

**vaddio**

# EasyUSB

Unified Communications (UC) Interoperability FAQ

## Contents

1	Compatibility Summary .....	2
1.1	Vaddio Lab Tested Interoperability.....	2
1.2	Field Test Soft-clients .....	3
2	UC Soft Client Interoperability .....	4
2.1	Cisco Jabber .....	4
2.2	Cisco WebEx.....	6
2.3	Skype.....	8
2.4	Adobe Connect 9.....	11
2.5	Microsoft Lync .....	13
2.6	Go-to Meeting (Citrix).....	15
2.7	Vidyo Desktop .....	17
2.8	Polycom M100 .....	18
2.9	LifeSize (Mirial) ClearSea.....	19
2.10	Google + .....	21
2.11	Encore by AGT (In progress).....	22
2.12	Panopto.....	23
2.13	Quicktime Media Player.....	24
3	General Troubleshooting .....	25
3.1	PC & OS Compatibility:.....	25
3.2	EasyTalk USB Audio Solution.....	26
3.3	ClearView HD-USB PTZ Camera .....	27
3.4	AV Bridge .....	27
3.5	Extreme USB Extender .....	27

# 1 Compatibility Summary

## 1.1 Vaddio Lab Tested Interoperability

The compatibility table below represents the UC software application that have been tested and validated by Vaddio Engineering for interoperability with the EasyUSB products. This includes ClearView HD-USB PTZ Camera, AV Bridge, and the EasyTalk Audio Solutions.

Software Client	Tested Version	Major Findings	Comment
Cisco Jabber	4.4	None	
Web Ex	WBS 28.7	None	Must have WebEx client version 28.7 to work with Vaddio USB Video Products. AV Bridge color space should be set to 4:2:0
Skype	6.0	720p only supported on Skype Certified Camera	Workaround for HD by downloading shareware to force HD.
Adobe Connect	9.0.1	UVC Conflict with some built in Laptop Cameras	Improved video performance with Release 1.2.0
Microsoft Lync	4.0.7	None	Improved video performance with Release 1.2.0
Gotomeeting (Citrix)	5.4	None	Improved video performance with Release 1.2.0
Vidyo Desktop	2.2.1	None	Certification in process with VidyoRoom systems
Polycom M100	1.0.4	None	
Lifesize ClearSea	8.2.0	None	
Google Plus	N/A	None	
Encore by AGT	Pending	Pending	Vaddio is working with AGT for compatibility. AGT is expecting to new release at end of Q1 that will be compatible with HD-USB camera.
Panopto	4.2.5602	None	
Quick Time Media Player	10.2	None	
VLC Media Player	2.0.4	None	
Real Player		None	

## 1.2 Field Test Soft-Clients

Field testing soft-clients are defined of known customer deployment of the EasyUSB product are using the identified application. Testing has been typically limited to conducting a test call with Vaddio personnel and verification of audio and video functionality.

UC Client	Description	Comment
IOCOM	Server-Client UC solution	
Radvison Scopia	Server-Client UC Solution	Preliminary testing completed. No issues found
Apple FaceTime	Server-Client UC Solution (Cloud Based)	Preliminary testing complete. No issues found
Blackboard	Lecture –Capture solution that includes UC client for distance learning.	Preliminary testing completed. No issues found
Tegrity	Lecture-Capture solution with softclinet	No issues found
Echo 360	Lecture-Capture solution with softclinet.	No issues found
USTREAM	CDN with softclient that can consume USB Webcam and USB Microphone as source.	No issues found
Livestream	CDN with softclient that can consume USB Webcam and USB Microphone as source.	No issues found
PresenterPro	House of Worship Capture software with USB Webcam & Microphone source capability	No issues found
Microsoft Expressions Encoder 3	Recording & Encoding software that allows USB video & audio as input source	No issues found
VCON	SIP client for point to point connections	
AVAYA ONE	SIP UC client from Avaya	

