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VIAS/SCIEM product catalog 2009

Measuring devices

Digital Video equipment

Software

Optical equipment

Additional hardware

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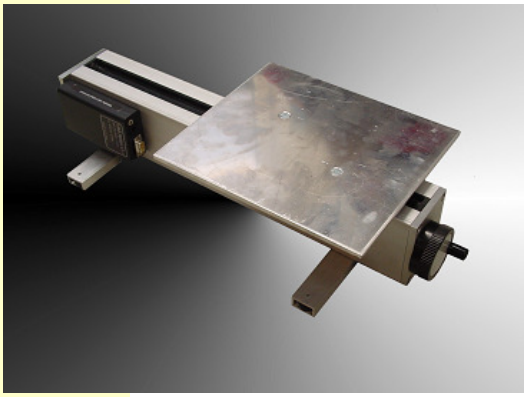
TimeTable Series



The TimeTable measuring devices are the measuring workhorses for your lab. A rugged industry strength aluminium body covers a high quality backlash-free ball spindle with prespanned bearings and a spindle hub of 4 or 5 mm.

Depending on the optical encoders or magnetic strips used the measuring resolution varies from 1/100 to 1/1000 mm.

Data acquisition and transfer is done using a µParSer interface that connects to the USB interface of a PC.

The TimeTable measuring devices is shipped with our new VIASDAQ data acquisition software that allows for direct data acquisition to PAST4, Format Heidelberg and Tucson file format. The VIASDAQ software runs with Windows 2000, Windows XP and Windows Vista.

All TimeTable measuring devices can be combined with a stepper motor and upgraded to a VideoTimeTable for the use with digital video equipment. With the UMS5 power interface all device functions are controlled by a PC. With additional hardware the TimeTable can be mounted on our LAT heavy duty tripod to use the measuring device in complex situations like the data acquisition on museum objects.

An easy to use light set is available separately.

The TimeTable measuring devices are available at different lengths and resolutions and come complete with the VIASDAQ data aquisition software, a µParSer USB interface, USB cable and a TriggerMouse.

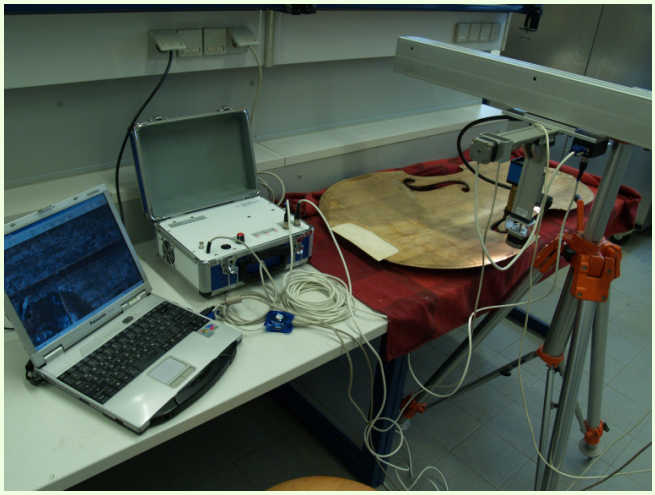
Currently Available models

Model	Measuring length	Resolution / Spindle Hub
TT50-O-100/4 or 5	43cm	<1/100mm / 4 or 5mm
TT60-O-100/4 or 5	53cm	<1/100mm / 4 or 5mm
TT85-O-100/4 or 5	78cm	<1/100mm / 4 or 5mm

System requirements

Windows 2000, Windows XP or Windows Vista
512 MB RAM,
USB interface
PAST4 recommended for data processing

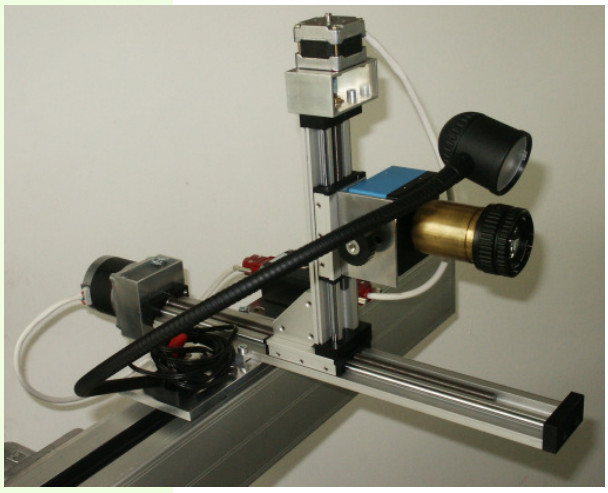
VideoTimeTable Series



The TimeTable measuring devices are the measuring workhorses for your lab. A rugged industry strength aluminium body covers a high quality backlash-free ball spindle with prespanned bearings and a spindle hub of 4 or 5 mm.

