



# Your Line of Sight

Leica StereoZoom®: Quality Stereomicroscopes

The complete program for assembly, quality control, OEM, research and training

**Leica**  
MICROSYSTEMS

# Leading Edge Technology in a New Price Category



Leica S6 E with 38° viewing angle  
on transmitted-light stand



## Greenough Based Optical Systems

The optical system of the Leica StereoZoom® line consists of two beam paths converging at 12°. The lens pairs are positioned closely together, giving the stereomicroscopes a very “slender” design. This offers the advantages of accommodating a small space requirement for use on bonders and in machine applications, unobstructed specimen access, plenty of space for tools, and a completely free view of the sample. The Greenough system permits cost-effective correction of aberrations, such as chromasia, image field curvature and distortion. The Leica StereoZoom® line uses the optimally corrected lens center for the image. This provides high optical performance with large, level, non-distorted fields of view and chromatically optimized, high-contrast images.

For over 150 years Leica Microsystems has been dedicated to producing optical instruments of the finest quality. Since 1849, Leica has created microscopes held in high esteem by researchers and technology companies throughout the world. Leica has earned a reputation for creating instruments that offer a technological edge, increased efficiency, and greater customer success; values that pay for themselves in the long run. Today, the legendary Leica name has become synonymous with innovative, high quality, and precision manufactured optics. In this grand tradition, Leica proudly introduces the StereoZoom® line – ***Your Line of Sight.***

The Leica StereoZoom® line was developed in collaboration with well-known companies along with experts from the fields of science, education and criminology. The specific know-how of our customers and the technological expertise of Leica Microsystems produced a stereomicroscope line that combines all the advantages of the Greenough optical system with the performance characteristics expected of a Leica microscope. The result is a line of stereomicroscopes that exemplify high quality optics, robust and reliable mechanics, and comfortable user interfaces, all at a reasonable price!

Leica's StereoZoom® line offers an affordable and comprehensive stereomicroscope program for all applications, from manufacturing quality inspection and assembly, OEM integration, and student laboratory use, to exacting research and development tasks. The Leica L2 integrated cold light illumination system provides optimized illumination and a compact, modern system design.

Wherever your passions lie, the Leica StereoZoom® line has the features to make them ... *Your Line of Sight.*

**[www.stereozoom.com](http://www.stereozoom.com)**

## Your stereomicroscope information source

Visit our exciting website and see what the 'Line of Sight' has to offer: high quality optics, ergonomic design and durable construction for your best value.

\*StereoZoom® is a trademark registered in the Principal Register of the US Patent and Trademark Office.

The slim and compact outfit: Leica S6 E with incident-light stand and Leica L2 cold light source

Leica Design by Christophe Apothélos





**Leica S8 APO**

**Low-priced high-performance  
microscope with apochromatic  
zoom 8:1**



**Leica S6 D**

**High resolution for  
video and photo**

### **Only the Leica StereoZoom® line offers**

- Maximum 36.5mm field of view – reduced sample handling and inspection times
- Versions with 38° or 60° viewing angle – promotes proper posture and improved comfort
- Ergonomic objectives for optimized viewing height
- World's most advanced ESD protection – Leica S6 T "Terminator"
- Transmitted light base with adjustable reflector – flexible and cost effective illumination
- 40× eyepieces for eyeglass wearers – highest magnification available for demanding samples

### **Now with fluorescence illumination!**

#### **World's best: Leica S8 APO**

The first stereomicroscope with apochromatic Greenough system, 8:1 apochromatic zoom and apochromatic objectives.

#### **Leica S8 APO with apochromatic 8:1 zoom for the highest requirements**

- Apochromatic optics system
- Apochromatic objectives
- Maximum resolution 600 Lp/mm
- 10×–80× magnification, working distance 75 mm\*
- Video/photo output
- Adjustable upper and lower zoom magnification stops
- Eyepieces for eyeglass wearers
- ESD safe construction (antistatic)

\* Basic equipment without objective, with 10× eyepieces

#### **Leica S6 D with 6.3:1 zoom and video/photo output**

- Ergonomic 38° viewing angle
- 6.3×–40× magnification, working distance 110 mm, field of view diameter 36.5 mm\*
- Adjustable upper and lower zoom magnification stops
- 6 achromatic supplemental objectives
- Ergonomic objectives for variable viewing height, magnification and working distance
- Eyepieces for eyeglass wearers
- ESD safe construction (antistatic)

