Motic®

MORE THAN MICROSCOPY

MOTICAM

DIGITAL PROFESSIONAL

SELECTION

DIGITAL SELECTION MOTICAMS

GET READY TO EXPLORE THE FULL POTENTIAL OF YOUR MICROSCOPE!

In the Motic Digital Professional Camera selection, we have lined up our top range of cameras suitable for any application and working area. Our range contains CMOS and CCD cameras, with up to 5.0 Mpixel in real time.

Whether you are a teacher at a University, a Lab Technician, a Researcher, working in the Industrial sector or a devoted microscopist, in this catalogue you will definitely find something suitable, for your application and within your budget. Discover the endless possibilities and benefits of connecting a Moticam camera to your microscope. Our 1-Year limited warranty (for digital products), is backed by a complete parts inventory that assures availability beyond the two year warranty period.

Motic´s aim is to provide a complete package that will allow you get to get started immediately.

Please take a look at the different Moticam cameras and softwares that we have in our program.

MOTICAM 1000

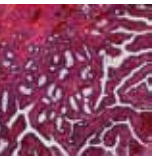
Basic with extra´s

The **Moticam 1000**, with 1.3 Mpixel, represents the economical solution for science education. It is equipped with a package of accessories that allows you to connect the camera via a c-mount connection or with the included eyepiece couplers over the eyepiece of the microscope (fits nearly every microscope).

As with all cameras, **Motic** also includes the basic but sophisticated **Motic Images Plus 2.0 Multi Language software,** allowing you to share, capture, archive, make video recordings and accurate measurements of your samples.

- Attachable C-mount camera CMOS 1/3"
- 1280x1024 pixels with USB2.0 output
- Focusable macro lens 12mm
- 28, 30, 34 and 35mm microscope eyepiece couplers
- Macrotube for specimens observation
- Motic Images Plus 2.0 for PC and MAC
- Calibration slide

Motic
BA210
Motic
Motic
EF-N Plan
10X/0.25
Motic
EF-N Plan
40X/0.65
BA210



MOTICAM2000,2300&2500

Affordable & High resolution CMOS cameras

Moticam 2000

This CMOS camera has a resolution of 1600 x 1200 pixels (2.0 Mpixels). This is an ideal camera when you need to document your work or study.

The Motic Images Plus 2.0 ML provides endless possibilities. The standard package of the **Moticam 2000** allows you to connect the camera to the microscope in 3 ways; with the eyepiece couplers & macro lens (onto the eyepiece), the B&S adapter (into the eyepiece tube) or via the c-mount connection (c-mount adapter required).

Moticam 2300

Are you considering publishing your captured images? The **Moticam 2300** has all it takes. Thanks to its high resolution of 3.0 Mpixels (2048 X 1536 pixels), the chip size of ½" and the included accessories, the **Moticam 2300** is all you will need. It does not matter if you are working in BF, DF and PH (even in some cases Epi Fluorescence), with this camera high quality images are assured.

Moticam 2500

The **Moticam 2500** is the most affordable high resolution digital colour camera on the market. The 5.0 Mpixel resolution allows you to capture even the tiniest detail.

As with all other Moticam CMOS cameras, the **Moticam 2500** is equipped with a c-mount connection, a set of eyepiece couplers as well as an eyepiece adapter which replaces the actual eyepiece if needed.

5.0MP
1/2,5" CMOS SENSOR

MOTICAM**2500**
2592x1944 pixels

3.0MP
1/2" CMOS SENSOR

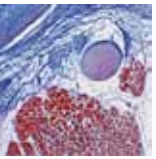
MOTICAM**2300**
2048x1536 pixels

2.0MP
1/3" CMOS SENSOR

MOTICAM**2000**
1600x1200 pixels

General specifications

- Attachable C-mount camera
- USB2.0 output
- 28, 30, 34 and 35mm microscope eyepiece couplers
- Precision Glass Eyetube Adapter (B&S Adapter)
- Focusable macro lens
- Macro Viewing Tube, great for looking at insects, minerals, etc.
- Calibration Slide with 4 dots as well as a Scale Cross for accurate measurements
- Software Motic Images Plus 2.0 ML for PC and MAC



MOTICAM480

The multi-talent

The Moticam 480 is the digital camera which has a solution for each working area. Whether you have **a TV monitor, a projector or computer** at your disposal, the Moticam 480 will work with all of them. Even simultaneously when required!

