



SKU: TKDMACZ-L



SKU: TKSS-LV2

# MacroZoom

digital microscope system

**P**recision glass optics and our **6MP Ultra-Cam II™ Camera** combine to make the O.C. White **MacroZoom Digital Microscope System** a powerful, ergonomic magnification tool for inspection. With crystal clear imagery, a range of bases to choose from (ball bearing, articulated, or lab-style), and an almost infinite working distance, **MacroZoom** offers unheard of flexibility.

Whether used in a lab, or on the production floor, our optics can be mounted in places the competitors' video inspection systems could never reach—inside manufacturing equipment, or underneath a conveyor belt, for instance.

Powerful software options are also available. Basic, built-in measurement features can be controlled independently with a mouse. Advanced imaging capabilities are included with software that requires a Windows PC. Data, images, and video can be saved to the 16GB SD card reader in a variety of formats.

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**MacroZoom Video Inspection Systems** include four integrated parts:

- **Powerful glass optics** with an unlimited working distance and magnification up to 120x with options
- An **6MP Ultra-Cam II™ Camera** that captures magnified images at 6MP (3264x1836) and video at 30 frames per second. Includes basic, built-in measurement software that can be controlled with a mouse
- Additional **software** can stitch images, create HDR composites, and extend depth of focus, among other features (PC required)
- A durable, **weighted stand** that can be used in all kinds of environments—from the lab to manufacturing floor

**MacroZoom Video Inspection Systems** are compatible with all Micro-Lite® Illuminators, but as the camera's light sensitivity is 300x greater than similar cameras, additional lights are not required.

The included HDMI port makes connecting to an external monitor simple, but we offer configurations with different screen configurations. See below for more details.

Applications for the **MacroZoom Video Inspection System** include: printed circuit board inspection, quality control, material qualification, pathology analysis, medical anatomy recording, fluorescent imaging, and teaching. If you've only ever used a traditional microscope, the fluidity of movement and breadth of vision a digital microscope offers will astonish you.

This product is **ESD Safe**.

*MacroZoom Lens*



*Focusing Arm*



**SKU: MACRO KIT**

*The MacroZoom lens and focusing arm are available as a stand-alone kit. The Ultra-Cam™II can also be purchased individually.*

*6MP Ultra-Cam™ II Camera*



**SKU: 14305**

All **MacroZoom Video Inspection Systems** include the following features:

- Precision glass optics with a magnification range up to 120x with options
- Variable Focal Design allows for unlimited working distance (object can be inches or feet away from the lens)
- Camera captures magnified images and video at 6MP (3264 x 1836)
- Video frame rate: 30fps
- HDMI and USB connectors
- SD card slot with 16GB SD card
- Built-in, standalone imaging software controlled with an included wireless mouse
- Though not required, MacroZoom is compatible with all Micro-Lite® microscope lights.
- Optional PC suite software includes advanced measurement and calibration capabilities, image stitching, and improved fluorescence settings. For more on these features, please see the camera specification sheet at the end of this document.
- ESD Safe and RoHS compliant
- 5 Year Mechanical Warranty

# Super-Scope® with Integrated 12" LCD Screen

The popular **Super-Scope®** series is our all-in-one digital microscope solution. With a 12" screen directly attached to the camera, everything you need to get to work is at hand in this compact product. The large working distance range means that operators of any height can easily readjust the digital microscope's positioning to fit them perfectly. Built-

in measurement and labeling software, along with the included wireless mouse, lets you capture images and video without an attached computer.

Adjust the height, fine-tune the focus, and light the (optional) lights! You're ready to go.



SKU: TKSS-FA



SKU: TKSS-L



SKU: TKSS

## MacroZoom Digital Microscope Base Options

Without the head's up screen of the Super-Scope® model, our basic **MacroZoom Digital Microscope System** can be paired with most existing monitors. The selection of rugged bases means it can be

used in many kinds of environments—from the lab to the shop floor. Built-in software and an included wireless mouse keeps your workspace uncluttered and your attention focused on the objects you're inspecting.