#### **Leica S6T Terminator with 6.3:1 zoom**

- Ergonomic 38° viewing angle
- 6.3×–40× magnification, working distance 110 mm, field of view diameter 36.5 mm\*
- Dissipative surface for optimal ESD protection
- Adjustable upper and lower zoom magnification stops
- 6 achromatic supplemental objectives
- Ergonomic objectives for variable viewing height, magnification and working distance
- Eyepieces for eyeglass wearers



# Your Line of Sight



**Leica S6 T**  
Voltage bypass for sensitive  
electronic components



**Leica S6**  
For OEM with ergonomic  
viewing angle



**Leica S6 E**  
High productivity  
for routine tasks



**Leica S4 E**  
Low-priced, expandable,  
powerful for assembly  
and schools

## **Leica S6 E with 6.3:1 zoom**

- Ergonomic 38° viewing angle
- 6.3× – 40× magnification, working distance 110mm, field of view diameter 36.5mm\*
- Adjustable upper and lower zoom magnification stops
- 6 achromatic supplemental objectives
- Ergonomic objectives for variable viewing height, magnification and working distance
- Eyepieces for eyeglass wearers
- ESD safe construction (antistatic)

## **Leica S6 with 6.3:1 zoom and 60° viewing angle**

- Ergonomic 60° viewing angle on tilted stereomicroscope
- 6.3× – 40× magnification, working distance 110mm, field of view diameter 36.5mm\*
- Adjustable upper and lower zoom magnification stops
- 6 achromatic supplemental objectives
- Ergonomic objectives for variable viewing height, magnification and working distance
- Eyepieces for eyeglass wearers
- ESD safe construction (antistatic)

## **Leica S4 E with 4.8:1 zoom**

- Ergonomic 38° viewing angle
- 6.3× – 30× magnification, working distance 110mm, field of view diameter 36.5mm\*
- The only instrument in its class with 2 ergonomic objectives for variable viewing height, magnification and working distance
- 6 achromatic supplemental objectives
- Eyepieces for eyeglass wearers
- ESD safe construction (antistatic)

# See New Horizons with Improved Optics

## **An Eye for Details**

You expect fast, accurate viewing, positive and effortless identification of details, reliable results in repetitive inspections, and room to use tools and work on the sample. The Leica StereoZoom® line exceeds your expectations with:

- World-class Leica optics designed to produce high resolution, high contrast images, that provide more information about the sample.
- A Greenough-based optical design that produces a flat image field (planar correction), optimal color transmission (chromatic correction) and allows more of the specimen to be in focus at once (depth of field).
- The largest field of view (36.5mm) of any instrument in its class reduces the need for sample handling and improves inspection times.
- Adjustable upper and lower zoom magnification stops (available on S6 models and on S8 APO), allow repeat inspections at two user-defined magnifications.
- Large working distance (110mm from microscope to specimen), providing ample space for manipulation.
- Leica S8 APO, a fully apochromatic corrected instrument that delivers an incredible 600 lp/mm (approx. 1 micrometer) resolution and a maximum magnification of 640×. Never before has such high performance been available in a cost effective Greenough design instrument.

## **Built to Last**

Stereomicroscopes are used in some of the harshest and most critical industrial and laboratory environments in the world. Whether it is a semiconductor manufacturer's clean room or a laboratory's biological containment hood, Leica has built the StereoZoom® line for years of trouble-free use:

- A single cam design guarantees smooth, precise control of the zoom optics.
- Leica's patented magnetic mounting system maintains proper alignment of the optics during zoom adjustments.
- Robust outer casings made with our patented *ZeroStat* polymers provide years of maintenance-free protection against electrostatic discharge (ESD). *ZeroStat* protection is not diminished by scratches and will not chip or flake off onto your sample.