The VideoTimeTable device combines all of our technologies to handle even the most difficult measuring situations (e.g. museums).

A step motor driven 85cm TimeTable device is driven by a UMS5 interface. A second and third motor driven axis allow for sideway scanning and focusing.



A high resolution USB Video camera (1.3, 3 or 5 mexapixel resolution) with a macro lens is mounted on the system. The camera movement is measured and the position data and live video image is fed into the computer for processing.

The VideoTimeTable is mounted on a heavy duty tripod that allows to set up the system even for the most difficult measuring situation.

Image series can be stored for later reference and error checking.

The VideoTimeTable equipment was successfully used in major museum collections all over the world:

Metropolitan Museum of Art - New York
Museum of Fine Arts – Boston
Aegyptian Museum – Cairo
Kunsthistorisches Museum – Vienna
British Museum – London
Aegyptian Museum – Berlin.

The VideoTimeTable device is individually built to your needs. All devices come with digital video camera, macro lens, light set, UMS5 power interface (110V/220V power supply selectable), µParSer USB interface and the new VIASDAQ measuring software.

System requirements
Pentium IV PC
Windows 2000/XP/Vista with DirectX 9 Multimedia extension,
3 USB 2 interfaces
512MB RAM,
1024 x 768 display
PAST4 recommended for data processing

Digital Video Hardware

A wide range of different digital video sources can be used with our measuring devices. The new VIASDAQ measuring software allows for connecting any WDM (Windows Driver Model) compatible video source and use it to get live images for measurement purposes.

Our range of USB and IEEE1394 /Firewire) based digital cameras with C-mount lens adapter ranges from entry level 1,3 Megapixel cameras to the current top model with 5 Megapixels resolution.

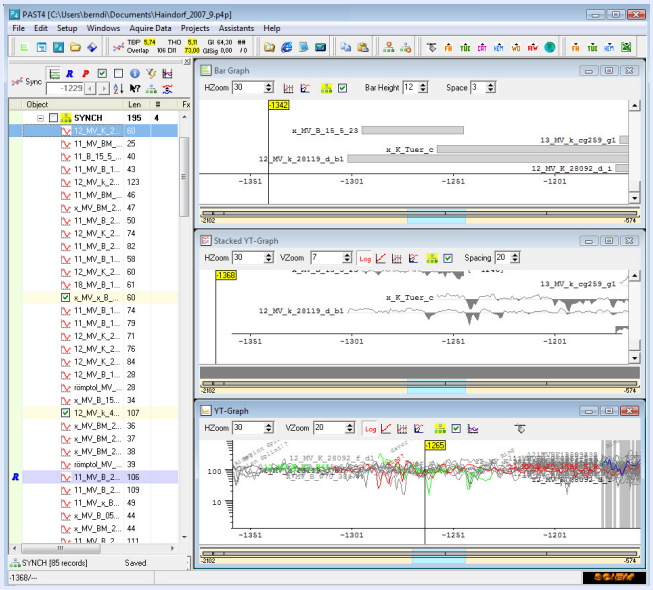
Since the development of digital video imaging hardware is in rapid development, please inquire for actual camera models.

Resolution		Connection	Sensor	Min. Framerate
1,3 Mpx	1280 x 1024	USB 2.0	1/3” CMOS	15fps
3 Mpx	2048 x 1536	USB 2.0	1 /2” CMOS	11fps
5 Mpx	2592 x 1944	USB 2.0	1 / 2.5” CMOS	8 fps
0,7 MPx	1024 x 768	IEEE 1394	1/3” CMOS	15 fps