Besides the different output options, the camera comes standard with the four different eyepiece couplers, c-mount ring, focusable macro lens, macro tube, calibration slide and the powerful Multi Language Motic Images Plus 2.0 software. Making the Moticam 480 a **complete and ready-to-use package.**

- Attachable analogue/digital C-mount camera CCD 1/3"
- Digital resolution: 720x576 pixels with USB2.0 output
- Analogue resolution: Max. 550 TV lines resolution S-Video & RCA
- Focusable macro lens 12mm
- 28, 30, 34 and 35mm microscope eyepiece couplers
- Macrotube for specimens observation
- Switching power supply 100-240V (CE)
- Motic Images Plus 2.0 for PC and MAC
- USB, S-Video & RCA cables
- Calibration slide

Multi-Output

The Moticam 480 has digital and analogue connections, allowing you to **connect your camera simultaneously to:**

Computer

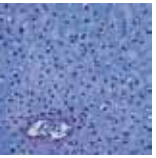
Through the **USB 2.0** cable you can connect the **Moticam 480** directly to your computer. By using the **Motic Images Plus 2.0 Software**, you can capture images, perform measurements and create videos, with just a few mouse clicks!
The Motic Images Plus 2.0 is an analysing software, which allows you to get the maximum information from the image and use all kinds of image enhancement tools to prepare your picture for reports and presentations.

Projector/Beamer

Connect the **Moticam 480** directly to your projector/beamer with the **RCA or S-video cable**, in order to share your images with a larger audience. Even when the images are enlarged by the projector, the Moticam 480/483 will ensure that crisp, clear images are being displayed.

TV Monitor

Use the **S-Video or RCA output** of the **Moticam 480** to connect it directly to the TV monitor.
With a resolution of **480 TV lines,** even the finest details will be displayed.



MOTICAM PRO

Quality deserves attention

This series of cameras contains 12 models with different SONY ICX sensor resolutions and technical characteristics. It includes **Colour CCD** imaging sensors for conventional microscopy techniques, **Monochrome CCD** imaging sensors for low luminosity microscopy and **Peltier cooled CCD Colour and Monochrome** imaging sensors for fluorescence microscopy. The cameras are assembled and tested to the highest standards in the clean room at our factory.

All **Moticam PRO** cameras come with the universal c-mount thread and are connected to the PC via a USB 2.0 port. **The Moticam PRO Series comes with the well known and user-friendly Motic Images Plus 2.0 analyzing software** (multi-language). Additionally with any Moticam PRO, the sophisticated **Motic Images Advanced 3.2 is supplied free of charge.**

Furthermore the Motic TWAIN drivers, Direct Show drivers (via our website) and the SDK are included with the software package of the Moticam PRO.

Moticam Pro

Peltier Cooling device

When using a camera for a long time, the sensor gets warmer and warmer. When using long exposure times, it becomes more sensitive to noise and this can be seen in the captured image.

With our Peltier mechanism, **the sensor is cooled down up to 10°C below ambient temperature** (ambient = the temperature inside the camera case). Peltier Cooled cameras are therefore recommended for **fluorescence applications.**

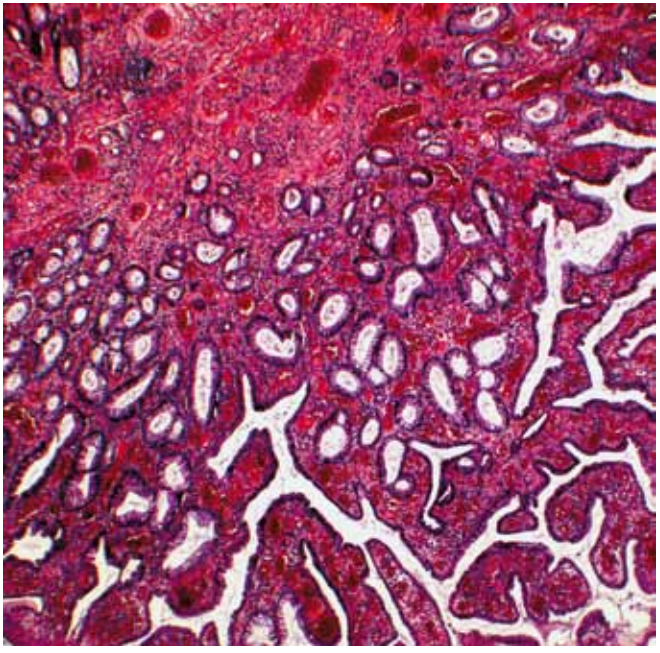
MOTICAM PRO 205 Budget High speed camera
MOTICAM PRO 252 Intermediate resolution camera
MOTICAM PRO 282 High resolution camera
MOTICAM PRO 285 High speed and high quality camera

A Colour
B Colour Peltier Cooled
C Monochrome
D Monochrome Cooled

Colour and Monochrome

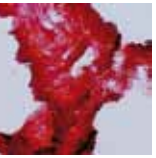
Colour cameras use a **RGB** primary colour mosaic filter on the chip. The distribution is standard; 25% Red, 50% Green and 25% Blue. Most of the time when working in fluorescence only one colour is revealed; therefore not allowing all available pixels to receive information. Just imagine seeing a blue image through the eyepieces, this means that only 25% of the total pixels are receiving and distributing information.

