D-Moticam BTW

## Microscope Tablet /Camera

Use and Care Manual

Introduction

Thank you for purchasing the D-Moticam BTW8 / BTW10 Tablet/Camera system. The **BTW** provides an effective method of attaching a camera system to any c-mount trinocular microscope using a 0.5x c-mount adapter. The image from the microscope can be viewed on the provided tablet or via WiFi to any WiFi enabled device.

The camera portion of the BTW houses a WiFi transmission antenna. WiFi allows any WiFi enabled device to view, measure and annotate the microscope image through the available MotiConnect application. The MotiConnect app can be downloaded through Google's PlayStore or Apple's AppStore.

Tablet Bracket Quick Assembly

Tablet Bracket

Moticam X3

C-Mount
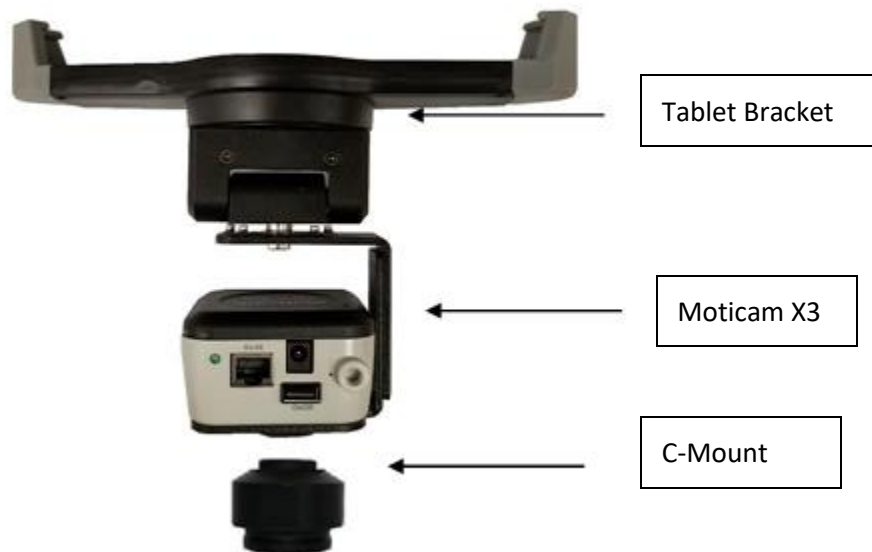
Camera Registration

It is important to make sure you have registered your device on the Motic Images website:
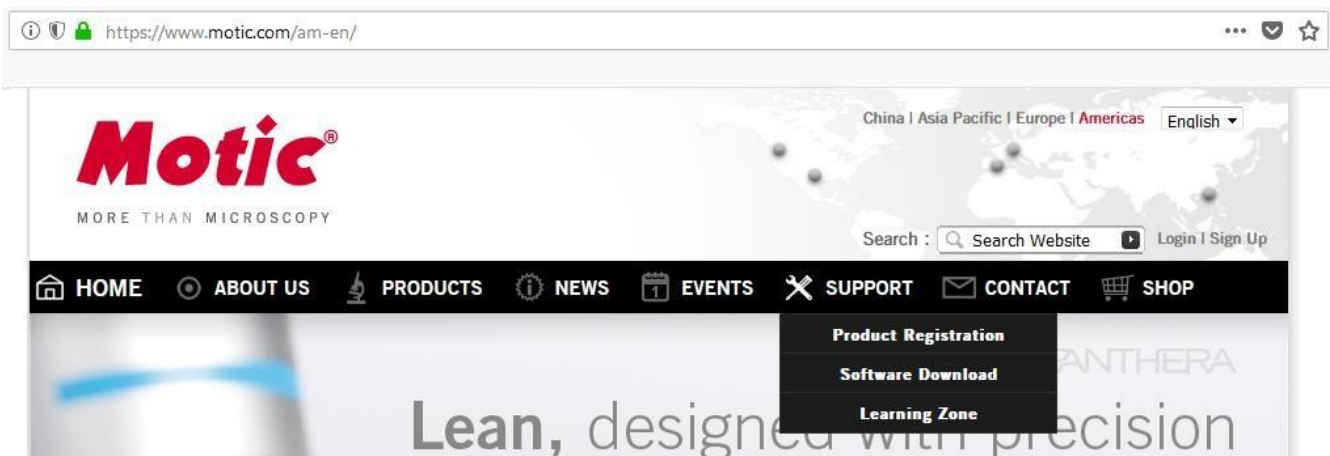
Connect to the Moticam X³ WiFi signal – Quick Start