## 2 UC Soft Client Interoperability

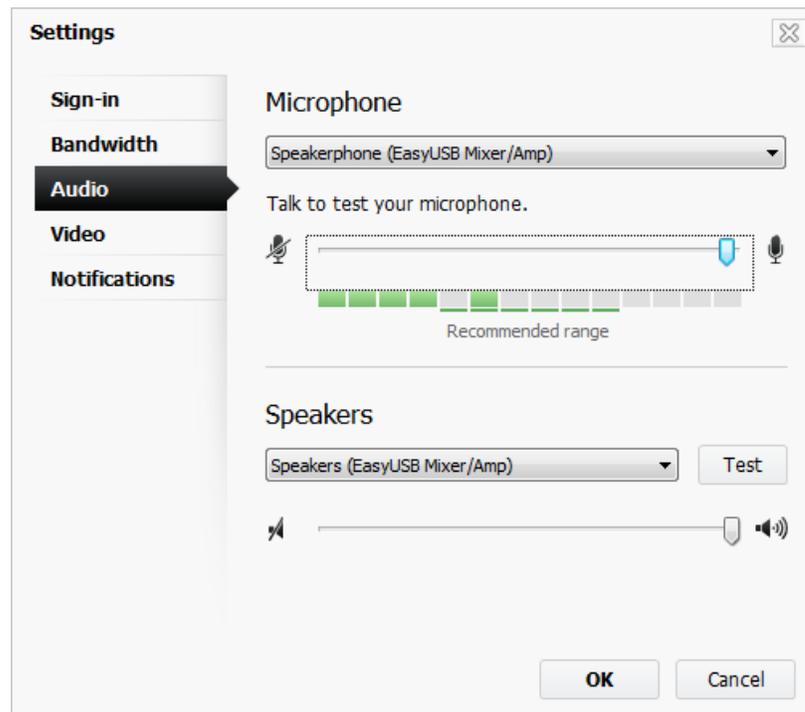
### 2.1 Cisco Jabber

- **General:** Cisco Jabber is deployed in an client-server architecture and is based upon a SIP signaling. It uses a H.264 encoder for HD video. Overall performance is good and Jabber adapts well to network fluctuations.

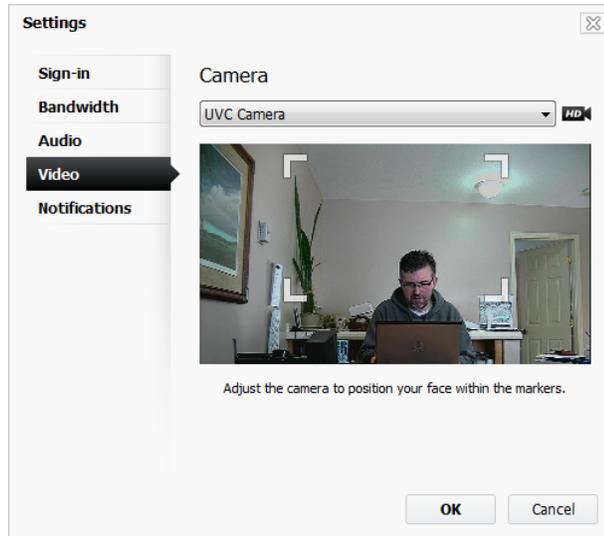
Table 2.1- Tested Versions

Jabber Version	Operating Systems	EasyUSB Tools Product
Version 4.4	Windows 7 MAC OS X	EasyUSB Mixer Amp
		ClearView HD USB
		AV Bridge

- **Recommended Configuration**
  - **Audio-** Select Speakerphone (EasyUSB Mixer/Amp) as both the Microphone and Speaker for Jabber. Set microphone gain so audio is in the green range during normal speech. If using an AV Bridge with Jabber, it will be identified as a microphone only.



- **Video-** Select UVC Camera as the video source. The HD-USB and AV Bridge will be identified as a UVC Camera within the application.



- **Troubleshooting**

Symptom	Potential Issue	Resolution
Poor Audio & Video	Limited Network Bandwidth	Check network bandwidth with in call network stats page.
Mic Audio Sounds Distorted	Mic Gain too high in Jabber Client	Go to audio settings and talk into EasyMic. Adjust gain slider until audio meter is in green range.

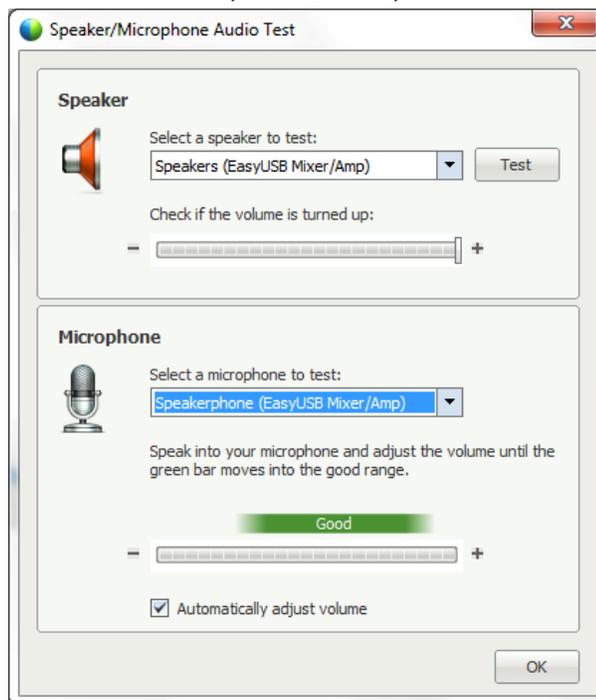
## 2.2 Cisco WebEx

- **General:** WebEx is a browser based web conferencing client-server application (Hosted) utilizing a Java Plug-in. Highest video resolution is 360p for Free Account and 720p is offered on the Premium Account. A video compatibility issue exists in WebEx version 28.6 and below. This is attributed to a limitation in the WebEx client to support MJPEG decoding. The Vaddio product are MJPEG imaging device. MJPEG support was added to WebEx in the WBS 28.7 release.
  - **In process for Cisco Partner Certification of HD-USB Camera**

