

Comfortable work, not harder!

Huvitz Stereo Microscope HSZ-700 / HSZ-600



## HUVITZ OPTILUTION

#### Most Optimized Optical Solution!

As one of the world leading ophthalmology equipment manufacturer, the professionalism of Huvitz engineering guarantees upscaled satisfaction for any R&D and production environment providing a more precise and optimized optical solution.

## Improved Flexibility Variety of objective lenses and eyepieces allow user to combine the optical system for any propose and work or R&D environment. Customized stand and digital application guarantee the best resolution in any environment. HUVITZ HSZ-660 HSZ-645 Contents HSZ-700 · Application Accessories -----12 HSZ-645TR Digital Application .... High Performance System Overview ..... Ergonomic Design -Specifications ...... Lighting Accessories ···· HSZ-730TR

Powerful Performance

optimized optical solution!

Advanced Design

Optical system with high resolution, true color reproduction and low distortion is one of the key characteristic of Huvitz

microscopes which provide with clear images for better analysis. Optimized task analysis can be achieved with the Huvitz

Ergonomic design has been carefully implemented to improve

Ideal position and angle of each module, compact size and high quality provide users friendly environment for any task given.

efficient usage and minimize operators' fatigue.

Helps to reduce fatigue in long-duration inspection.

## HSZ-700 Series

Wisely optimized zooming and color reproduction offer you stable and high quality images.

Interchangeable objective lenses and accessories can be implemented to provide a guaranteed satisfaction for any given inspection environment and task.









### HSZ-700, the best solution where high precision Galilean optic system is required!

#### Galilean Optical System

This not only change easily objective lens but also produce real image. It is possible to use wide range of research required high precision and wide range of accessories for Quality Control.

#### Wide 7:1 Zoom

It offers the highest zooming specification among the competitor's model. The 8x to 56x zooming range provide the easiness for any task execution. Longer working distance is another factor of consideration of the HSZ-700.

#### Superior optic system

Live color reproducibility and high resolution power are just a result of superior optic design minimizing distortion and aberration offering a clear image on wide range and variety of samples.

#### Effective task execution

HSZ-700's speed, accuracy and effectiveness offer the best solution for any challenging task.

High resolution and power lenses can be interchanged easily to obtain better results for any routine tasks given.

HSZ-730TR / HST-ILST7

## HSZ-600 Series

The improved performance is much easier to work by simple and intuitive structure.

compact design creates and ideal combination











### HSZ-600, A Greenough system to provide a wide range of inspection field demanding safety and comfortability

#### **Greenough Optical System**

Efficient Greenough Optical System offers you more superior flatness and outstanding depth of focus.

Lens coating and material are carefully selected to provide the best result to minimize the distortion and color aberration.

#### Compact Design

Compact microscope with large base for variety of specimens offer you optimized inspection environment.

Ergonomic design optimizes the comfort during the operation.

#### Effective 6.7:1 Zoom

Most widely used and broadly accepted 6.7:1 zooming design provide more effective working environment.

Higher working distance offers you better quality control of specimens and samples.

#### Effective task execution

Carefully selected lens and coating materials can improve the operation efficiency and minimize eye fatigue drastically.

Most optimized observation angle of HSZ-660 is best for multiply customized environments.

HSZ-645TR / HSZ-ILST6







Highly stringent criteria design to minimize aberration and distortion with ideal coating technology and lens materials.

#### High resolving power objective lens

Low distortion, longer working distance, ideal lens combination and design offer you a better observation environment for any specimen. Ideal selection of lens and coating materials guarantee the fidelity of color reproducibility and their longevity.

Interchangeable objective lens can adapt the microscope for any working environment.

#### Eyepiece with Comfort View

High eye point design and aberration correction are another advantages of Huvitz microscope eyepieces.

They provide with the optimal visual field for low acuity power users.

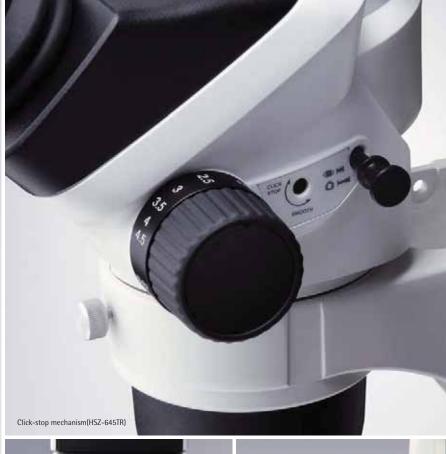
#### Flexibility of Observation Tube

Observation tube is designed to be adaptable for any kind of observation needs.