# The Value of Versatility



Ergonomic objective 0.6 $\times$  – 0.75 $\times$  on Leica S6 E,  
working distances 77mm to 137mm



Leica S6 with 60° ergonomic viewing angle on  
mountable focus drive, tiltable, for OEM



Swinging-arm stand

## Money Well Spent

The purchase of a stereomicroscope is a long term investment in the future. That is why Leica uses a modular design for all of our stereomicroscopes. This time tested and proven design allows you to individually equip each stereomicroscope with the appropriate accessories that will optimize its performance for your application. Money well spent means you only make the investment necessary to service your current need and rest assured that your Leica StereoZoom® can grow to service future needs with only minimum additional cost. The ability to create optimized systems that grow with your organization's inspection needs is another reason why Leica StereoZooms® are ... *Your Line of Sight*.

## Tailored Performance

With the StereoZoom® line, you select precisely the performance you need. Even the basic Leica S4 E model with 4.8:1 zoom for routine inspections gives you access to the entire assortment of objectives, eyepieces, stands and illumination. The four Leica StereoZoom® S6 models with 6.3:1 zoom are available with either a 38° (S6 E/S6 D/S6 T) or 60° (S6) viewing angle, video/photo tube (S6 D), or our patented Terminator version (S6 T, with a special incident light or T swivel arm stand) for critical applications involving ESD sensitive components.

The unique performance of Leica S8 APO with 8:1 zoom magnification, apochromatic supplemental objectives and integrated phototube is perfect for exacting applications, especially digital documentation and image archival and analysis.

## Integration Made Easy

The Leica L2 cold light source attaches to a wide variety of stands via specialized mounting brackets that are simple and intuitive to use. When used with a "boom" style swing arm stand, the L2 can be attached to the vertical or horizontal column, whichever is more convenient. On basic incident light and transmitted light (including mirror base) stands, the L2 bracket mounts to the rear of the stand, attaching to the focus column where it meets the base.



### **Ergonomics Enhance Productivity**

We understand that a comfortable work environment reduces fatigue related inspection errors and increases workers productivity, health, and job satisfaction. That's why the StereoZoom® line is designed with the consideration of modern ergonomics.

### **Visibly Better**

From the first time you use the StereoZoom®, you will be delighted with the large, flat (planar) field of view, and clear, sharp images. The finest details are clearly visible and the optical design allows the stereomicroscope to be used for long periods without causing eyestrain. The StereoZoom® S4 E and S6 models offer the largest field of view (36.5mm) of any instrument in their respective classes. More of the sample can be inspected without the need for handling.

### **Proper Posture Avoids Pain**

Proper posture at the workstation is essential to avoid the troublesome aches associated with muscle fatigue. That is why the Leica StereoZoom® line has an ergonomic 38° viewing angle (except leica S6). The S6 model has a 60° viewing angle to maintain an optimum viewing height in instances where the entire stereomicroscope needs to be inclined, such as on a wire bonder or prober station.

Also available for the Leica S4 E and S6 models are two optional ergonomic objectives with variable working distances in the ranges of 77mm–137mm (0.6×–0.75×) and 48mm–98mm (0.7×–1.0×). These ErgoObjectives permit fine adjustments of working distance and viewing height without time consuming lens changes.

### **Modest Space Requirements**

The economical sizing of the StereoZoom® line and Leica L2 cold light source creates workstations that use minimum amounts of bench space, fit neatly into storage cabinets or laminar flow hoods, and integrate easily into OEM manufacturers fabrication and test stations. The lightweight nature of the Leica StereoZoom® stereomicroscopes and L2 cold light source allows them to be easily carried from one workstation to another and provides greater stability on “boom” style stands and OEM focus mounts.



Transmitted light base and universal light guide for oblique transmitted illumination



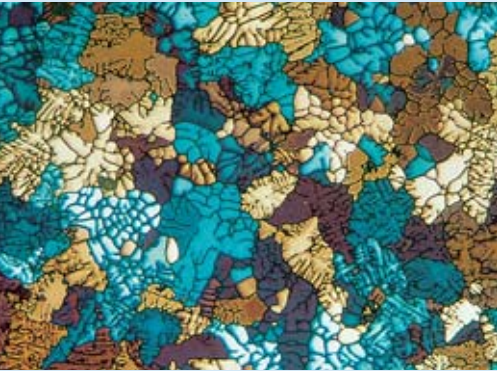
Vertical illumination for high relief slide preparations and for brightening depressions and holes



Attachment for vertical/oblique observation: 360° view without tilting or rotating the object

