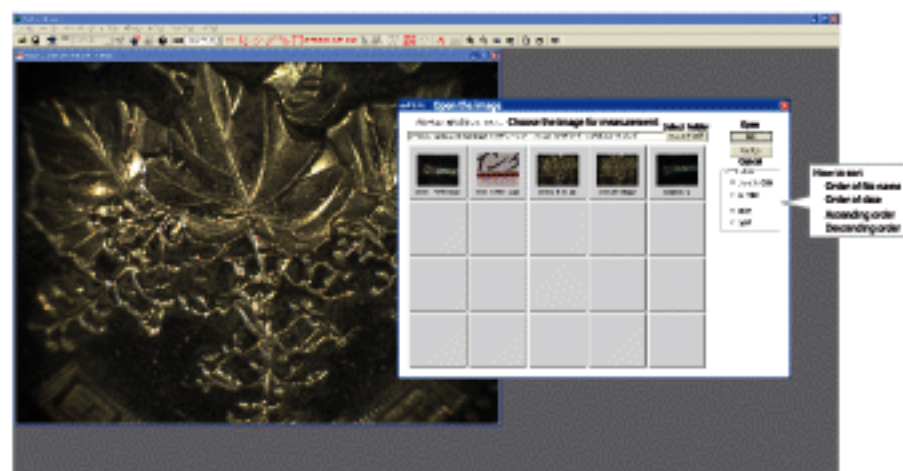


可以简单地用自己喜欢的文件名保存。  
Photographic image can be easily saved by using a name of your choice.

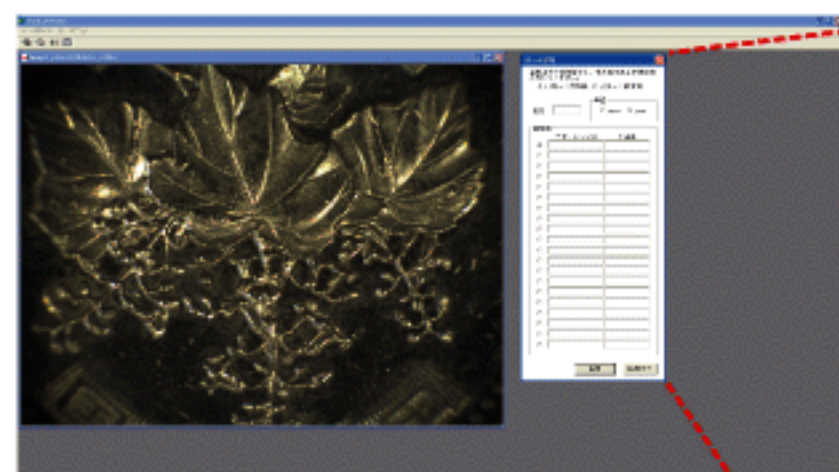
- 手动测量画像  
Manual measurement image
- 3D合成画像  
3D composite image
- 将测量数值导出到Excel  
The result of a measurement's numerical value is forwarded.

可以将图像和测量值保存至同一文件。  
可以用图标视图的方式简单地打开所保存的图像。

The image and the measurement's value can be saved in the same file.  
Saved images can be displayed and opened easily via thumbnail.



## >> 镜头倍率校正功能 Lens magnification proofreading function



为更准确地对应多种镜头倍率的测量精度，可以简单地同一画面上进行刻度校正。校正表保存后，可以随时打开并使用。

Scale proofreading can be done easily on the same screen thanks to the many varieties of lens magnification with dependable measurement precision.  
Proofreading tables can also be saved in a file, and can be used at any time.



## Z轴电动聚焦·3D合成功能 Z axis electric focus/3D synthetic function

● 马达驱动连接器 Motor drive coupling

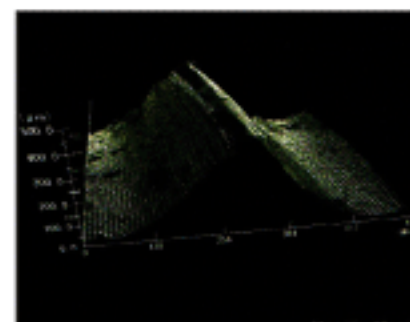


● 控制装置 Controller



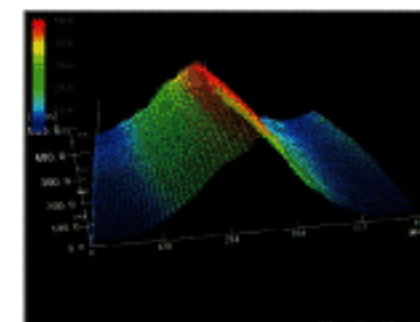
## 搭载更加细致的立体描绘·测量功能 Installed a more precise and solid description and measurement function.