Huvitz Trinocular Tube, HSZ-645 and HSZ-730 are suitable for video port output for digital application.

60 degree inclination tube is also available to meet special and customized need. (HSZ-660)









# Compact design providing multiple functions reducing eye fatigue.

#### Slim and Compact Design

Achievement of the most ergonomic design multiple computer simulation minimizes the operators' fatigue and maximizes the work efficiency.

#### Comfortable Zoom Knob / Focus Knob / Click Stop

Careful polyurethane material selection in zoom knobs and focus dials to assure the comfort in any operation.

To achieve repetitive zooming change Click Stop function has been implemented to improve work efficiency.

#### High Eye Point and Diopter function

High Eye Point eyepiece design provides comfort view with operation with a pair of glasses or with low visual acuity.

The diopter control is easily achieved from the eyepieces.











## High Intensity LED implemented.

#### High Intensity LED

Low energy consumable and durable LED provide suitable transmission

LED lighting has been proved to reproduce real color without affecting specimen by its excess of color temperature providing longer lifetime and low energy cost.

#### 4 Split LED ring light

Compact 4 split right LED illumination can simulate different lighting environment for a better observation.

Light intensity can be easily optimized for any glossy samples or specimens.

#### LED Transmitted / Reflected light

Other external light is not needed as light angle can be regulated from

Transmitted light is designed to be used with stand base without any discomfort.

11









## Application with easy operability, wider working space and ESD

#### Wider Base Stand

Variety of stand can be chosen depending on the work environments' needs. Hybrid transmitted and reflected light base is also available with very compact design and universal stand is also available for large specimens or samples.