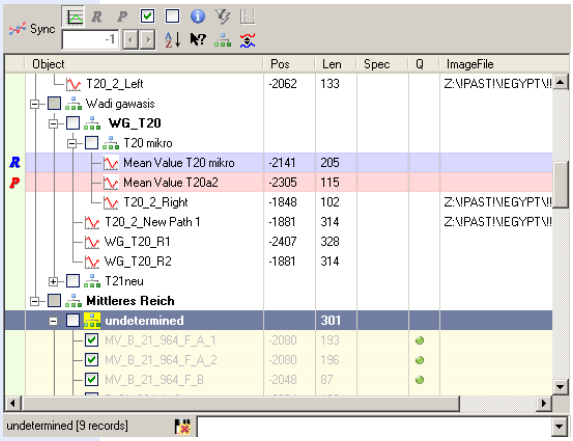
Actual framerates and resoulition may vary

All cameras are equipped with an UV filter, Windows WDM driver and have a C-Mount lens connector.

PAST4 – Personal Analysis System for Treering research

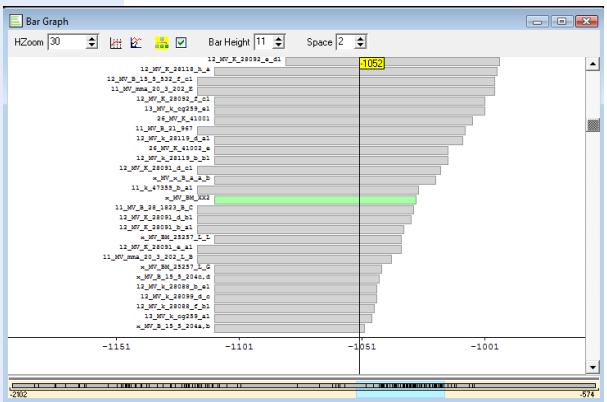


The PAST4 software package contains everything you need to start your dendrochronological research. PAST4 is a fully Microsoft Windows compliant application, supporting all 32bit and 64bit Microsoft operating systems (Windows 2000, Windows XP and Windows Vista).



The PAST software was the first Windows based graphical software package for dendrochronological research purposes. The current version is the result of 12 years of continuous improvements based on customer demands. Fast statistical tests and the constant availability of graphical information (3-way graphs allow the simultaneous display of YT-, Stacked- and Bar Graphs) present a unique concept for synchronization and chronology building.

The hierarchical group concept allows for the easy handling of huge amounts of records. Dynamic mean values are a valuable aid when working with problematic samples. Mean values can easily be altered, combined or enhanced with simple mouse operations.

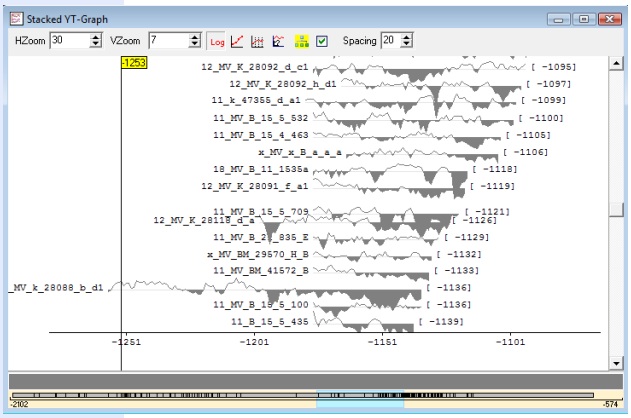


The newly designed fully customizable Project management window holds together all project based information and has built in sorting and editing functions.

By using XML for project file storage PAST4 offers a unique total recall system for project handling. Multiple records and mean values are stored in monolithic files that can easily be copied, pasted and transported in the Internet.

Various import and export filters to the most important file formats used in dendrochronology (Format Heidelberg, Format Hemmenhofen, Tucson, Catras, ITRDB) allow data handling at a high level.

The new Multisync assistant is at your service when it comes to mass synchronization of hundreds of samples.
Clickable result lists allow for the testing for and the elimination of improper synchronization results.



Generating graphical data for publishing purposes is made easy with the built in printing function or by copying/pasting screen contents as vector graphs. For example, placing scalable graphs into a Word file is a simple copy/paste process.

PAST4 supports Windows EMF files, the Microsoft standard vector based file format that will be understood by vector based graphical software packages. Close interaction with the OSM software allow for in place editing of data that was created by measuring scanned images with the OSM software.

PAST4 has built in support for the VIAS TimeTable and VideoTimeTable measuring device series. Measurement projects created with the new VIASDaq software can be imported directly.