Articulated Arm Base

SKU: TKDMACZ-FA



Laboratory Style Base

SKU: TKDMACZ-L



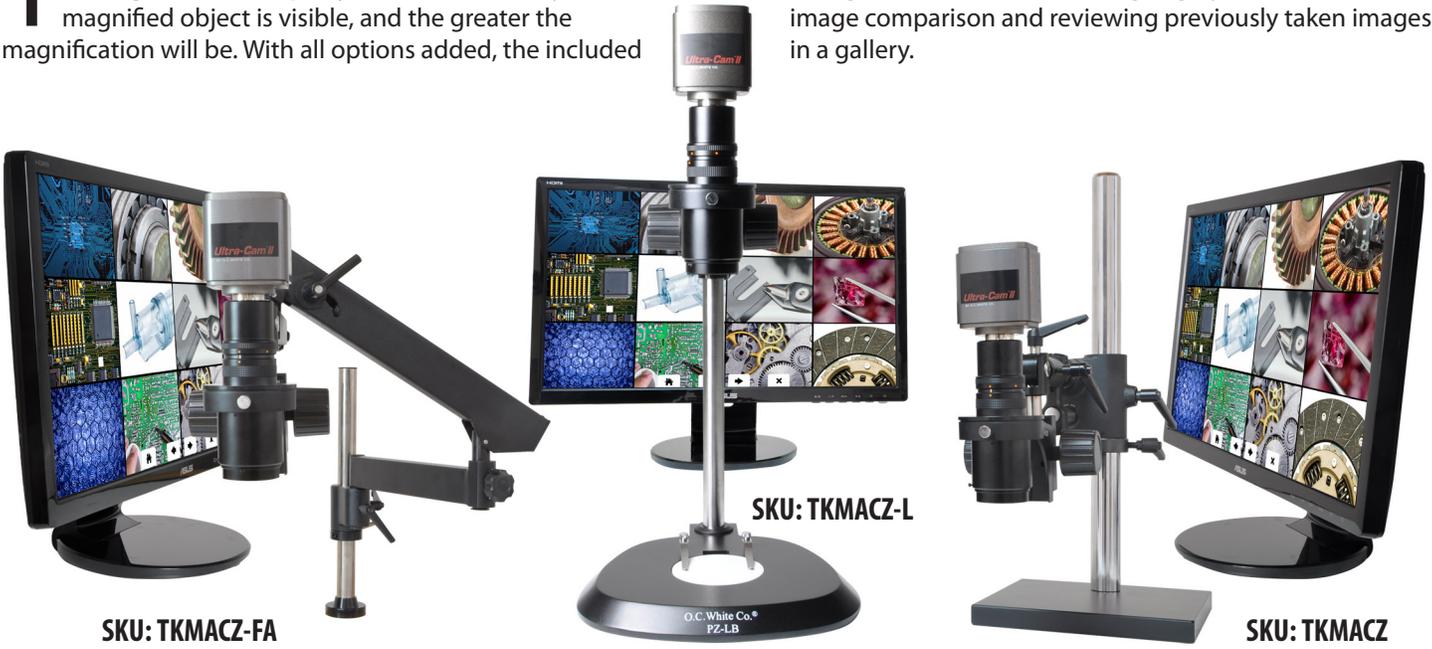
Ball Bearing Arm Base

SKU: TKDMACZ

# MacroZoom Digital Microscope with 22" LCD Monitor

The larger the monitor used with the **MacroZoom Digital Microscope System**, the more of your magnified object is visible, and the greater the magnification will be. With all options added, the included

22" LCD monitor will enlarge specimens up to 120x. This configuration is ideal for training, highly detailed work, image comparison and reviewing previously taken images in a gallery.



Even though our camera's light sensitivity is 300x greater than similar cameras and don't require an extra light, the **MacroZoom Video Inspection Systems** are compatible with all our Micro-Lite® lights—LED, fluorescent, or 150w Fiber Optic Illuminators.



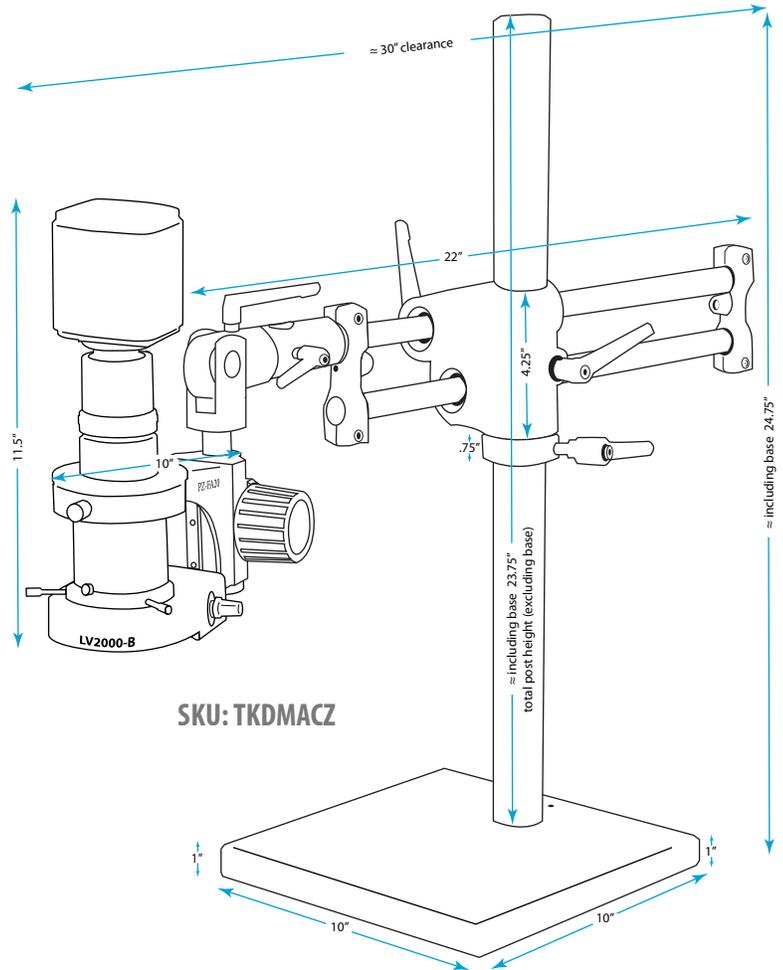
SKU: LV2000-B



SKU: FL1000



SKU: ML3000-A



SKU: TKDMACZ

# 6MP Ultra-Cam™ II Digital Camera

With great color fidelity and image clarity, O.C. White's **6MP Ultra-Cam™ II Digital Camera** captures high-resolution images and video of magnified objects. Along with our **MacroZoom** line of video inspection systems, it works with O.C. White's trinocular microscopes (such as the ProZoom 6.5).