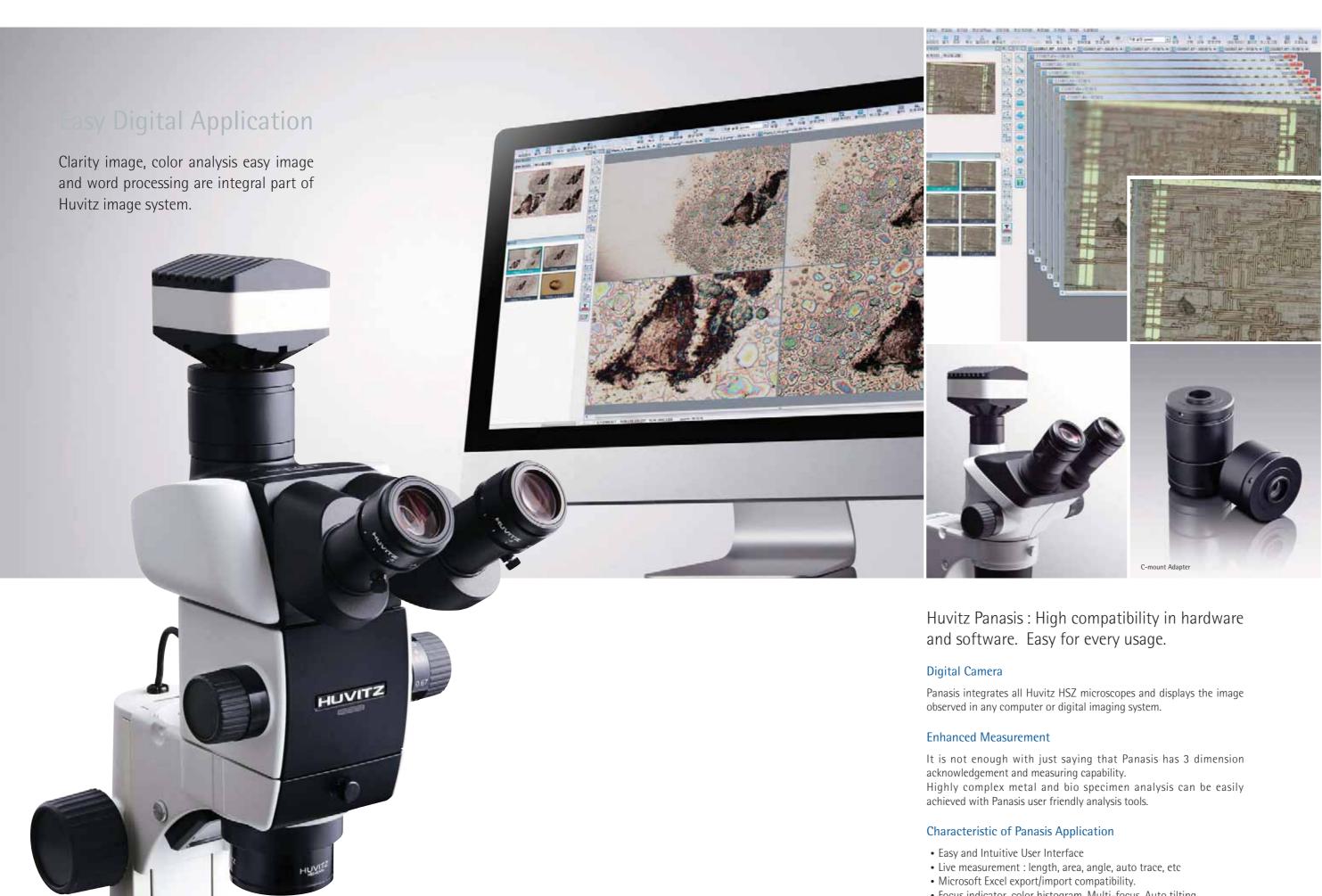
#### Variety of Video Ports

Huvitz exclusive video port lenses assure better quality video images for any digital camera systems.

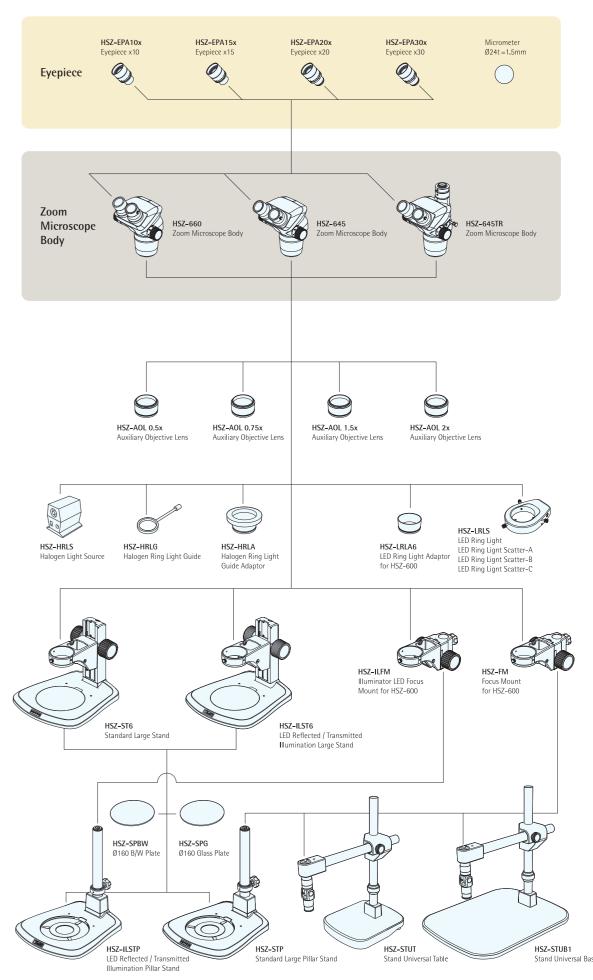
#### ESD and surge protection

Huvitz Unique ESD and surge protection system comply with the UL and CL standards and regulations: another advantage of Huvitz system for electronic and electric quality control usage.

12



System Overview / HSZ-600



- Focus indicator, color histogram, Multi-focus, Auto tilting
- Wider filter and image processing
- R&D resource dedicated for time to market customization
- SW Upgrade and customer support though Huvitz website.

#### Specifications

#### HSZ-700 Specifications

п32-700 Spec	incations						
Item		Specifications	Specifications				
Zoom microsco HSZ-ZB700	ope body	Zoom drive: Horizontal knob system Click stop for each zoom magnification: On-Off switching possible Zoom ratio values: 7:1 (0.8~5.6x) Zoom magnification indication: 0.8, 1, 1.25, 1.6, 2, 2.5, 3.2, 4, 5, 5.6. Objective lens mounting: Screw mounting into thread					
Observation tu HSZ-TR30 HSZ-BI30	be	View inclination angle : 30 Light path selection(only HS Interpupillary distance ad	Trinocular tube(HSZ-TR30), Binocular tube(HSZ-BI30) View inclination angle: 30° Light path selection(only HSZ-TR30): 2 steps (Binocular 100%, Video 80%-Binocular 20%) Interpupillary distance adjustable range: 55 to 75mm Eyepiece clamping knob provided				
Stand		HSZ-ST7	HSZ-ILSTS7	HSZ-ILST7			
HSZ-ST7		Standard large stand	LED reflected / transmitted illumination stand	LED reflected / transmitted illumination large stand			
HSZ-ILST7 Frame installation		Mounting diameter : 76mm					
HSZ-ILSTL7	Focusing adjustment		Knob rotation tension adjustment Focusing stroke : 120mm				
	Stage plate	HSZ-SPG HSZ-SPBW	HSZ-SPG100	HSZ-SPG HSZ-SPBW			
	Light source	Transmitted illumination: LED Reflected illumination: LED Average LED life span: 10,000 hrs. Input rating: AC 100-240V, 50/60Hz, 10W					
Objective lens		Model HSZ-ACH1x HSZ-PLAP01x HSZ-ACH1.5x HSZ-ACH2x	HSZ-ACH1x W/D : 90.5mm HSZ-PLAP01x W/D : 81mm HSZ-ACH1.5x W/D : 45.5mm				
Eyepieces			Eyepiece series				
Weight							