Please note
Older RS-232 based ParSer interfaces are no longer supported in PAST 4.5. If you use a RS-232 based ParSer interface you will need to upgrade your measuring device to a VIAS µParSer interface).

System requirements
Pentium IV PC
Windows 2000/XP/Vista
USB interface
512MB RAM,
1024 x 768 display (minimum)

OSM3 – On Screen Measuring Software

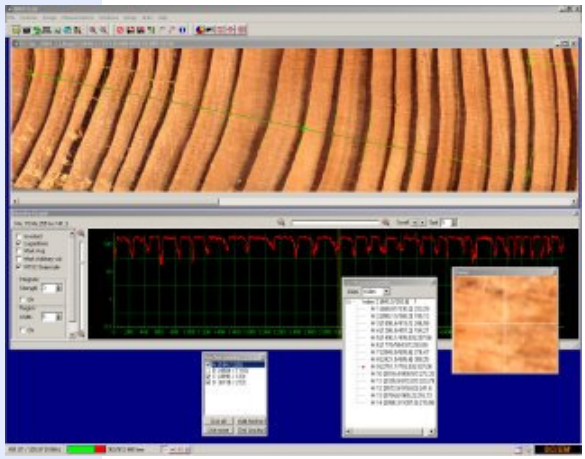
The OSM software turns any Windows-compatible flat bed scanner into a high quality measuring device.

Depending on the optical resolution of the scanner used, measurement resolutions well below 1/100 mm can be achieved.

OSM is optimized to work with very large image files (250MB and up).

Each step in the measurement process can be stored and retrieved for later reference.

Measuring data can be exported as Format Heidelberg, Tucson or ASCII files. OSM project files can be imported to PAST4 directly, allowing for interactive work between the two programs.



The new right angle line tool will help setting measurements accurate.

Predefined anchor lines make it possible to measure along a given measurement path.

Image analysis functions such as the new Density plot allow to do early/latewood analysis on a standardized basis.

An updated version of OSM (development in progress) will allow for stitching an unlimited amount of individual images, thus creating the possibility to measure on very large surfaces without compromising computing speed and memory requirements.

System requirements

Standard system:
Windows XP or Windows Vista
Celeron (1500MHz and above) 512 MB RAM, 32 MB Video RAM, screen resolution 1024 x 768 with 16 bit color depth , a 17" display, a good and ergonomic mouse pointing device, 10GB free harddisk space (for storing images), a TWAIN compatible USB scanner (Optical Resolution 1200 x 1200 dpi minimum)

Advanced system:
Dual Core processor, 2GB RAM, a 22" WXGA display with a resolution of 1280 x 1024 (1600 x 1024 recommended) a large and fast harddisk (60GB and above, SATA-interface) and a backup device (LTO or DAT streamer). We recommend the use of PAST4 for data processing.
For enhanced resolutions the use of IEEE1394 based scanners with 4800 x 4800 dpi optical resolution is recommended.

The macro lenses presented here cover a wide range of focal lenghts, DTO´s (Distance to Object) and viewfields. All lenses were tested for measuring purposes with our USB and Firewire video cameras.

If you need macro lenses with different features please contact us!