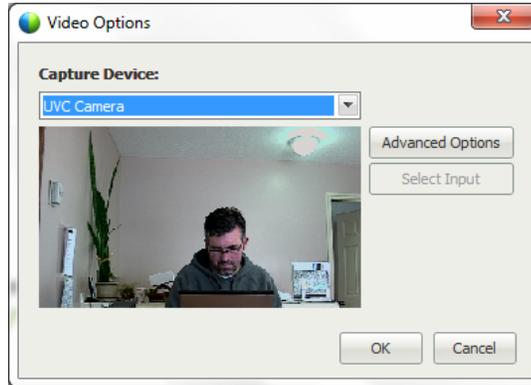
Table 2.2- Tested Versions

WebEx Version	Operating Systems	EasyUSB Tools Product
WBS 28.7 and above	Windows 7 MAC OS X	EasyUSB Mixer Amp
		ClearView HD USB
		AV Bridge

- **Recommended Configuration:**
  - **Audio-** Select the EasyUSB Mixer/Amp as the Speaker and Microphone within WebEx. This is accessed from the Audio<Speaker/Microphone Test menu.



- **Video-** Select UVC Camera as the source. This is accessed in the Video Options menu in WebEx represented as a COG Icon in the Participants Window. For AV Bridge, set the USB color space to 4:2:0 for optimum performance with WebEx.



- **Troubleshooting:**

Symptom	Potential Issue	Resolution
Stair stepped video	Non-compatible WebEx client	Check if WebEx Client is Version WBS 28.7 or above.
	Color Space Setting	Check Vaddio device to make sure USB Color Space is set to 4:2:0
Video Artifacts at resolution <360p	Downscaling artifact with WebEx client	The HD-USB camera possesses an edge enhancement feature producing crisp video edges between object in the shot. It has been found this cause scaling artifacts on some softclient on low resolutions. The edge enhancement (Sharpness) can be disabled in the camera from the IR remote and reduces scaling artifacts on softclient. Path is >special>image adj>sharpness
Low Resolution Video	Network Bandwidth	Go to Audio & Video Statistics within WebEx and monitor send and receive bandwidth. WebEx video resolution is tied to available bandwidth.

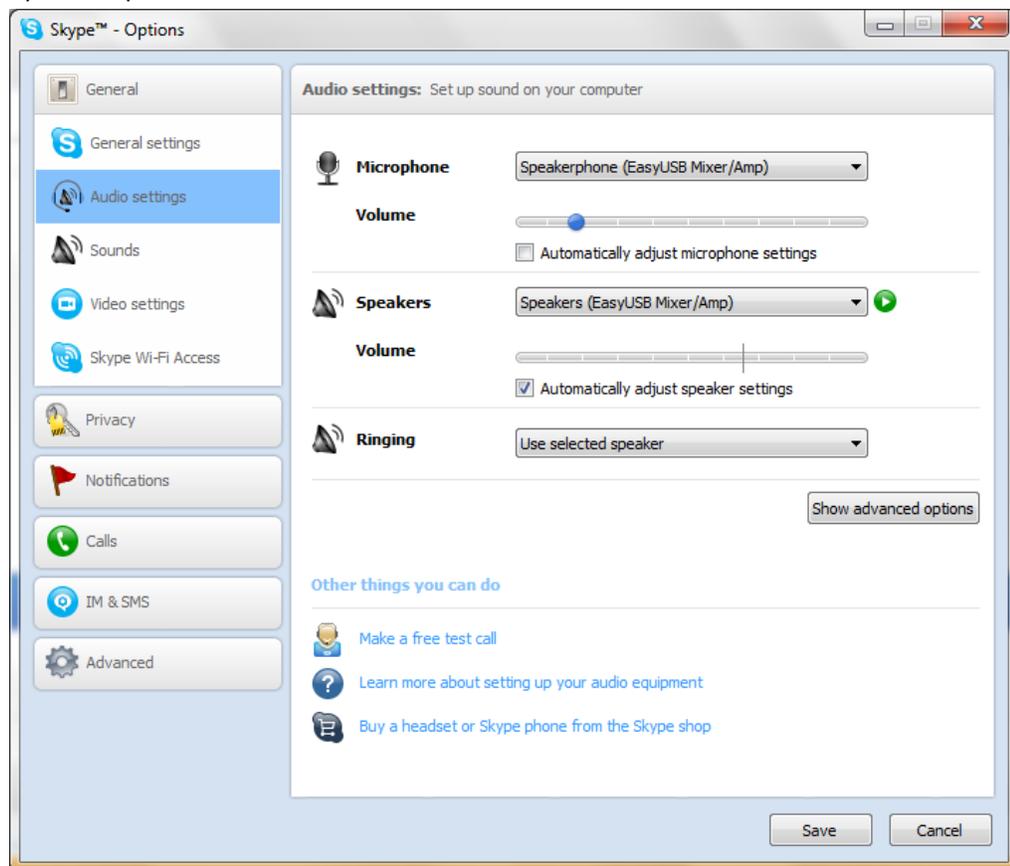
## 2.3 Skype

- General:** Skype is Server-Client architecture based upon proprietary signaling protocol. AV performance can be affected by both bandwidth availability and Skype server utilization at time of call. Full interoperability testing has been conducted with Skype and generally works without issues with the EasyUSB Tool product line.