The Monochrome cameras do not have any colour filter and therefore each pixel records the amount of light it sees. It does not transmit any information on the colour of the sample to the computer. For these reasons monochrome cameras can definitely be considered when working with **fluorescence**. You will have better chances of capturing low light samples when using the full capacity of the pixels in the chip. **Of course colour is important in fluorescence, but this can be added at a later stage in the software.**



MODEL		SONY SENSOR	SENSOR SIZE	PIXEL SIZE	RESOLUTION				
MOTICAMPRO 205	A	ICX205AK	1/2”	4,65 x 4,65	1360 x 1024	○	●	○	○
	B					○	●	●	○
	C	ICX205AL				●	○	○	○
	D					●	○	●	○
MOTICAMPRO 252	A	ICX252AQ	1/1.8”	3,45 x 3,45	2080 x 1542	○	●	○	○
	B					○	●	●	○
MOTICAMPRO 282	A	ICX282AQ	2/3”	3,40 x 3,40	2580 x 1944	○	●	○	○
	B					○	●	●	○
MOTICAMPRO 285	A	ICX285AQ	2/3”	6,45 x 6,45	1360 x 1024	○	●	○	●
	B					○	●	●	●
	C	ICX285AL				●	○	○	●
	D					●	○	●	●

NOMENCLATURE Monochrome · Colour · Peltier cooled · High speed



Motic Images Plus 2.0

The essence of Motic´s Image Analysis Software

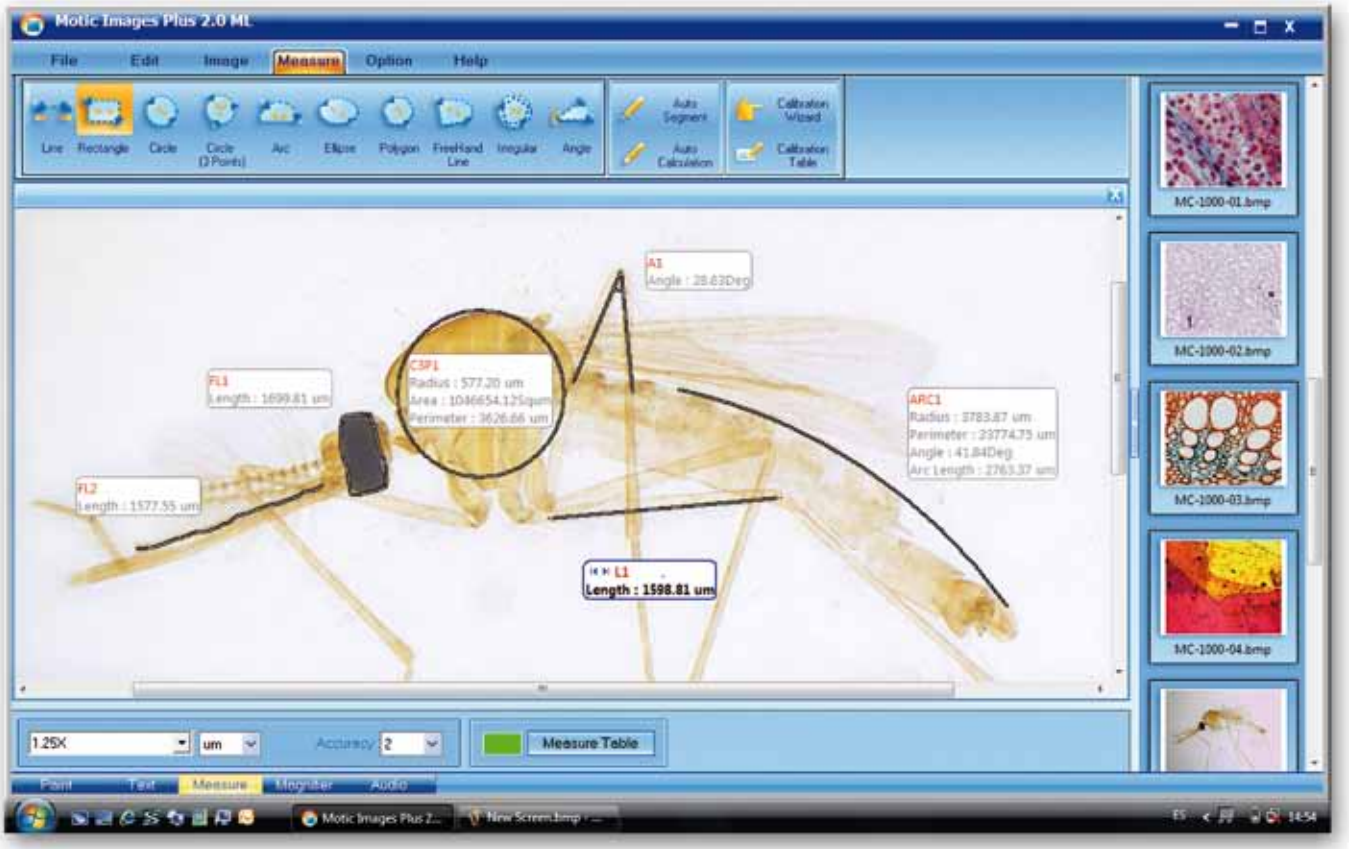
The multi language image analysis software, Motic Images Plus 2.0, is your entry ticket to the digital world of microscopy.
Many years ago this software was introduced as a "basic" software for capturing images and for storing them in a digital format. Nowadays the **Motic Images Plus 2.0** is far from "basic". With the help of many **Moticam** users around the world it has become **highly sophisticated image analysis software** with the following main functions:

Capture	**Automated counting**
Auto Capture	**Creating reports**
Video recording	**Image comparison**
Measurements	**Amalgamation**

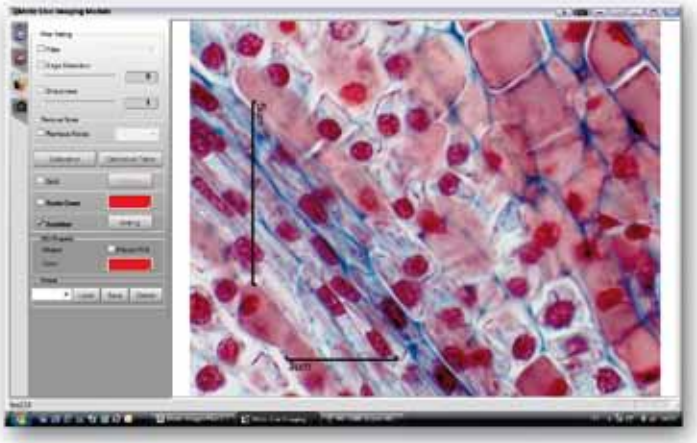
At the present time we are still in close contact with many users of our software. Approximately each 6 months a new up-date of the **Motic Images Plus 2.0**, can be downloaded on our website. Once you have purchased a Moticam you can get **unlimited FREE up-dates.**

Besides the software itself, we also put a lot of effort into making the **Moticams** compatible with different types of Operating systems, and of course the new releases of each Operating System. At present our **Moticams** are able to work with Windows (XP, Vista and 7), MAC and LINUX.

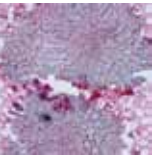
In case you would like to use a different Image analysis program with the **Moticam** cameras, you can run most cameras by using the TWAIN driver or the DirectShow device.



Motic Images Plus 2.0 ML - *Measures*



Motic Images Plus 2.0 ML - *MI Device*



Motic Images Advanced 3.2

Sophisticated Image Analysis Software

This software contains all functions of the Motic Images Plus 2.0 software plus much more. **It consists of three different modules**; segmentation, multi-focus and assembly.

Segmentation

The superior counting module allows you to **perform manual segmentations by using a histogram (colour), grey scale or by selecting the size**. You can create in one sample different groups, which will be highlighted in different colours.
After the segmentation has been performed, you will have information about the area in square um, perimeter, width, height and much more details.
The results of the segmentation can be exported in an excel file for further analysis.