# Leica StereoZoom® S8 APO

## Pinnacle of Performance



The Leica StereoZoom® S8 APO is the only high performance Greenough style stereomicroscope with a fully apochromatic corrected optics system. Combined with the available apochromatic corrected supplemental objectives (0.63×, 1.6×, and 2.0×), the result is the top performing Greenough style stereomicroscope in the world today! The 8:1 zoom magnification system in concert with the variety of available eyepieces and supplemental objectives produces magnifications from 3.2× – 640× (10× – 80× standard magnification) and achieves an incredible 600 lp/mm resolution. This means that the S8 APO can effectively image specimens approaching 1 micrometer in size, an accomplishment previously achieved only by stereomicroscopes costing two to three times as much!

### The Focal Point of Knowledge

Apochromatic optics provide the user with the most precise information. That's why Leica Microsystems corrects chromatic aberrations to eliminate any interfering color fringes and render even the finest details ultra sharp. Contrast, brilliance, sharpness, resolution, color fidelity and reproduction accuracy are unsurpassed.



The benefit of apochromatic correction is best witnessed with specimens that have fine, low contrasting structures such as large animal cells, plant cilia, or metallic microelectronic structures. The increased optical performance of an apochromatic system allows you to see the details of the structure or differentiate between two closely spaced structures. Researchers and engineers engaged in critical applications such as microinjection or fine pitch wire bonding will find that it makes a world of difference in their work.

### Benefit as a Principle

The StereoZoom® S8 APO is a powerhouse of performance and an economical way to make sure that your stereomicroscope optimizes the capabilities of your camera and analysis software. The user benefits from the excellent image quality of the Leica S8 APO when documenting valuable work results and can photograph, film, record, or transmit important processes. With the built-in video/photo tube, Leica S8 APO is ready to be adapted to professional digital image recording systems, or to automatic photo systems such as the Leica MPS60.



Leica S8 APO with Leica  
L5 FL fluorescent system

Leica S8 APO StereoZoom® with  
Leica DC Digital Camera System  
on transmitted light stand





# Complete Solutions for Digital Imaging

The integrated phototubes of the Leica S6 D and S8 APO allow easy and rapid camera assembly. The beam splitter diverts 100% of the available light to the camera, fulfilling the high light requirements of sophisticated digital cameras. Of course conventional film and analog video cameras achieve outstanding results as well.

## Leica digital imaging systems

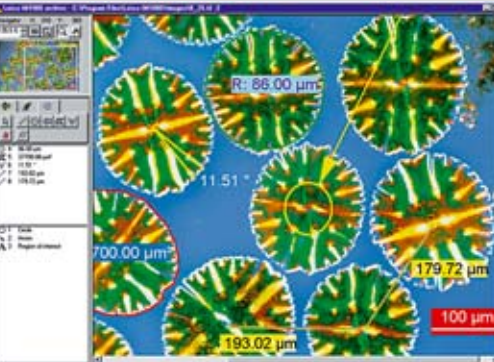
The Leica DC camera line, designed using the latest digital technology, is characterized by performance and flexibility and meets even the toughest demands for digital photography in the field of microscopy. The modular design offers not only the right camera for any application, but also the right software, with convenient image capture, user-friendly processing functions, and image management software for archiving, editing and analysis.

## Leica Image Manager

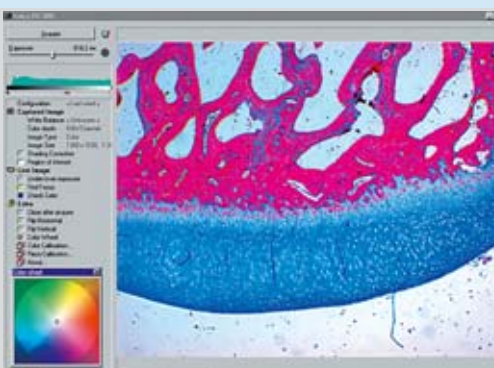
The Leica Image Manager brings efficiency and economy to the fields of scientific photography and microscopy as well as for industrial image recording and processing. The Leica Image Manager equips you with sophisticated proven image management software that provides a multitude of options for Image Measurement, Image Compare, Image Processing, Image Assembly, Presentation and MultiFocus.