1. First plug the power supply 12V, into the back of the Moticam X3 camera power port
2. Allow the camera time to power on
3. You will notice a Blue LED start to blink. During this time, the Moticam X3 will establish a WiFi network.
4. The Moticam X3 camera can support up to 5ea devices at one time.
5. Once the camera establishes its network, you will see the camera on WiFi list of available devices.
6. By default, the Moticam X3 operates at 2.4 GHz. Instructions for switching it to 5 GHz can be found further below.
7. The Moticam X's SSID signal is printed on a label on the camera. To log onto your camera, simply connect your included tablet to that signal. The password for the network by default is 12345678.
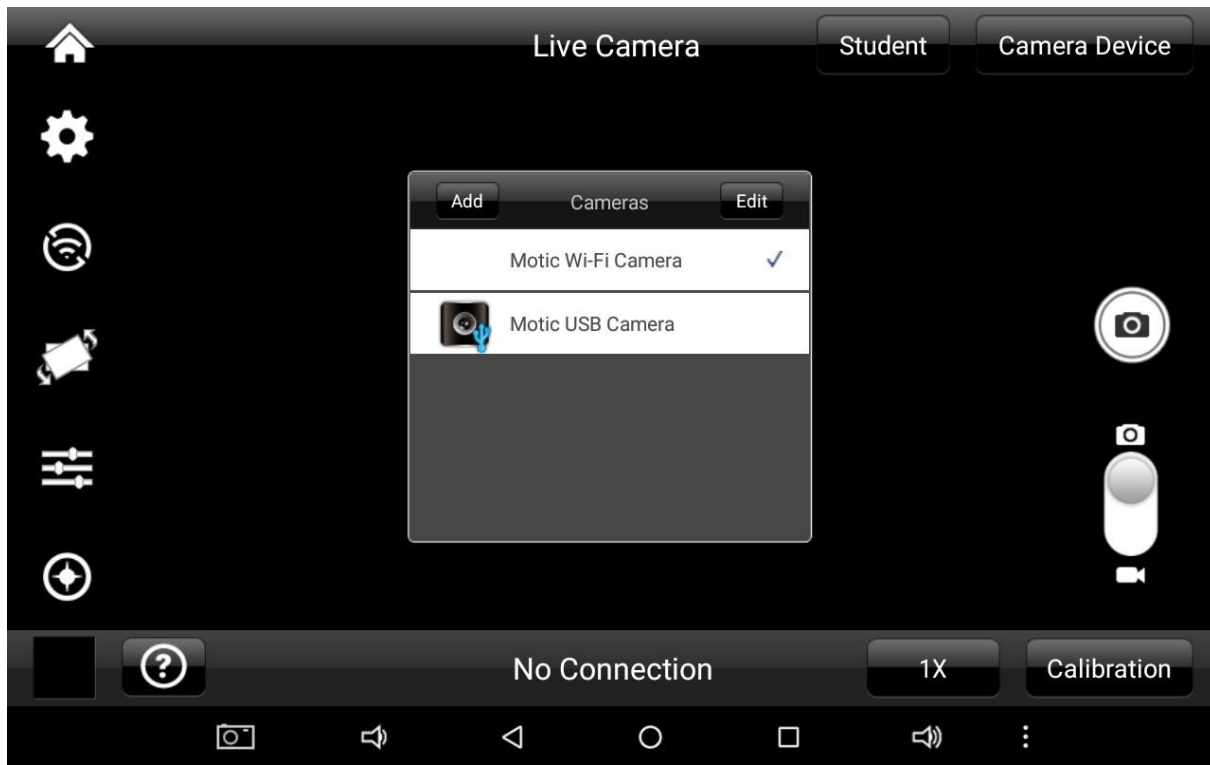

MotiConnect Quick Start

1. From the main tablet screen, click on MotiConnect App Icon

2. Secondly, from the MotiConnect app, click on Camera Device. From here click on Motic WiFi Camera.

    This will open the WiFi camera live image. You can begin viewing.

**Using a WiFi device that operates with Android or IOS**

1. For best performance, we recommend to use WiFi devices, such as tablets, with a screen not smaller than 7 inches. For iOS devices we suggest using iOS 5 or higher while for Android Devices we suggest using Version 4.0 or Higher.
2. To operate and use the camera on your tablet, please download our free App called MotiConnect. For iPad you can find this on the AppStore, for Android devices you can find this on Google Play.

TABLET SOFTWARE

This android tablet comes equipped will all the necessary software needed to start using your equipment out of the box. Since it is an android tablet, you will be able to connect to your office/school Wi-Fi network to access the internet and download additional applications. The primary application for accessing your camera is MotiConnect.