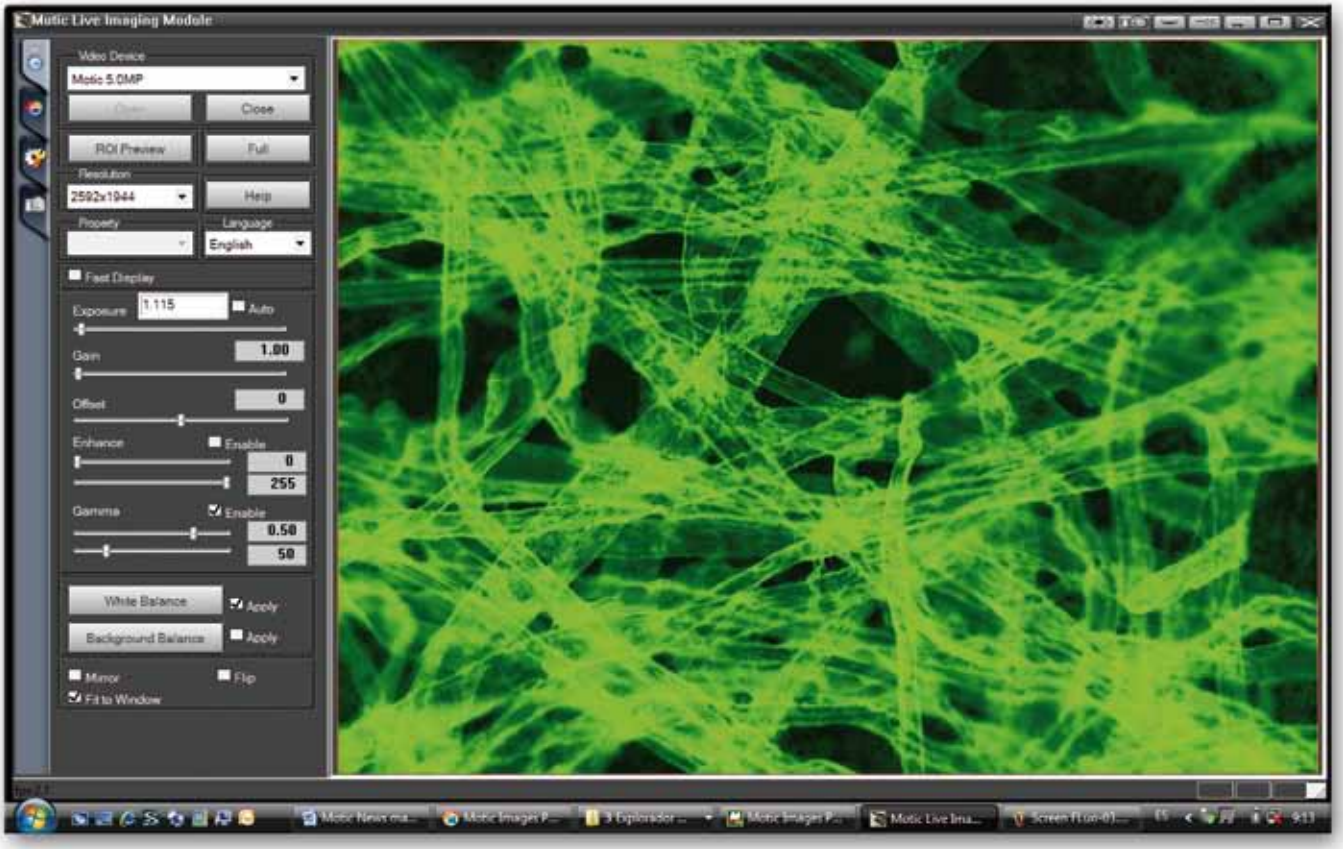
Assembly

This module can be used for **creating a single overview image out of multiple separate images**. The software recognizes any overlapping and corrects this automatically. This software is specially designed for users who wish to have an overview of the complete sample, while working at a higher magnification.

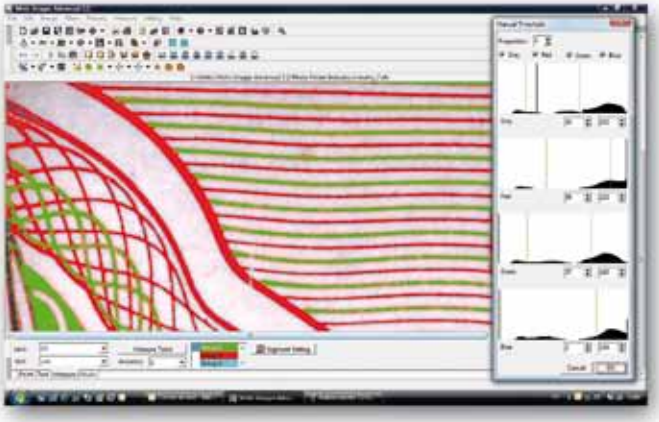
Multi Focus

The multi-focus module can be used to **capture up to 100 images taken at different focusing levels.** The software will automatically recognize the parts that are in focus in each image and assemble them into a new file. **The result is a single image that is completely in focus.**

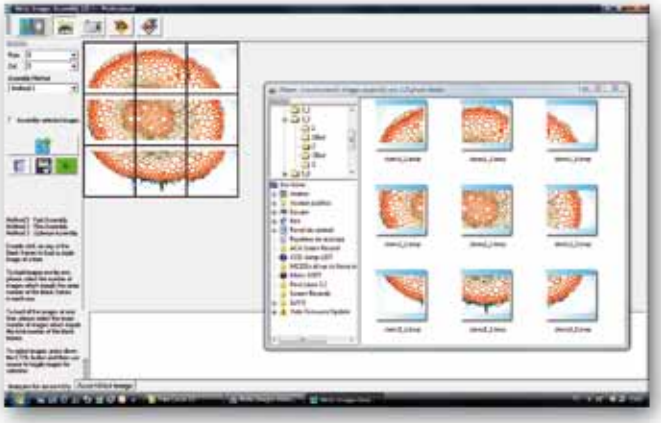
**Motic Images Advanced 3.2 available in English language and only compatible with PC.*



Motic Images Advanced 3.2 - *Live Imaging Module*



Motic Images Advanced 3.2 - *Counting Module*



Motic Images Advanced 3.2 - *Assembly*

Motic Trace

Match or no match?