Ni-EL Macro Zoom Lens
Ro-05 Fixed focal lens
Ro-20 Fixed focal lens

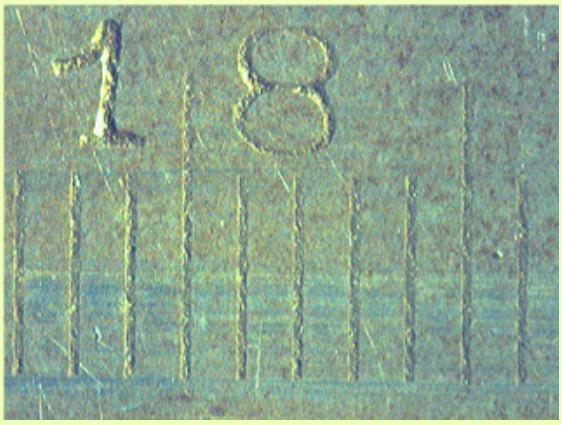
NI-EL Nikkor EL Zoom Macro lens

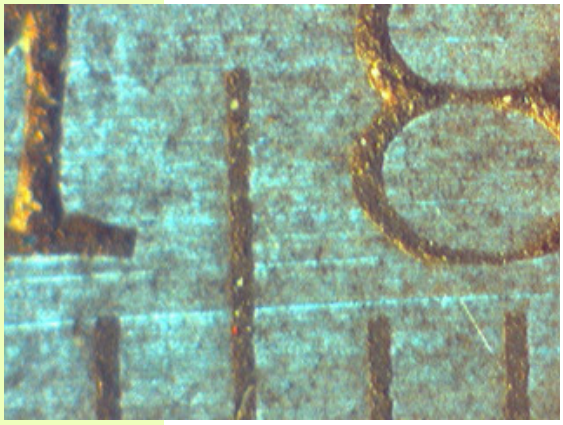
Adapted Nikon Nikkor EL 50mm (actual focal length 5 - 25 mm)
29 mm C-Mount Adapter

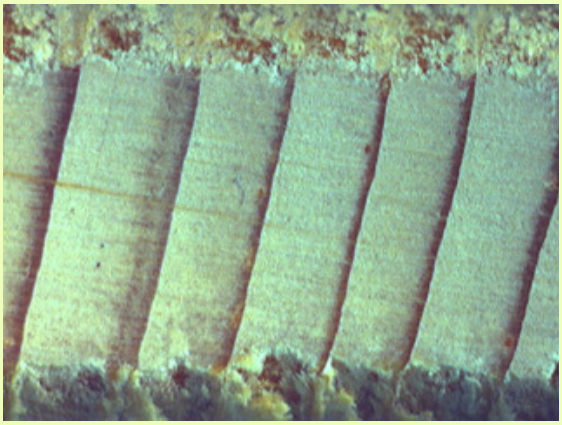
	Min Zoom	Max Zoom
Distance to Object	16 cm	7cm
Viewfield	10 x 7,5 mm	4,3 x 3,2 mm

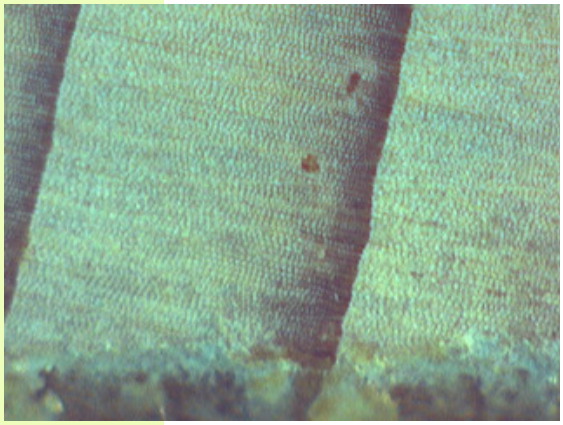
This adapted lens has a very good color reproduction and is well suited for most purposes. With the maximum zoom this lens produces live video images with a pixel size of 0,6 x 0,6 1/100 mm. An especially interesting feature is the large object distance of up to 16 cm.

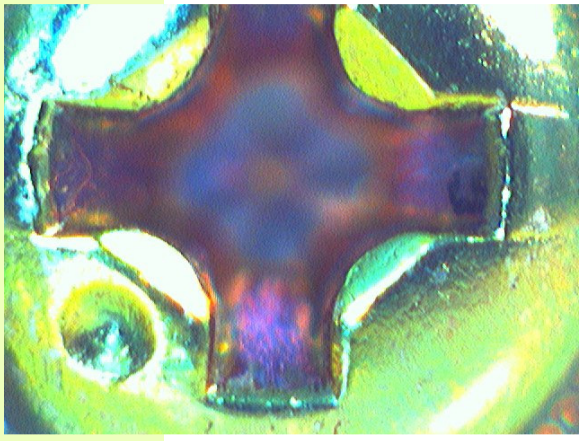
Sample pictures (all images taken from live video stream produced by a 2104 FireWire Digital camera @ 640 x 480 pixels/30fps)