The camera automatically analyzes images. It optimizes white balance, exposure time, and saturation, presenting the best possible image without the need for manual adjustments beyond focusing. The 3D noise reduction function keeps images crisp and noise-free—even for long exposures in low light situations. Exposure times can be controlled from 2 ms to 10 seconds, with 20 levels of gain adjustment. Images are previewed at 2MP (1920x1080) resolution, and final images can be saved up to 6MP (3264x1836) resolution. Video is captured at 30 fps. Both images and video are saved to an included 16GB SD card.

The **6MP Ultra-Cam™ II Digital Camera** can be operated independently without a PC. Basic imaging and measurement software comes installed, which can be controlled with a mouse. Images and video can be saved to a gallery for future comparisons, or exported to the card.

More advanced software with a suite of more dynamic measurement tools is also provided, requiring a Windows PC to operate. These tools allow you to calibrate your cameras and draw directly on the magnified images with measurements that are accurate to within 1/100 microns. This data can be exported as TXT or Excel files. Additional features include image stitching, improved fluorescence setting, and adding notes and annotations to videos and images. A complete list of features is included at the end of this document.

The **6MP Ultra-Cam™ II Digital Camera** features include:

- Preview images: 2MP (1920x1080)
- Capture images: 6MP (3264x1836)
- Video frame rate: 30fps
- Automatically optimizes white balance, exposure time, and saturation
- HDMI and USB compatible for maximum connectivity
- SD card slot (includes 16GB card)



SKU: 14305

Built-in imaging software suite features include:

- On-screen controls via wireless mouse
- Image/Video Capture
- Exposure and gain controls
- Gamma, contrast, and saturation settings
- Red, blue, and color temperature settings
- Brightness, sharpness, and de-noise settings
- Flip horizontal and vertical
- Zoom in/out
- Set grid overlay
- Live vs. frozen image comparison
- Review image gallery

An overview of the advanced imaging and measurement software features is available on the reverse side of this page.

# 6MP Ultra-Cam™ II Digital Camera

## Advanced Software Features

In addition to built-in software, **6MP Ultra-Cam™ II Digital Camera** comes with advanced imaging and measurement software. Windows PC required.

Features include:

### Basic camera controls:

- **Automatic exposure and white balance**
- Choice of **image formats** (JPEG, BMP, TIFF, and RAW)
- Choice of **video formats** (depending on which are available on your computer)

### Image Acquisition:

- **Continuous shooting**—For still photography, save a designated number of sequential images
- **Auto-stop video**—Video capture can be configured to stop after a set number of frames or seconds
- Set **Frame Speed** (normal/high) and **Data Width** (8Bit/16Bit)

### Color control:

- **Flat fielding**—Correct uneven brightness
- **Monochrome**—Create a gray-scale image
- **Color enhancement**—Make colors more vivid
- **Parameter settings**—Save up to twenty settings for repeat use
- **Measurement tools**—More than a dozen tools for measuring, labeling, documenting your magnified images. Draw lines, parallel lines, rectangles, 2-point circles, concentric circles, polygons, arcs, and more—directly on the images and save the precise, calibrated measurements for later review.

- **Edit measurement appearance**—Control the appearance of your annotations; edit color, size, and scale
- **Calibration table**—Records frequently used measurement scales for repeated use
- **Layer control**—Allows measurements to be saved and viewed per layer to keep complex objects clear
- **Generate measurement list**—Collects measurement information in one place; can be exported as TXT file or to Excel

### Advanced imaging features

- **Fluorescence settings**—Variety of controls to improve capture of fluorescent-lit images, including channel-specific levels settings, black balance, and capture mode options (manual, fine, and excellent)
- **Fluorescence color control**—Colors can be designated for different dye types used in fluorescence imaging. A final, composite image can then be assembled showing the different hues
- **HDR Image**—Multiple images taken of the same scene at different exposures can be combined to create a composite with greater detail and color fidelity.
- **Class counting**—This feature helps users manually count features in a photo by having the software keep track. Each item identified is indicated with a colored dot. Five different types of samples can be tracked independently.
- **Extend Depth of Focus**—Sometimes it's impossible to see all of an un-flat object in focus. This feature allows the user to photograph the same object multiple times with different areas in focus, and then combine them into one, clear image.
- **Image Stitching**—At high magnification, it's often impossible to see the entirety of an object, even on a large monitor. This feature enables users to combine multiple views of the same object into a single, large image.