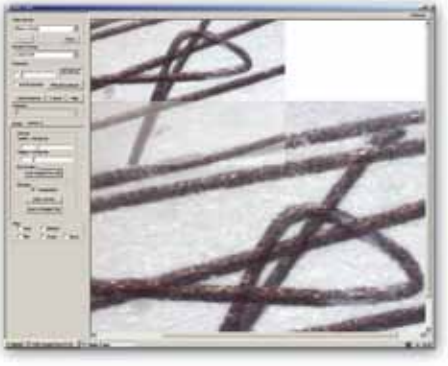
Motic Trace is the software that everyone has been waiting for. There is no need to buy an expensive **comparison microscope** anymore!

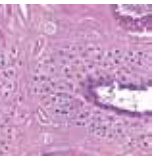
Simply connect two or more Moticams or Motic digital microscopes to your computer and get an immediate live comparison through the Motic Trace software.

Not only will you be able to **compare images side by side,** but you will also be able to **overlay, resize and rotate** them independently. Match to fingerprints, authenticate handwriting or determine whether two pieces of fabric belong to the same manufacturer, with the ease of just a few mouse clicks.

Motic Trace works together with Motic Images Plus 2.0 and therefore providing a comprehensive platform for further evaluation of the compared images. **Create your reports with accurate measurements and editing tools.**

All you need is two **Moticam** or two **Motic digital microscopes,** and you can teach forensics.





MoticNet

Get your microscopes connected

The network software **MoticNet** is compatible with all **Moticam** cameras. **MoticNet offers the teacher a live overview for each student Digital microscope system**. This overview can be extended up to a maximum of 48 individual digital microscope systems, in order to manage even larger classes by a single teacher.

With the **MoticNet** the teacher can have a **complete overview of each students station**, and also control and manipulate the quality of their microscope. This can all be done from the teacher's computer. No need to walk around anymore, having to pass by each individual student to check their progress. Through a simple mouse click the teacher can broadcast the demonstration. Additionally, **the work at one student's station can also be shared with the entire classroom**. Besides broadcasting a screen with the connected stations, it is also possible to send messages from the teacher's computer to the student in question and vice versa.

MoticNet can even be useful outside teaching digital microscopy. Having each computer station connected and linked to the central control station of the teacher, **MoticNet** also allows third party programs such as Mathematics and Language software, to be launched and used. Allowing full remote keyboard and mouse control, any Windows based program can be initiated, **controlled and manipulated by the teacher.**

Connect your Moticam

Easy does it!

It is Motic´s goal to provide a complete package that will allow you to connect your Moticam to almost every microscope. In total, **there are 3 different ways to connect a Moticam to your microscope**. Have a look at the chart below to see which options are standard and optional.

MODEL	EYEPIECE COUPLER	B&S ADAPTER	C-MOUNT
MOTICAM 480	●	○	●
MOTICAM 1000	●	○	●
MOTICAM 2000	●	●	●
MOTICAM 2300	●	●	●
MOTICAM 2500	●	●	●
MOTICAM PRO	○	○	●

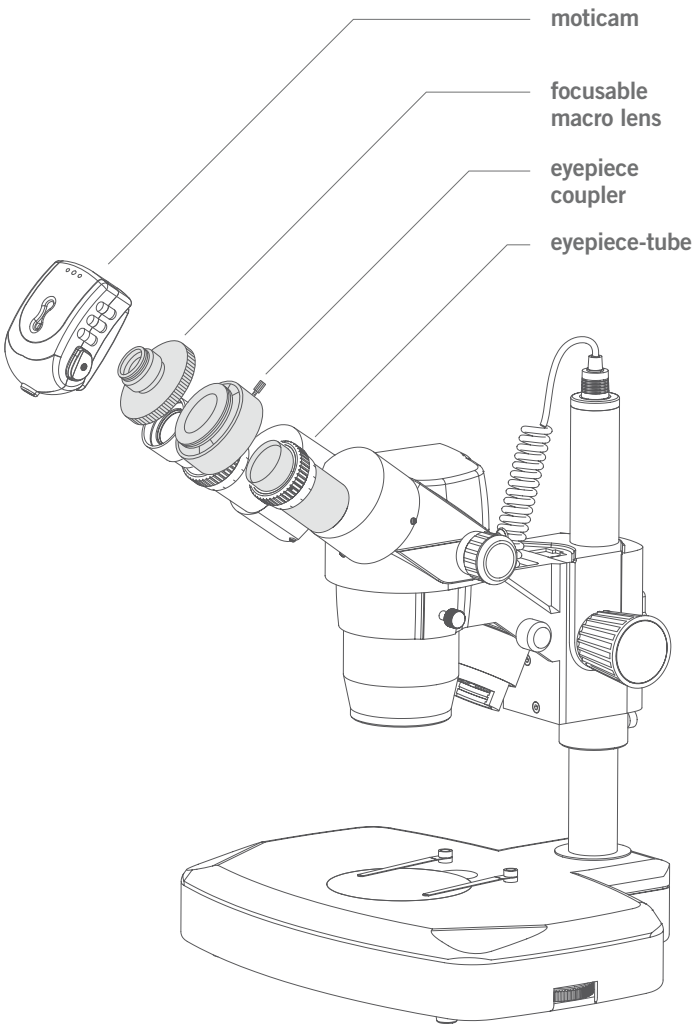
NOMENCLATURE ○ Optional ● Standard ○ Not available