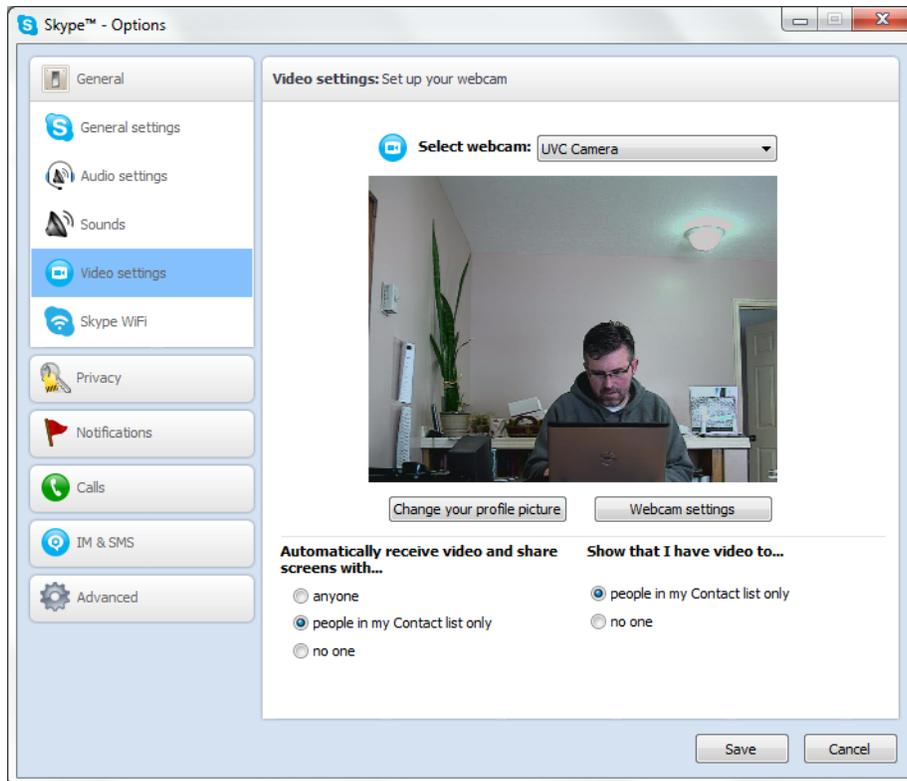
Table 2.3- Tested Versions

Skype Version	Operating Systems	EasyUSB Tools Product
Version 6.0	Windows 7 MAC OS X	EasyUSB Mixer Amp
		ClearView HD USB
		AV Bridge

- Recommended Configuration:**
  - Audio-** Set EasyUSB Mixer/Amp as the Microphone and Speaker device in the Tools> Options menu within Skype. Disable “Automatically adjust microphone settings” for optimum performance.



- **Video-** Select UVC Camera as the WebCam in the Tools>Options menu within Skype.



- **Troubleshooting:**

Symptom	Potential Issue	Resolution
Poor Audio & Video	Limited Network Bandwidth	Check network bandwidth of connection in Skype under Menu <Call<Call Tech Info. This will list call stats and identify if audio/video problem is associated with available bandwidth. Re-establishing call can sometimes help.
	Skype AGC enabled	Skype has aggressive AGC that can cause mic audio to clip. Recommendation is to disable "Automatically adjust mic settings" and set Skype gain manually.
No HD Video	Skype Certification	Skype requires the WebCam to be Skype Certified in order to support 720p calls. The HD-USB Camera is currently not certified. There are open-source applications that can be downloaded that will force Skype into HD video mode.