#### **HSZ-600 Specifications**

Item		Specification	S			
Microscopy body	/	HSZ-645	HSZ-660	HSZ-645TR		
HSZ-645	Magnification			0.67x ~ 4.5x		
HSZ-660	Zoom ritio			6.7 : 1		
HSZ-645TR	Working distance		110mm			
	Tube inclination angle	45° 60°		45°		
	Interpupillary		Left / right interlocked			
	distance adjustment			Adjustment range: 55 to 75mm		
	Viedo camera adaptability		-	C-mount(0.5x built in)		
	Click stop		-	Click stop for each zoom magnification: On-Off switching possible		
Auxilliary objective lens		Mounting by	screwing into	the thread at the bottom of frame(M48 thread x0.8)		
Stand		HSZ-ST6		HSZ-ILST6		
HSZ-ST6		Standard large stand		LED reflected / transmitted illumination large stand		
HSZ-ILST6	Frame installation	Mounting diameter: 76mm				
	Focusing adjustment	Knob rotation tension adjustment				
		Focusing stroke: 120mm				
	Stage plate	HSZ-SPG		HSZ-SPG		
		HSZ-S	SPBW			
	Light source			Transmitted illumination: LED		
				Reflected illumination: LED		
				Average LED life span: 10,000 hrs.		
				Input rating: AC 100-240V, 50/60Hz, 10W		
Eyepieces	HSZ-EPA10x	10x / FN 22 / Diopter adjustment : -8D ~+5D / Eyepiece micrometer dist mountable				
	HSZ-EPA15x	15x / FN 16 / Diopter adju		stment : -8D ~+5D / Eyepiece micrometer dist mountable		
	HSZ-EPA20x	20x / FN 12.5 / Diopter adjustment : -8D ~+5D / Eyepiece micrometer dist mounts				
	HSZ-EPA30x	30x / FN 7 / Diopter adjustment : -8D ~+5D / Eyepiece micrometer dist mountable				
Dimensions / We	eight	Dimension (W*D*H): 289.9 x 329.9 x 371.3 / Weight: 5.2Kg				

#### Eyepieces

, i				
Model	F.N. : 22	Diopter adjustment	Reticle	Focal magnification
HSZ-EPA10x	22	-8 ~+5	Yes	-
HSZ-EPA15x	16	-8 ~+5	Yes	-
HSZ-EPA20x	12.5	-8 ~+5	Yes	1.3x
HSZ-EPA30x	7	-8 ~+5	Yes	2x

Auxiliary objectiv	e lens for HSZ-600
Model	Working distance(mm)
HSZ-AOL0.5x	200
HSZ-AOL0.75x	130
HSZ-AOL1.5x	64
HSZ-A0L2x	39.5

#### Camera port for HSZ-700

Model	Details
HSZ-CP1x	C mount without lens
HSZ-CP0.5x	C mount 0.5x lens

#### Hologen ring illumination

Model	Details
HSZ-HRLS	Halogen ring light source
HSZ-HRLG	Halogen ring light guide
HSZ-HRLA	Halogen ring light adapter

### LED ring light

Model	Details
HSZ-LRLS	LED ring light source
HSZ-LRLA6	Ring light adapter for HSZ-600

#### Stage plate

5 1	
Model	Details
HSZ-SPG100	Glass plate Ø100
HSZ-SPBW100	Black / White plate Ø100
HSZ-SPG	Glass plate Ø160
HSZ-SPBW	Black / White plate Ø160
	HSZ-SPG100 HSZ-SPBW100 HSZ-SPG