Onto the eyepiece

With each **Moticam** we supply four eyepiece couplers (28mm, 30mm, 34mm and 35mm in diameter).

Simply **connect the focusable macro lens to the camera and select the correct eyepiece coupler** for your microscope. Put the complete combination **onto the eyepiece**, and you have turned your conventional microscope into a **digital microscope.**

This solution is also applicable for non-Motic microscopes. In case of any doubts please contact your local **Motic** distributor.

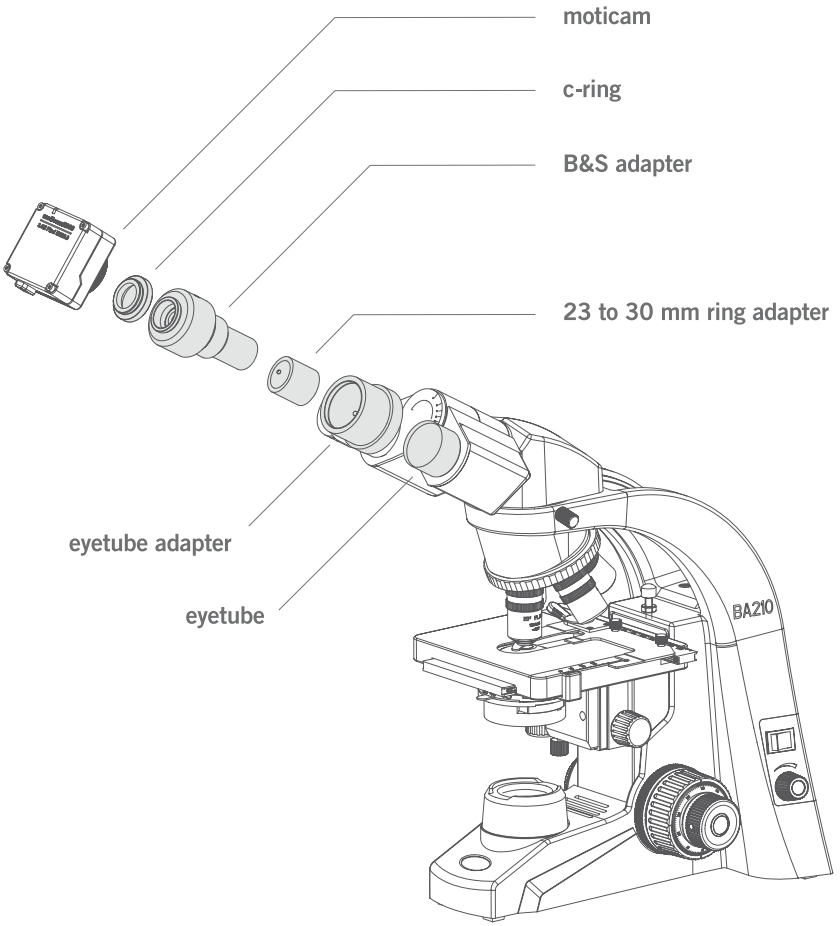


Into the eyetube

With the Moticam 2000, 2300 and 2500 a special Eyetube adapter (B&S) is supplied.

Simply screw the Eyetube adapter on the Moticam. Remove an eyepiece from the microscope and replace it with the Moticam-Eyetube adapter combination. You have turned your conventional microscope into a digital microscope.

This solution is also applicable for non-Motic microscopes. In case of any doubts please contact **Motic**.