## Automatic Photo Systems

To document important work results on conventional film materials, Leica offers cost-effective, easy-to-use photomicrographic systems. Largely automatic functions take care of complex settings and calculations to eliminate sources of errors and incorrect exposures.



Leica Image Manager for professional archiving, handling and analyzing of electronic images



Intuitive DC camera software from  
Leica Microsystems

Leica S6 D StereoZoom®  
with Leica DC Digital Imaging System





# Optimized Illumination



Coaxial illumination for reflective, flat objects like polished metal components, wafers, chips, or layered surfaces



Leica LED1000 – Spot



Leica L5 FL fluorescent system

## **Leica L2 compact Cold Light Source**

The Leica L2 cold light source provides optimized illumination to specimens. Powerful and compact, the Leica L2 is the high capacity partner for the StereoZoom® line and is suitable for all applications in industry and science. The Leica L2 is extremely versatile and has a large assortment of fiber optic light guides to choose from, supporting various lighting techniques such as coaxial, spot, and near vertical as well as the more conventional incident oblique and transmitted light methods.

The Leica L2 can be directly coupled with your stereomicroscope to form an integrated system with low space requirements and is constructed of the same ZeroStat antistatic polymer as the Leica StereoZoom® stereomicroscopes (for detailed information, see brochure M1-288-0).

## **Leica LED1000 - the latest illumination technology**

The LED illumination (Light-Emitting-Diode) is ideal for routine tasks in industrial and lab settings where high light intensity with minimum heat development is required. The following advantages distinguish this illumination technology: color temperature 5.000 K (daylight!), no UV radiation, extremely long life, nearly maintenance-free, free of ripple and flicker, noise-free, vibration-free operation and a compact lightweight design. The modular concept of the LED1000 offers ring illuminator and spot and extensive accessories for a variety of applications. The LED ring illuminator (40 LEDs) provide a very bright and homogenous illuminated object area. The LED spot (19 LEDs) can be attached directly on the Stereozoom® or used as a stand-alone variant. Ring illuminator and spot are antistatic.

## **Leica L5 FL - low-priced cold-light fluorescent system**

Leica L5 FL is a powerful luminous fluorescent system for blue or green fluorescence. Leica L5 FL simplifies the daily routine tasks in the lab and is also suitable for training, forensics and industrial stereo-fluorescence applications. The equipment consists of a comfortable high-performance cold-light source, fiber-optic light guide, illumination optics and filter holder. A filter wheel with 5 filter holders in the cold-light source for excitation, color and daylight filters as well as filter changers for suppression filters in the observation beam path of the stereomicroscope allow for very quick changes between fluorescence and bright-field observation. The luminous 250-W cold-light reflector bulb guarantees intensive, outstanding fluorescent images. The color temperature measures a perfect 3350 °K and can be monitored via LCD. For details, see brochure M1-205-1.

# Leica Microsystems Worldwide

Leica Microsystems is active in the areas of microscopy, specimen preparation, image analysis, confocal laser technology, medical technology and equipment for the semiconductor industry. The international technology group with headquarters in Wetzlar, Germany, has grown from these world-famous brand names that are rich in tradition: Wild, Leitz, Reichert, Jung and Cambridge Instruments.

## Made by Leica

Leica Microsystems develops system solutions for the benefit of our customers. Leica's innovative, leading-edge technology has earned an international reputation for high quality. The same high quality standards apply to all 11 production locations in 7 countries. Leica is synonymous with quality throughout the world.

## Leica for You

Technology is one aspect of the success of Leica Microsystems, while customer focus is another. Our employees offer courteous, competent advice, service and representation on-site and in the language of your country.

## [www.stereozoom.com](http://www.stereozoom.com)

You will find valuable information on the products and services of Leica Microsystems on the Internet as well as contact information for distributors near you.

[www.stereozoom.com](http://www.stereozoom.com) will give you direct access to the Stereomicroscopy Business Unit with headquarters in Heerbrugg, Switzerland. Visit us to get more information on the new StereoZoom® line.



