

# Using Microscope for WorkLink Remote Assistance

**User Guide for Configuration and Use**

## Table of Contents

<b>Introduction</b>	<b>3</b>
<b>Hardware Requirements</b>	<b>3</b>
Computer (Laptop or Desktop)	3
Mobile Device	4
Capture Card/Device	4
Microscope	4
<b>Connecting all Hardware devices</b>	<b>5</b>
<b>How to connect with another user on a WorkLink/Remote Assistance Call</b>	<b>5</b>
<b>Demonstrations of successful Remote Assistance Calls with a connected Microscope</b>	<b>6</b>
<b>How to use 2D Annotations on a Remote Assistance Call</b>	<b>6</b>
<b>FAQs</b>	<b>7</b>
Why is there no audio transmission from the caller to the receiver i.e. from the computer to the receiving device?	7
Why is there no video transmission from the caller to the receiver i.e. from the computer to the receiving device?	7
<b>Limitations</b>	<b>8</b>

## Introduction

This document serves as a guide for configuring and using the WorkLink Application with a Microscope for Remote Assistance.

WorkLink is an Augmented Reality (AR) platform that offers both real-time remote assistance and access to AR guided instructions in one application.

The major prerequisites for a successful remote assistance call are:

1. The installation of the WorkLink Application on the users' Laptop/desktop and mobile device. The WorkLink Application can be downloaded from respective platform stores (iOS App Store, Google Play Store, Microsoft Store). Direct to be installed from CMS or Client's Software Center.
2. A stable internet connection.

## Hardware Requirements

The hardware requirements specific to the use case are listed below:

1. [Computer \(Laptop or Desktop\)](#)
2. [Mobile Device](#)
3. [Capture Card/Device \(Physical device\)](#)
4. [Microscope](#)

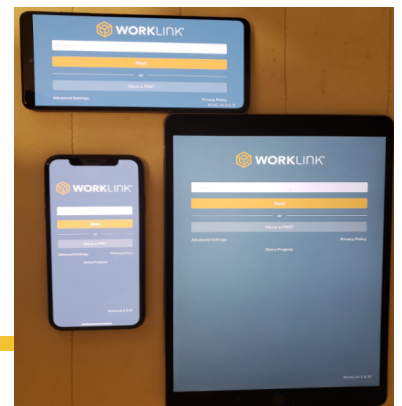
### Computer (Laptop or Desktop)

This workstation will be used by the user initiating the call. In this case, this will be the technician or the guest user that will be live streaming images from the Microscope. The computer is connected to the physical Capture Card/device using a USB cable.



### Mobile Device

This is a mobile phone or tablet used by the user receiving the call. In this case, this is the Expert. If you are using the Guest/Pin functionality,



this device will be used to generate a pin on the WorkLink App. The device must be compatible with WorkLink. See [supported devices](#).

## Capture Card/Device

A tested brand is the AVerMedia Capture card, also known as the Live Gamer Mini. It is a streaming and recording device responsible for transmitting live images from the Microscope to the computer.



This capture card is connected to the computer using a USB cable and connected to the Microscope using an HDMI cable.

## Microscope

This is the instrument used to examine objects that are too small to be seen. The Microscope must be connected to power and powered on to work. It is connected to the Capture Card using an HDMI cable to transmit live images to the computer. **Note:** The Microscope does not work over USB.

Please refer to your Microscope manual for specific instructions on adjusting the focus of the Microscope to effectively capture details of the image/object.



## Connecting all Hardware devices

As a technician or guest, follow the steps below to connect all devices before connecting to another user on a call.

1. Connect your computer to power to sustain battery level.
2. Connect your Microscope to power and turn it on with the remote controller (if applicable)
3. Connect the Capture Card to your computer using the USB cable.
4. Connect the Capture Card to the Microscope using the HDMI cable. Use the “HDMI IN” port on the Capture Card.

**Note:** You **MUST** connect all hardware devices i.e. Desktop/Laptop, Capture device, and Microscope before installing the WorkLink Application on the Desktop/Laptop.

## How to connect with another user on a WorkLink/Remote Assistance Call

To share the image/object under the Microscope with another user, the user sharing the image will be the one initiating the call using a desktop/laptop that is connected to a Microscope.