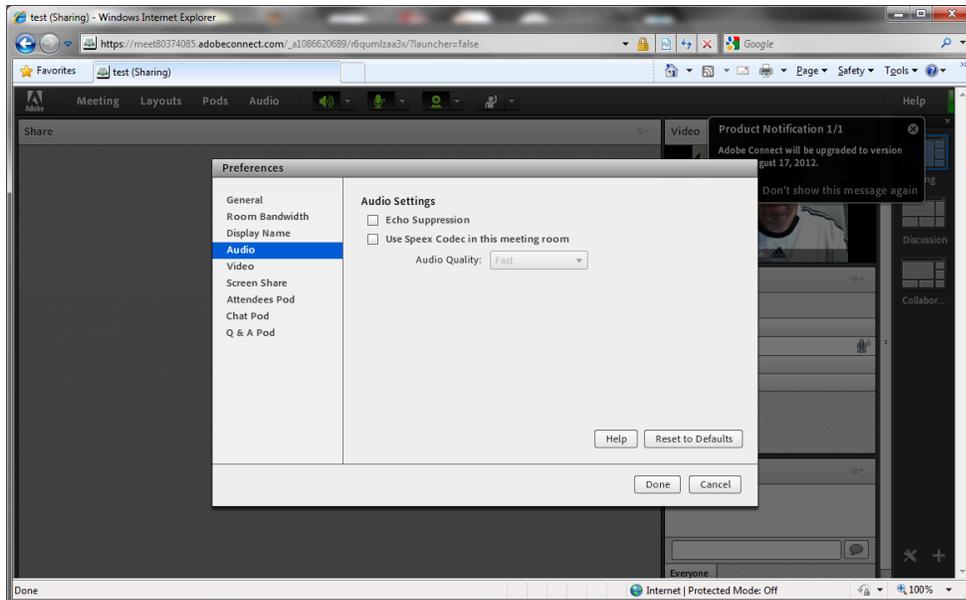
## 2.4 Adobe Connect 9

- **General:** Adobe Connect is a Web-Based web conferencing solution with Client-Server architecture. It utilizes a Flash based plug-in for the media & control functionality. Supports 640X480 video (max).

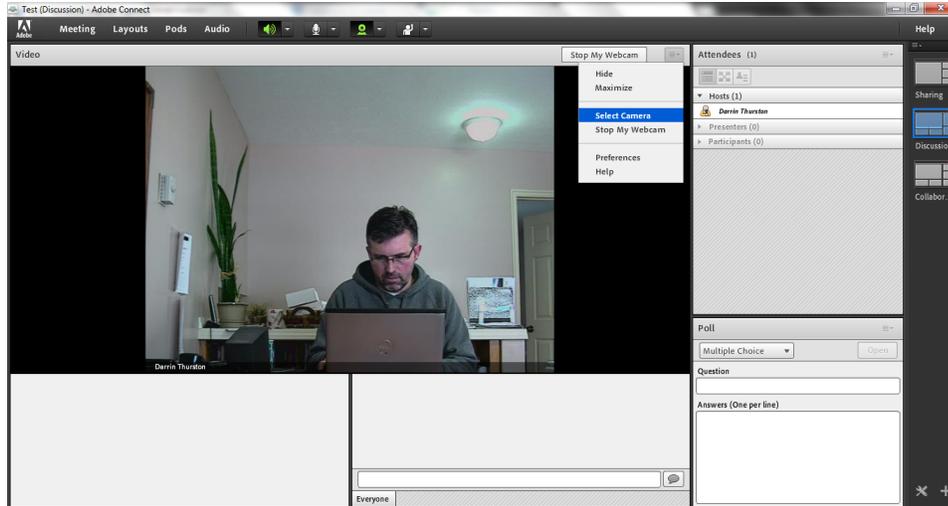
Table 2.4- Tested Versions

Adobe Version	Operating Systems	EasyUSB Tools Product
Version 9.0.1	Windows 7 MAC OS X	EasyUSB Mixer Amp
		ClearView HD USB
		AV Bridge

- **Recommended Configuration**
  - **Audio-** Audio settings found under Meeting/Preferences/Audio. Disable Echo Suppression when used with EasyMic's. Enable Echo Suppression when used with A/V Bridge. Mic gain can be modified from the speaker and microphone controls in the application. .



- **Video-** The camera can be selected from the video pane in Adobe Connect. The HD-USB camera will be depicted as a UVC Camera.



- **Troubleshooting:**

Symptom	Potential Issue	Resolution
Can't Select HD-USB Camera as source	Adobe UVC Enumeration	The HD USB-Camera is defined as a generic UVC device. It was found that Adobe does not recognize the distinction between generic UVC devices if multiple are connected to the PC. It will always pick the first UVC device plug-in. Fix is to disable any Non Vaddio UVC device in operating system (Win XP or Win 7).
No Audio	Must Allow Connect to access audio device	Upon entering a meeting room, a pop-up is presented to user asking if Connect can access PC audio devices. Must confirm access for audio to work.
	Must Connect Audio	User is required to connect mic in the application for audio to start.
No Video	Must Start Video	User must share video in the application for WebCam to activate.
Video Artifacts at low resolution	Downscaling artifact with Connect client	The HD-USB camera possesses an edge enhancement feature producing crisp video edges between object in the shot. It has been found this cause scaling artifacts on some softclient on low resolutions. The edge enhancement (Sharpness) can be disabled in the camera from the IR remote and reduces scaling artifacts on softclient. Path is >special>image adj>sharpness