● 轮廓线 Wire frame



通过用轮廓线表示立体画像，使形状的观察变得容易，并能观察到由于样品形状产生的死角。  
Shape observation can be facilitated by showing the 3D image with the profile line. Also, any blind spots caused by material are covered.

● 高度差色彩显示 Height difference



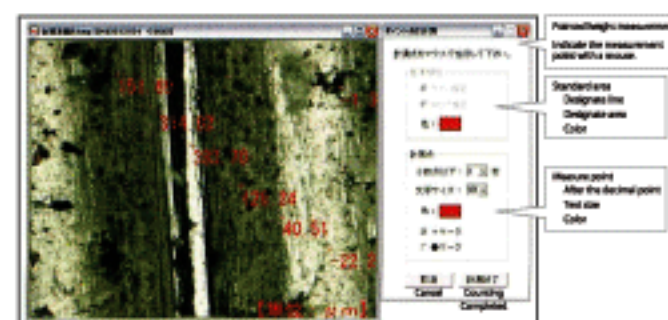
通过把高度替换成颜色信息，使高低差变得一目了然，即使细微的一点倾斜也不会遗漏。  
With the replacement of height by color information, the vertical interval becomes obvious. Any little change in slope is not overlooked.

● 分布图表 Profile display



分布图表可显示任意位置的断面曲线把高度·宽度·复杂的凹凸部等图表化，使之更容易理解。可以很简单地将取得的数据以Excel形式输出。

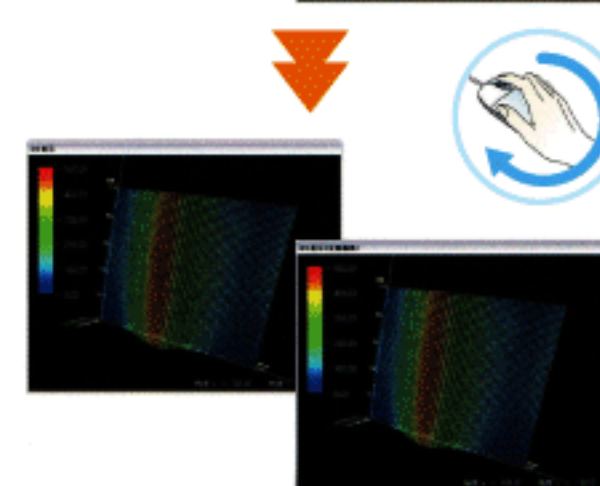
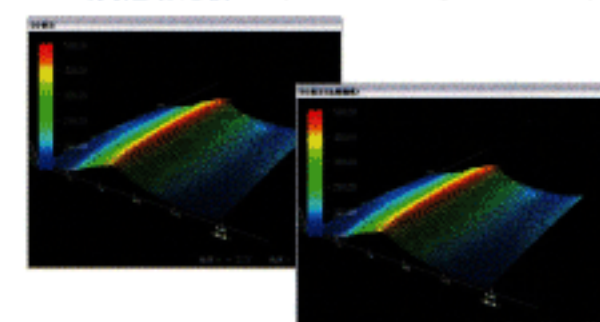
Profile display of a section curve at an arbitrary position.  
Height, width, and a complex ruggedness are plainly graphed.  
Easily put an acquired data.



运用在2次元画像，在画像上显示任意高度。高度数据可以一步测定的计量。

In two dimensional image, arbitrary height is displayed on the screen.  
The height can be measured accurately.

● 2画面联动比较 Comparison of two images simultaneously



通过使2张3D画像的角度和方向同步联动，让对比观察变得更易。视线角度可以通过输入数值决定。

Observation of the comparison can be easily done by synchronizing the angle and direction in two 3D images. As for a square angle, a numeric input is also possible.