The users can connect using any of the two scenarios below:

1. [Direct Remote Assistance Call](#) - This is a call between two licensed users in the same company i.e. an Expert and a Technician. Licensed users exist in the contact list on the WorkLink App and can be called if they are online. Both users must log in to the WorkLink App and be connected to the internet for a call to be established. Learn more about [Remote Assistance Calling](#).
2. [In-direct/Guest Remote Assistance Call](#) - This is a call between a licensed user and a guest user. The guest user can be another user within the same company or an entirely different person. A guest user must be invited by a licensed user (an Expert) to connect on a call. The invitation can be by email, phone or PIN. Learn more about [Guest Invite Feature](#).


## Demonstrations of successful Remote Assistance Calls with a connected Microscope

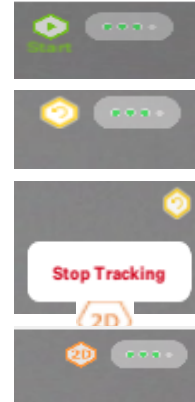
- [Direct Remote Assistance Call](#).
- [In-direct/Guest Remote Assistance Call using the PIN functionality](#).

## How to use 2D Annotations on a Remote Assistance Call

While using Remote Assistance functionality, a Windows platform user can perform 2D annotations when 3D tracking is difficult or not possible.

By default, 3D tracking is enabled when you click on the “Start” icon on the top right corner of the screen when on a call. If you struggle with using annotations after clicking “Start”, please proceed to use the 2D tracking following the steps below:

1. Click on the “Start” button
2. Click on the next symbol 
3. Click on “Stop Tracking”
4. Annotation tools can now be used when the tracking symbol changes to i.e. “2D”



**Note:** "Reset tracking"  and "Stop tracking" will wipe out current annotations.

Here is a [Video Walkthrough on using Annotation Tools.](#)

## FAQs

### Why is there no audio transmission from the caller to the receiver i.e. from the computer to the receiving device?

**Answer:** The input device on the computer is likely using the Capture device microphone when it should be using the computer's default microphone.

**Solution:**

1. On your computer, go to Sound Settings>>Sound>>Input>Manage Sound Devices.
2. Disable the Capture device listed under "Microphone".
3. The original default Microphone for that computer will now work on the call

#### Manage sound devices

Below is a list of all your devices. Select a device you want to disable or enable.

##### Output devices

- Speakers  
Realtek(R) Audio
- BenQ RL2460H  
NVIDIA High Definition Audio

##### Input devices

- Microphone  
Live Gamer Mini
- Stereo Mix  
Realtek(R) Audio

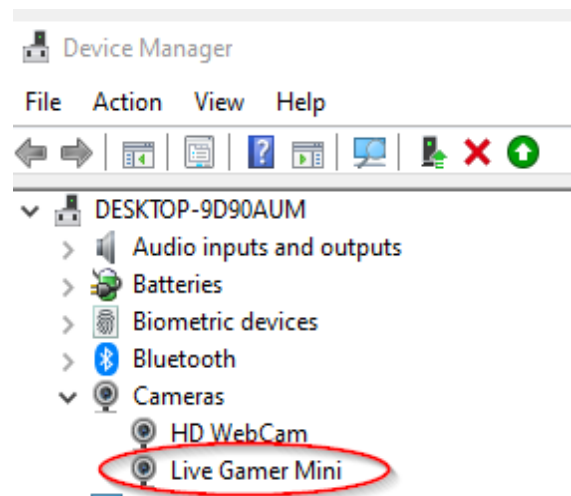
### Why is there no video transmission from the caller to the receiver i.e. from the computer to the receiving device?

**Answers:**

1. Your Microscope may be turned off.
2. Your Capture device may not be properly connected to the Computer and/or the Microscope.

**Solution**

1. Confirm the following:
  - a. Your Microscope is turned on.



- b. The Capture Card is connected to your computer using the USB cable.
  - c. The Capture Card is connected to the Microscope using the HDMI cable. **Use the “HDMI IN” port on the Capture Card.**
2. On your computer, go to “Device Manager” and click on the arrow beside “Cameras” to expand.
3. You should see the Video Capture device listed here, right-click on it to enable the device if disabled.
4. **Very important:** Connect your devices (Microscope, Computer, and Capture device) before installing the WorkLink App.

## Limitations

The following are limitations of using a Laptop/Desktop for initiating a Remote Assistance call:

- No camera swapping on Windows platform - This feature is available for iOS and Android platforms only.
- No recording on Windows platform - Session recording is currently only supported when the device placing the call is an iOS (ARKit) or Android (ARCore) device.
- Limited or no 3D Annotations capability on Windows Platform - Only one of the annotation tools work for 3D annotations with this use case. 2D tracking/annotations work perfectly.