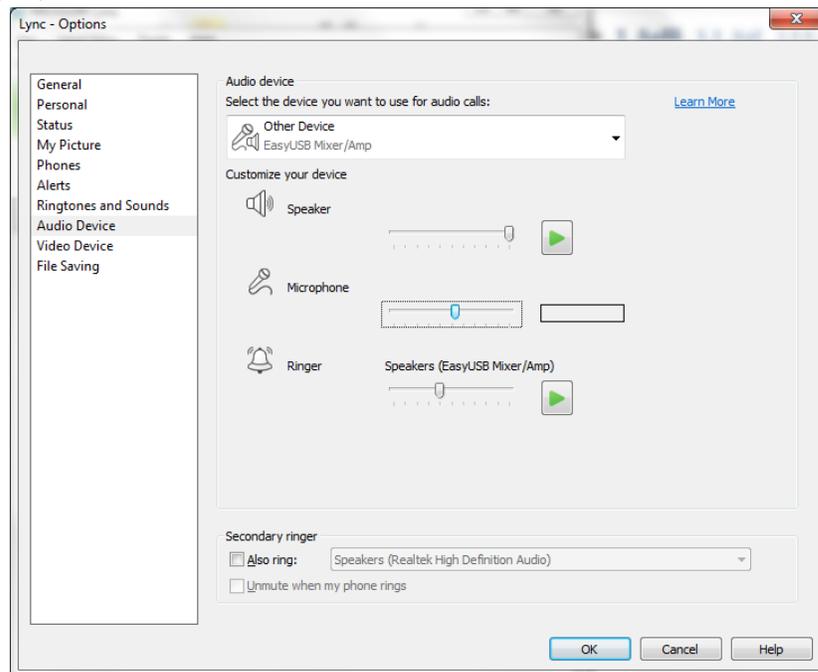
## 2.5 Microsoft Lync

- General:** Microsoft Lync deploys a Client-Server architecture and is based upon a modified (proprietary) SIP call signaling protocol. It utilizes a proprietary video encoding (RT) on the client application requiring a Quad-Core PC to obtain HD resolution (720p/24- max). Video and audio quality can be impacted with network bandwidth fluctuations.
  - Microsoft Lync Certification – In process.**

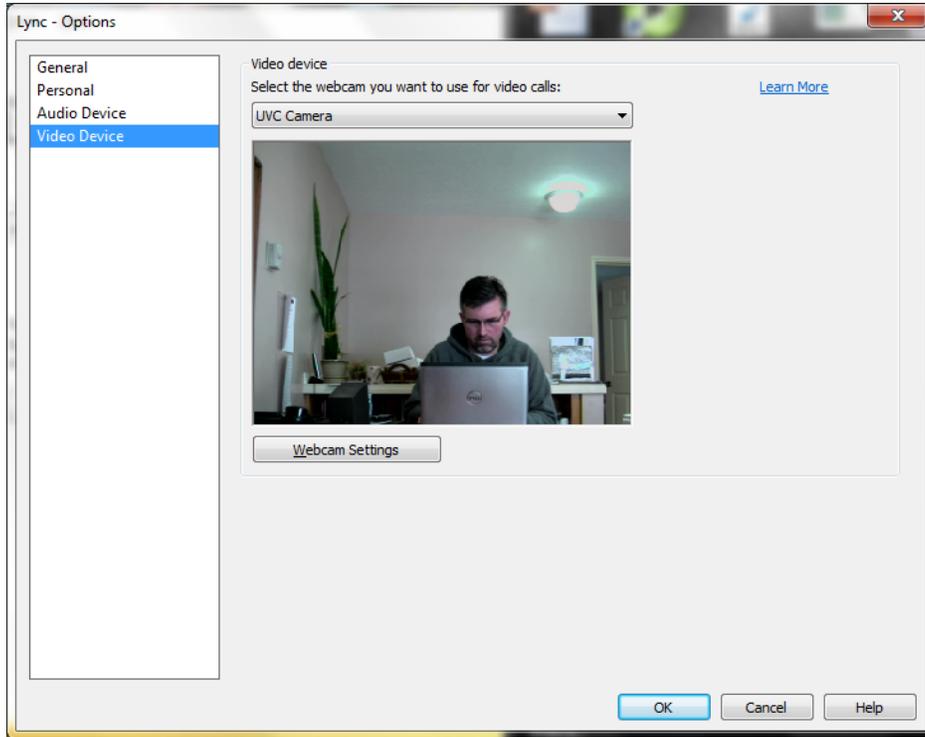
Table 2.5- Tested Versions

Lync Version	Operating Systems	EasyUSB Tools Product
Version 4.0.7 (Lync 2010)	Windows 7	EasyUSB Mixer Amp
		ClearView HD USB
		AV Bridge

- Recommended Configuration:**
  - Audio-** EasyUSB Mixer/Amp can be selected as audio device under Tools/Option/Audio Devices. Defaults setting are recommended. Lync has PC audio processing with both AGC and AEC that cannot be disabled and will automatically adjust any setting made in USB properties.



- **Video-** The HD-USB camera is selected as the source within the Lync Options pane. The device will show up as an UVC Camera.



- **Troubleshooting:**

Symptom	Potential Issue	Resolution
Can't get HD Video	PC Requirements	Must have Quad Core to get 720p on both ends. Check MS web for PC requirements.
	Limited Network	@1.5Mb required for HD.
Audio Anomalies	Lync Audio Processing Conflicts	Lync audio processing on the PC is optimized for Headset applications with ACG, AEC, and Noise reduction and cannot be disabled. Audio anomalies (pumping, level fluctuations) can occur with large acoustical event that may occur in a room environment.
Cant' Answer Call	HID Commands	Currently the Answer & Hangup Key will not interface with Lync Client. This is known issue and resolution will be on future release.