MOTICONNECT OVERVIEW – HELP MENU

MotiConnect is a dedicated image processing Android app for Motic cameras, which includes image preview, capture, recording, editing and measuring functions. Please refer to the Application Help guide for a complete description of the MotiConnect Application.
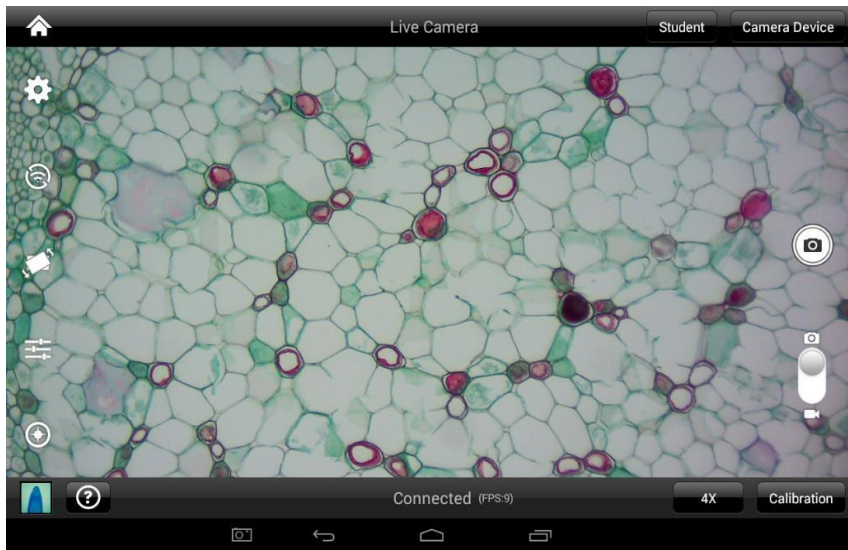
HELP BUTTON

	Help Menu - Opens a new window which provides a description of features available with the MotiConnect Application

<u>**CALIBRATION**</u> **– (*Optional – not necessary to use your microscope*)**

To prepare for the calibration process, please make sure you have the calibration slide. The calibration slide has four individual dark round circles. Each dark round circle corresponds with each objective on your microscope.

- The 1.5mm dot (150um – microns) with the 4X objective.
- The 0.6mm (600um – microns) with the 10X objective.
- The 0.15mm (150um – microns) with the 40x objective.
- The 0.07mm (70um – microns) with the 100X objective.

To begin the calibration process, place the calibration on the stage.

1. First place your calibration slide on the stage, switch to the 4X objective, and move the slide over to the 1.5mm dot.
2. With the dot centered on the tablet screen, select the calibration button, located on the bottom right hand side of the screen.
3. You should have a bright green circle on the screen.
4. Click the calibration button a second time.
5. This time the calibration settings window will open.
6. In the objective magnification window select the objective you captured the dot with. In this case the 4X objective.
7. In the diameter window select the diameter of the dot you captured. In this case the 150um. Then click OK.
8. The last window that will open is the Save Sign window. Since you capture this image with the 4X objective, it is best to enter this on this line.
9. The objective line should default to the objective you are calibrating. In this case it should say 4X.
10. The X and Y numbers on the next two lines should be near identical. Look at the first three numbers. As long as they are the same within one or two digits, you have a good calibration.
11. Click Ok and you are done.

Calibration

To begin click on Create Calibration. Get out your Calibration Slide.
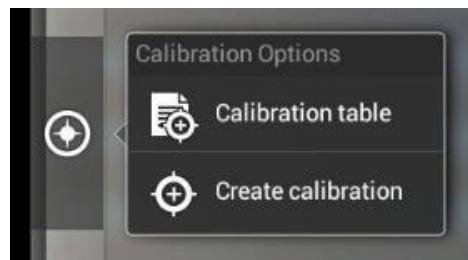
The software will capture the image from the preview mode and input the image into calibration mode.

Now put the Calibration slide on the stage of the microscope and focus the dot in the center of the screen. For 4x Objective, use the 1.5mm dot. For 10x Objective, use the 0.6mm dot. For the 40x Objective, use the 0.15mm dot. For the 100x Objective, use the 0.07mm dot.

After your dot is in focus, select "Create Calibration" then "Calibration" to add a new set of calibration parameters into the calibration table. You should have a bright green circle (shown below). If you don't have a bright green circle, the calibration failed. Make sure the slide is clean and the image has sufficient lighting.   If the calibration is successful, choose what objective you're using on the microscope under "Objective Magnification" then select the length of the diameter of the dot, then tap OK. A calibration is needed for each objective that will be used in measuring, so repeat the process if necessary.


Software will provide the um/Pixel X and um/Pixel Y based on the previous users provided information.

Users can save those parameters with user assigned own Sign Name. This new Sign Name will be saved in the calibration table for the future use.

Objective Magnification: If users change the objective magnification number, please ensure same magnification number is selected on the software. There is no need to re-calibrate the system.
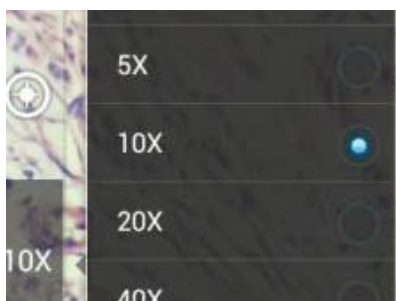
TRANSFERING IMAGES TO YOUR COMPUTER

By default all your images are saved to the Micro SD card included with your M29TZ-SM99CL-BTW1 series microscope. This card is provided as a courtesy. If it is missing or lost, you will need to purchase a replacement. It is highly recommend that you purchase a Micro SD to Standard SD card adapter.

This is simplest and easiest way to transfer images to your computer. Images are automatically captured as Jpeg images. If your computer/laptop does not come with an SD card slot, a SD card reader will need to be purchased as well. *Please note: 32GB Max*