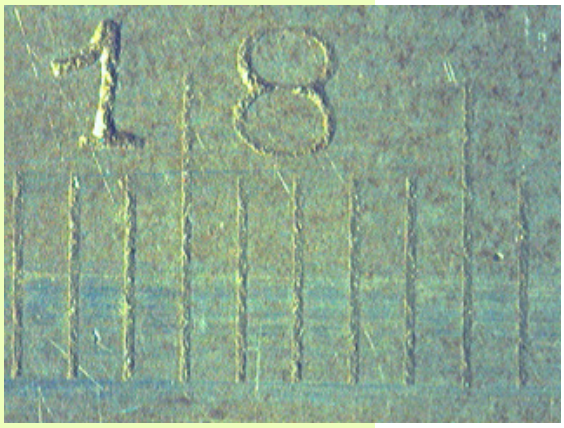
Ro-05 Rodenstock fix focus 0,5x macro lens

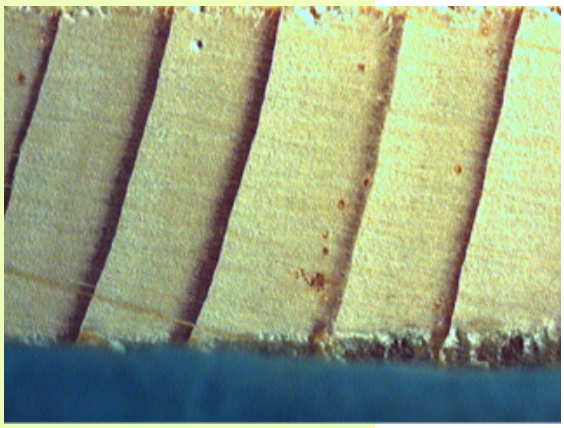
29 mm C-Mount Adapter

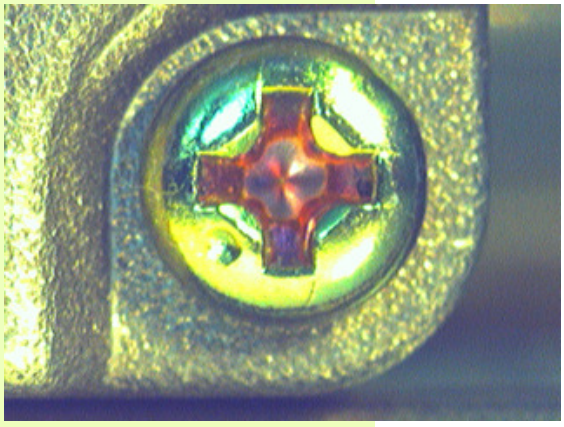
Distance to Object	11 cm
Viewfield	9,5 x 6,5 mm

This fixed focus lens brings the finest in measurement optics at a very interesting price. Rodenstock lenses guarantee crisp detailed picturing. Pixel size is approx. 1,56 x 1,56 1/100 mm

Sample pictures (all images taken from live video stream produced by a 2104 FireWire Digital camera @ 640 x 480 pixels/30fps)







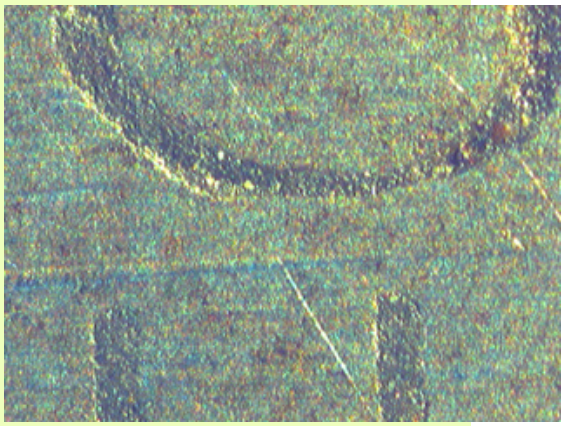
Ro 20 Rodenstock fix focus 2x macro lens