#### HSZ-700 optical performance

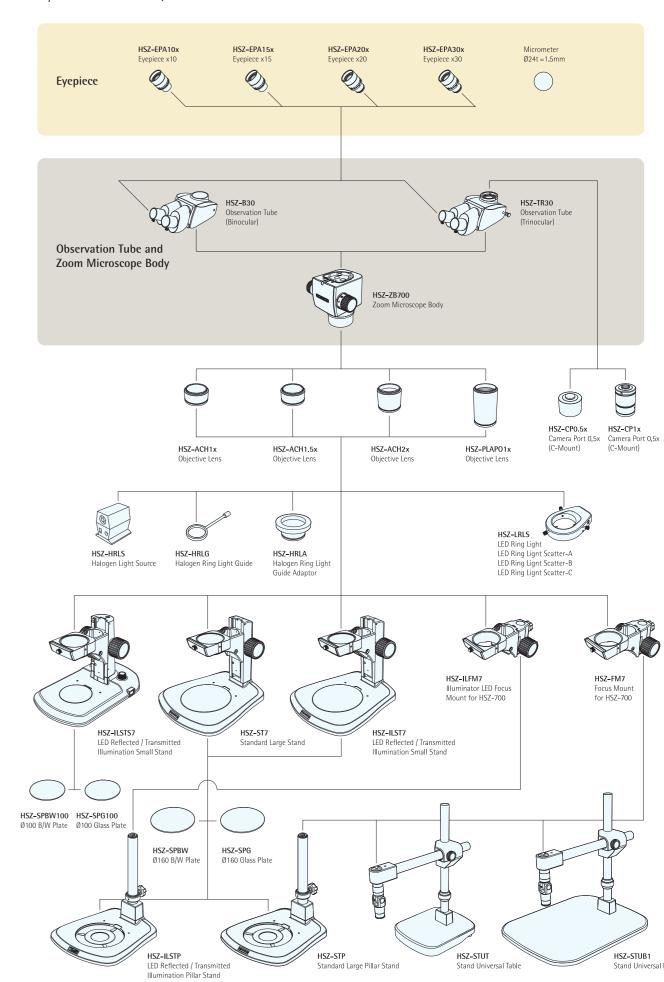
Eyepiece	HSZ-EPA10x		HSZ-E	PA15x	HSZ-EPA20x		HSZ-EPA30x	
F.N.	F.N. 22		1	6	12.5		7	
Objective lens	Total magnification	Field view (mm)	Total magnification	Field view (mm)	Total magnification	Field view (mm)	Total magnification	Field view (mm)
1x	8x-56x	27.5-3.9	12x-84x	20.0-2.9	16x-112x	15.6-2.2	24x-168x	8.8-1.3
1.5x	12x-84x	18.3-2.6	18x-126x	13.3-1.9	24x-168x	10.4-1.5	36x-252x	5.8-0.83

#### HSZ-600 optical performance

	HSZ-E	PA10x	HSZ-E	PA15x	HSZ-E	PA20x	HSZ-EPA30x	
Zoom	Zoom 22		16		12.5		7	
magnification	Total magnification	Field view (mm)	Total magnification	Field view (mm)	Total magnification	Field view (mm)	Total magnification	Field view (mm)
0.67x	6.7	32.8	10.1	23.9	13.4	18.7	20.1	10.4
1x	10	22	15	16	20	12.5	30	7
2x	20	11	30	8	40	6.3	60	3.5
3x	30	7.3	45	5.3	60	4.2	90	2.3
4.5x	45	4.9	67.5	3.6	90	2.8	135	1.6

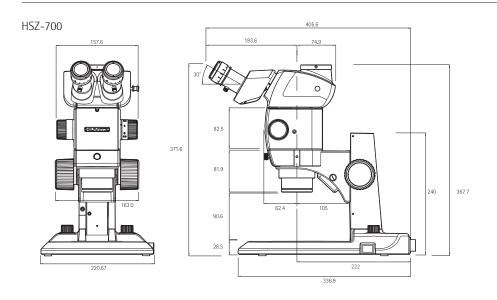
Designs and details can be changed without prior notice for the purposes of improvement.

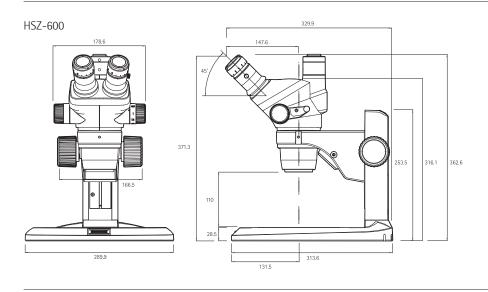
## System Overview / HSZ-700



## Huvitz Stereo Microscope HSZ-700 / HSZ-600

#### **Dimensions**











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