满足观察目的的自由组合构成 Free composition and combination corresponding to observation purpose

## 根据您的观测要求,自由组合部件 (请选择相机,物镜,支架)

Flexible configuration and a wide variety of product models to suit various applications  
(Please select a camera, lens and a stand.)

### 相机产品系列

Camera lineup

FS型USB相机  
USB camera (FS Model)



MX型PCI相机  
PCI camera (MX Model)



### 镜头产品系列

Lens lineup



低倍率镜头  
Low magnification lens



中倍率镜头  
Middle magnification lens



高倍率镜头(物镜镜头交换型)  
High magnification lens (Object lens exchangeable)

### 支架产品系列

Stand lineup

标准支架  
Standard stand



直视支架  
Straight stand



自由视角支架  
Free-angle stand



### ● 17英寸显示器倍率表 17-inch monitor magnification table

| 相机种类<br>Camera type | 低倍率镜头<br>Low magnification lens(times) | 中倍率镜头 (※1)<br>Middle magnification lens(times) | 高倍率镜头 (※2)<br>High magnification lens(times) | 物镜镜头<br>Object lens                                                         |
|---------------------|----------------------------------------|------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------|
| FS 型<br>FS Model    | 1~45 倍                                 | 40~240 倍                                       | 80~800 倍<br>270~2700 倍                       | 低倍率 Low magnification<br>高倍率 High magnification                             |
| MX 型<br>MX Model    | 1~30 倍                                 | 30~180 倍                                       | 60~600 倍<br>200~2000 倍<br>270~2700 倍         | 低倍率 Low magnification<br>中倍率 Middle magnification<br>高倍率 High magnification |

※1) 中倍率镜头可另行配备0.5倍和2.0倍的镜头转换器。

※2) 高倍率镜头可另行配备2.0倍的镜头转换器。

\*1) Converter lenses are prepared in the middle magnification lens 0.5 and 2.0.

\*2) Converter lenses are prepared in the high magnification lens 2.0 times.

## Z轴电动控制支架 Z axis electric control Stand

### 直视支架

#### ND-ST2 型

Straight stand ND-ST2 type



### 自由视角支架

#### ND-ST3 型

Free angle stand ND-ST3 type



| 型号<br>Model                | ND-ST2 型 Straight stand ND-ST2 type                                                                                                                                                                                                                                                         | ND-ST3 型 Free angle stand ND-ST3 type |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| 支柱倾斜<br>Prop inclination   | 仅需垂直度<br>Only vertical                                                                                                                                                                                                                                                                      | 左右 90 度<br>Right and left 90 degrees  |
| XY 载物台<br>X-Y stage        | 标准配备<br>Standard equipment                                                                                                                                                                                                                                                                  | 标准配备<br>Standard equipment            |
| Z 载物台<br>Z stage           | 选配<br>Optional                                                                                                                                                                                                                                                                              | 标准配备<br>Standard equipment            |
| 倾斜载物台<br>Inclination stage | 选配<br>Optional                                                                                                                                                                                                                                                                              | 选配<br>Optional                        |
| 焦距调整部<br>Focus dial part   | 滚柱导轨式镜筒 (rack & pinion 方式) 全行程量: 30mm<br>Body tube with up and down method by roller guide (rack & pinion method) stroke range: 30mm<br>微调行程量: 0.2mm (每转一圈)<br>Slight movement stroke range: 0.2mm (per rotation)<br>粗调行程量: 36mm (每转一圈)<br>Amount of fluttering stroke: 36mm (per rotation) |                                       |
| 外形尺寸<br>Externals size     | 250×300×630mm                                                                                                                                                                                                                                                                               | 300×300×630mm                         |
| 重量<br>Weight               | 6.8kg                                                                                                                                                                                                                                                                                       | 17.2kg                                |

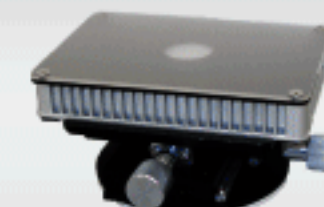
### ● 选配照明 Lighting options



LED 环形照明  
LED ring lighting



低倍率用透过照明  
Low-magnification transmission lighting



高倍率用透过照明  
High-magnification transmission lighting