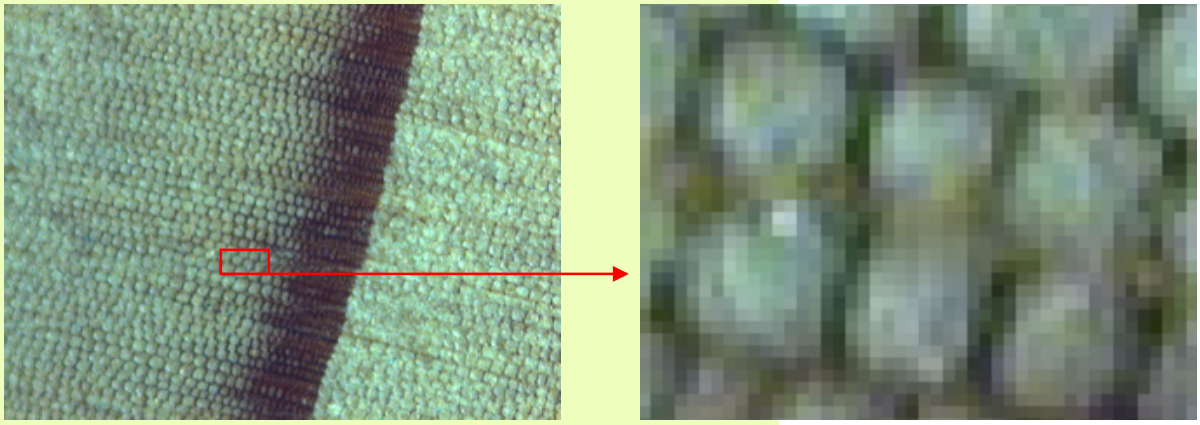
29 mm C-Mount Adapter, f = 8. for using this lens special light sources may be required!

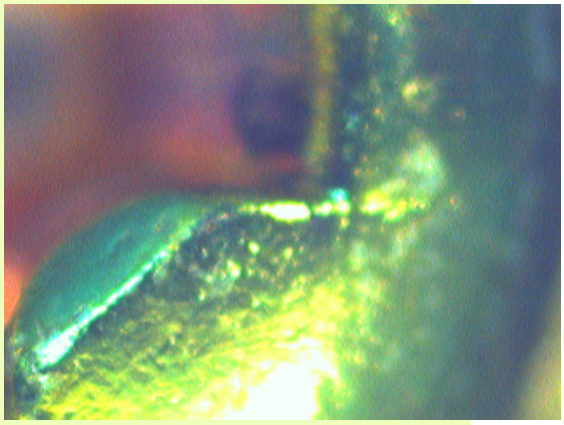
Distance to Object	7 cm
Viewfield	2 x 1,5 mm

This “eagle eye” lens brings the maximum of resolution and detail and is especially suited for measuring very small objects with sizes well below 1/100 mm. With a camera resolution of 640 x 480 pixels the Ro 20 produces images with an incredible pixel size of 0,3 x 0,3 1/100 mm.

Sample pictures (all images taken from live video stream produced by a 2104 FireWire Digital camera @ 640 x 480 pixels/30fps)



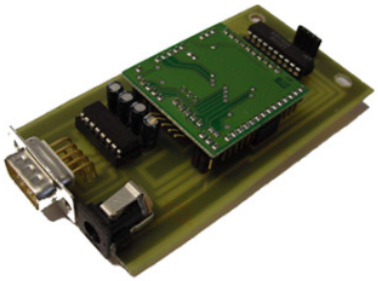




USBParSer interface

The USBParSer interface connects a TimeTable, VideoTimeTable or any other measuring device that is equipped with a HEDS optical encoder to a standard USB interface of a PC. A built in Microprocessor keeps track of the current position.

The ParSer interface can be used to connect different measuring devices such as the Lintab series to a PC and use these measuring devices with PAST4/PASTLite or VIASDAQ.



System requirements
Hewlett Packard/Agilent optical encoder equipped measuring device, 1 free USB interface, PAST4, PASTLite or VIASDAQ data acquisition software.

The USBParSer comes complete with USB cable, a Trigger mouse. manual and USB drivers on CD-ROM.

Light Set

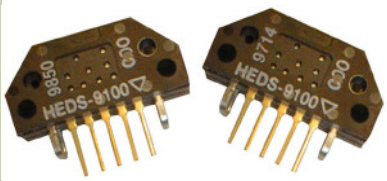
The universal light set can be easily mounted on any TimeTable/VideoTimeTable device.
A 35cm swan neck lamp holder helps positioning the lamp head.

The Light Set comes with all cabling and a 220V power transformer.

Tripod and other hardware

The LAT heavy duty tripod is stable yet lightweight and will hold a VideoTimeTable in any position.

We offer a wide range of hardware components to solve even the most difficult measuring situations.

Optical encoders

Standard or high resolution HEDS encoders/disks for system repair or upgrade are available.
All encoders are fully compatible with the ParSer interface.
For details and availability please contact us.