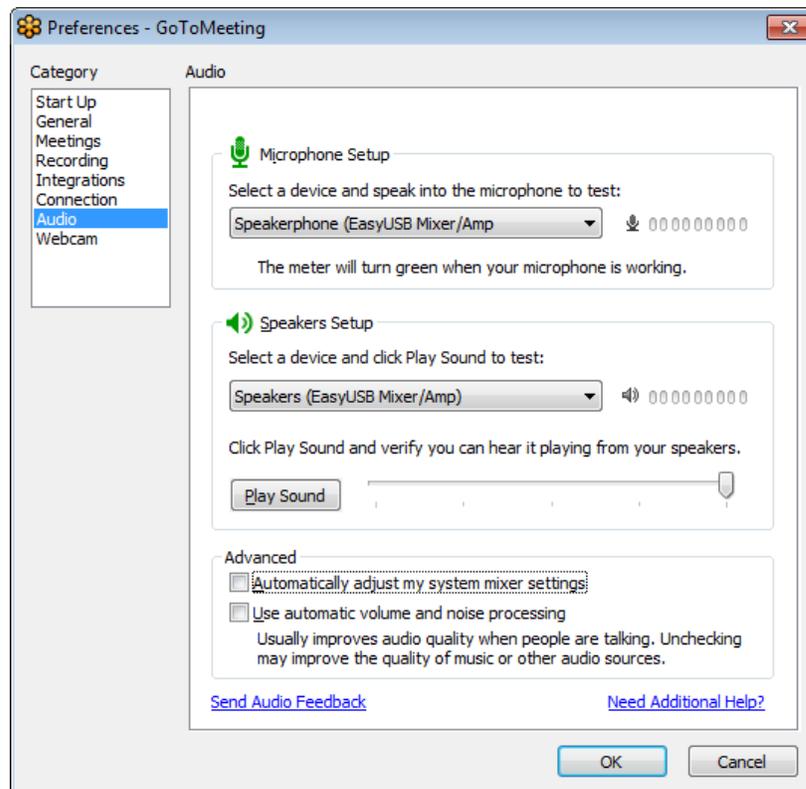
## 2.6 Go-to Meeting (Citrix)

- **General:** Cloud based Web Conferencing Service. GTM utilizes a proprietary encoder for video.

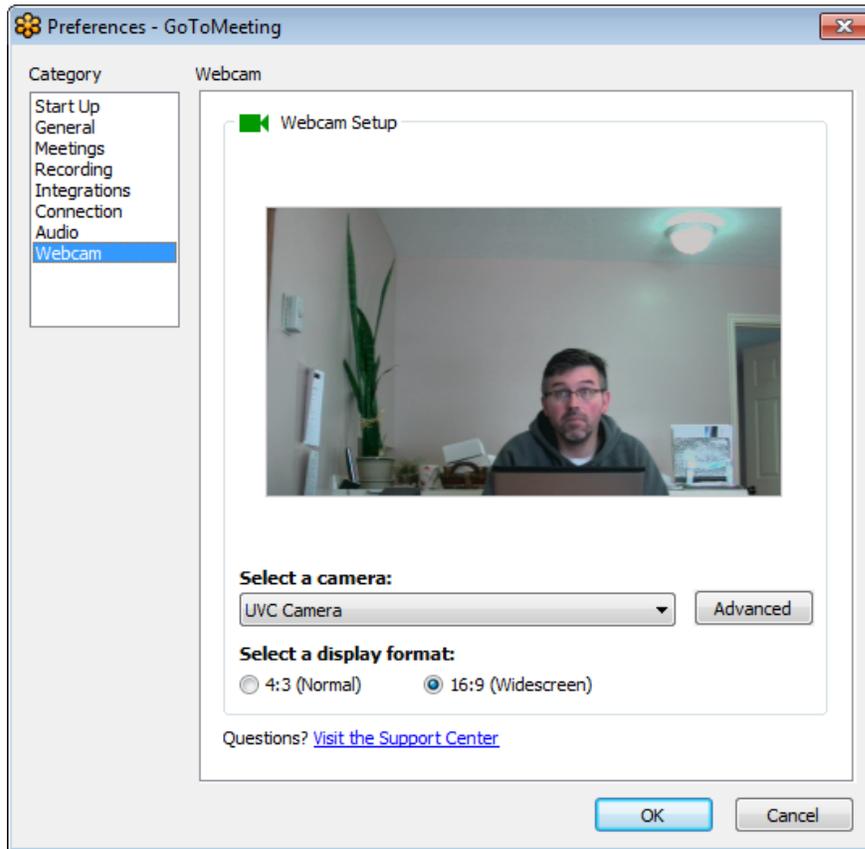
Table 2.6- Tested Versions

GTM Version	Operating Systems	EasyUSB Tools Product
Version 5.4	Windows 7 MAC OS X	EasyUSB Mixer Amp
		ClearView HD USB
		AV Bridge

- **Recommended Configuration:**
  - **Audio-** Select the EasyUSB Mixer/Amp as both the Microphone and Speaker within the Preferences panel in Go-to-Meeting. Recommendation is to disable the advanced settings for “Use automatic volume and noise processing” and “Automatically adjust my system mixer settings” to prevent processing conflicts between GTM and the EasyMic Echo Cancellation function.