## Selling units and production facilities

### North America

- Canada
- USA

### South America

- Argentina
- Bolivia
- Brazil
- Chile
- Columbia
- Costa Rica
- Cuba
- Ecuador
- El Salvador
- Guatemala
- Honduras
- Jamaica
- Mexico
- Paraguay
- Peru
- Surinam
- Trinidad Tobago
- Uruguay
- Venezuela

### Europe

- Albania
- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Great Britain
- Greece
- Holland
- Hungary
- Iceland
- Ireland
- Italy
- Lithuania
- Luxembourg
- Malta
- Norway
- Poland
- Portugal
- Republic of Belarus
- Rumania
- Russia
- Slovakian Republic
- Slovenia
- Spain
- Sweden
- Switzerland
- Turkey

### Africa

- Algeria
- Angola
- Benin
- Burkina Faso
- Burundi
- Comoro
- Congo
- Egypt
- Ethiopia
- Gabon
- Gambia
- Ghana
- Guinea
- Ivory Coast
- Kenya
- Liberia
- Madagascar
- Malawi
- Mali
- Mauritius
- Morocco
- Mozambique
- Niger
- Nigeria
- Reunion
- Rwanda
- Senegal
- Sierra Leone
- Somalia
- South Africa
- Sudan
- Tunisia
- Uganda
- Zaire
- Zambia
- Zimbabwe

### Asia and the Pacific

- Australia
- Bahrain
- Bangladesh
- Burma
- China
- Guam
- India
- Indonesia
- Iran
- Iraq
- Israel
- Japan
- Jordan
- Korea
- Kuwait
- Lebanon
- Malaysia
- Nepal
- New Caledonia
- New Zealand
- Oceania
- Oman
- Pakistan
- Papua New Guinea
- Philippines
- Qatar
- Saudi Arabia
- Singapore
- Sri Lanka
- Syria
- Taiwan
- Thailand
- United Arab Emirates
- Vietnam
- Yemen

• Production facilities

## Leica StereoZoom® – Your Line of Sight at a Glance

	<b>Leica S4 E</b>	<b>Leica S6</b>	<b>Leica S6 E</b>	<b>Leica S6 T</b>	<b>Leica S6 D</b>	<b>Leica S8 APO</b>
Optics system	Greenough	Greenough	Greenough	Greenough	Greenough	Greenough apochromatic
Viewing angle	38°	60°	38°	38°	38°	38°
Zoom	4.8:1	6.3:1	6.3:1	6.3:1	6.3:1	8:1
Magnification (basic equipment)	6.3×–30×	6.3×–40×	6.3×–40×	6.3×–40×	6.3×–40×	10×–80×
Maximum resolution	372 lp/mm	432 lp/mm	432 lp/mm	432 lp/mm	432 lp/mm	600 lp/mm
Maximum numeric aperture	0.124	0.144	0.144	0.144	0.144	0.2
Working distance (basic equipment)	110mm					75mm
Field of view diameter (basic equipment)	36.5mm					23mm
Adjustable zoom limits		2	2	2	2	2
Video/photo tube					yes	yes
Standard objectives	Achromats 0.32x, 0.5x, 0.63x, 0.75x, 1.6x, 2.0x					Apochromats 0.63x, 1.6x, 2.0x Achromate 0.32x
Ergonomic objectives	0.6×–0.75×/ 77–137mm, 0.7×–1.0×/48–98mm					
Adjustable objective	0.3×–0.4×/ 200–350mm					
ESD protection	antistatic	antistatic	antistatic	antistatic	conductive, Terminator	antistatic
Eyepieces (standard and for eyeglasses)	10×, 16×, 20×, 25×, 40×, fixed and adjustable clip-on, angular, soft eyecups					
Illumination	Compact cold light source Leica L2, antistatic / Leica LED1000 (Laser-Emitting-Diode illumination) / Leica L5 FL cold-light fluorescent system					

For detailed technical information and data, see brochure M1-188-4.

### Quality with a Future

At Leica, every stereomicroscope and every individual component is manufactured and calibrated with the greatest care using the strictest manufacturing tolerances and environmentally sound processes. Of course, devices of the StereoZoom® line meet all the quality and functional test requirements of ISO 9001 and ISO 14001.

Leica Microsystems (Switzerland) Ltd  
Business Unit SM  
CH-9435 Heerbrugg

Telephone +41 71 726 33 33  
Fax +41 71 726 33 99  
[www.leica-microsystems.com](http://www.leica-microsystems.com)  
[www.stereomicroscopy.com](http://www.stereomicroscopy.com)

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