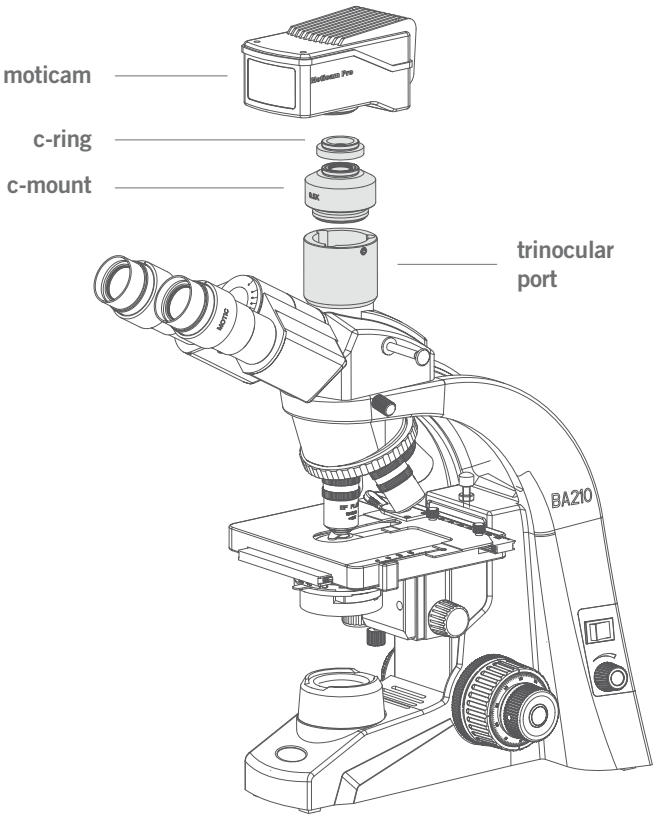


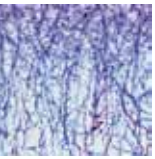
Onto the trinocular tube

For all Motic trinocular microscopes we have several c-mount adapters available. The **c-mount adapter needs to be chosen according to the chip size of the camera.** Each **Moticam** (excluding the gooseneck cameras) comes standard with a CS/C-mount connection; the **c-ring** is included in the package.

Just **fix the c-mount adapter on the trinocular port and connect the Moticam to the c-mount adapter.** This combination will give you the freedom to continue observing with both eyes, while having the **Moticam** connected.

Our **Moticam** cameras can also be used on non-Motic microscopes, via the **universal c-mount connection.** Just remember that you will need in this case the c-mount adapter from the manufacturer of your microscope.





Accessories

Moticam 480, 1000, 2000, 2300 and 2500

The aim of **Motic** is to provide you with a complete package that will allow you to get started immediately. Within your **Moticam** package you will find the following accessories provided **Free of Charge:**

1 ▶ Focusable Macro Lens

This focusable macro lens allows you to **transform the Moticam into a Macro Camera** for observing larger objects outside of the microscope. Furthermore the focusable macro lens is used to connect the camera to the Macro Tube or to the Eyepiece Couplers. With the Moticam 480, 1000, 2000 and 2500, a 12mm focusable macro lens is supplied and for the Moticam 2500 a 16mm focusable macro lens is included.

2 ▶ Eyepiece Couplers

Four different eyepiece couplers are provided (28mm, 30mm, 34mm and 35mm) to connect the **Moticam** directly onto the eyepiece of most microscopes. Connect the focusable macro lens to the camera and fix the eyepiece coupler on the focusable macro lens. Attach this combination to the eyepiece and you have turned your microscope into a **digital microscope.**

3 ▶ Calibration Slide

The Motic Calibration Slide allows you to **calibrate your system** (Motic Imaging Device + Computer) so that the measurements made with the application software are accurate. The calibration slide contains several different sizes of calibration circles, as well as a micrometer crosshair.

4 ▶ Macro Tube

This device was designed by teachers to give the **Moticam** a stable support to stand on **when observing macro specimens** such as insects and minerals. Simply connect the focusable macro lens to the camera and attach it to the macro tube.

5 ▶ Eyetube Adapter (B&S)

The special eyetube adapter is standard with the Moticam 2000, 2300 and 2500. For the Moticam 480 and 1000 it is available as an **optional accessory.** This adapter fits directly into the microscope's eyetube. The eyetube adapter allows the Moticam to be connected to those microscopes that have larger or unconventional eyepieces.

4
Optional 5
2
Ø35
Ø34
Ø30
Ø28
B&S
B
12mm
1
B&S
A
3

DIGITAL
SELECTION
MOTICAMS

MOTIC,
MORE THAN MICROSCOPY

We hope that we have given you a good impression of all available Moticam cameras, the different ways to adapt the camera to the microscope and the software that we have to offer. This catalogue contains limited technical specifications on the cameras; therefore we suggest consulting our general catalogue Moticam Cameras.

As a part of Motic´s philosophy, we would like to keep in touch with you, whether you are going to purchase or have already purchased your Moticam camera. We are very interested in your opinion, your comments and your suggestions on how we can improve our products. Together we can make it happen

Your Motic Team

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