- **Video-** In the preference pane, select the UVC Camera as the source.



- **Troubleshooting:**

Symptom	Potential Issue	Resolution
Video Edge Artifacts	Low Resolution Scaling	GTM typically operates at lower video resolution potentially creating scaling artifact in the image. This may be improved by disabling the "Sharpness setting" on the HD-USB camera with the IR Remote. This as accessed on the camera menu at: Special>image adjust>sharpness
Noise Burst in Audio	GTM Audio Anomaly	In testing it was observed that occasional noise burst in the GTM receive audio was observed in Handfree operations. The occurrence of this was reduced by disabling the "Use automatic volume and noise processing"

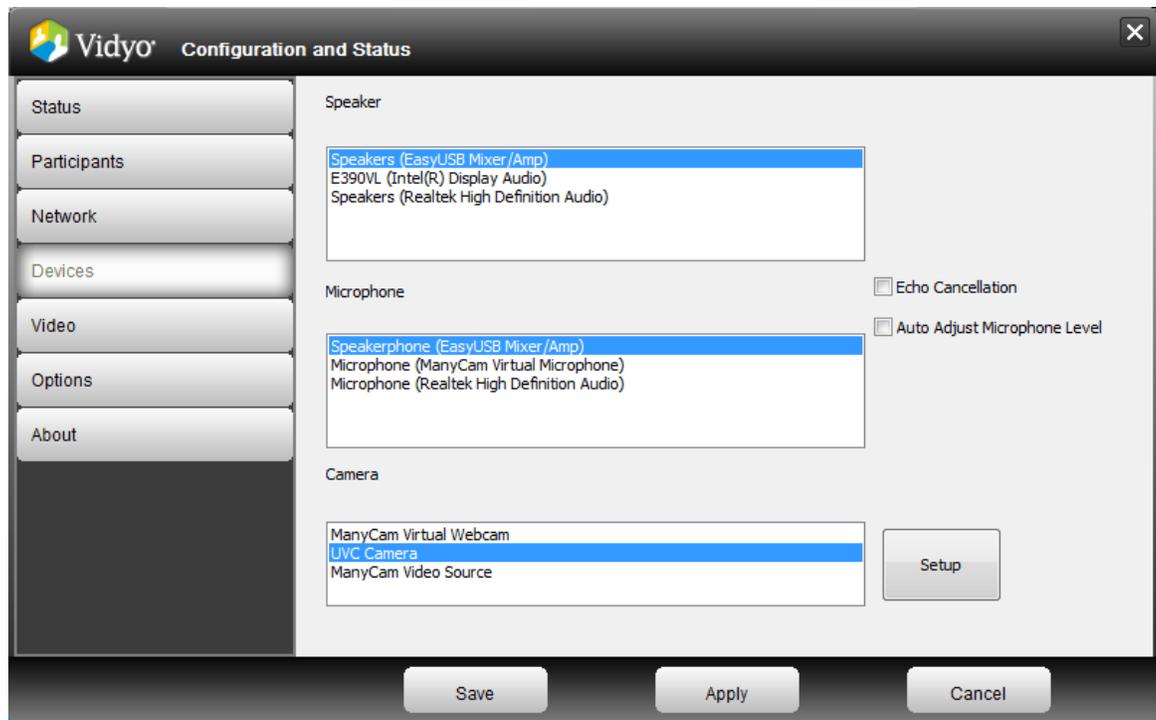
## 2.7 Vidyo Desktop

- **General:** Vidyo is a client-server application for video conferencing. It utilizes a modified SIP signaling protocol with H.264 SVC.

Table 2.7- Tested Versions

Vidyo Desktop	Operating Systems	EasyUSB Tools Product
2.2.1	Windows 7 MAC OS X	EasyUSB Mixer Amp
		ClearView HD USB
		AV Bridge

- **Recommended Configuration:**
  - **Audio& Video-** Select the EasyUSB Mixer/Amp as the speaker and microphone within the Configuration & Status menu in the Vidyo client. Recommendation is to disable “Echo Cancellation” and “Auto Adjust Microphone Level” for optimum performance with the EasyTalk Audio Solution. Select the UVC Camera as the camera source in the same pane.



- **Troubleshooting:**

Symptom	Potential Issue	Resolution
No Audio with AV Bridge	Source not connected to Left Channel Audio Input	Vidyo only sends left audio channel of Stereo input. Make sure audio source is on left channel.

## 2.8 Polycom M100

- **General:** SIP based video conferencing client. Client has minimum requirements that drives maximum resolution supported.

Table 2.8- Tested Versions

Polycom M100	Operating Systems	EasyUSB Tools Product
1.0.4	Windows 7	EasyUSB Mixer Amp
		ClearView HD USB
		AV Bridge

- **Recommended Configuration:**
- **Troubleshooting:**

Symptom	Potential Issue	Resolution
HD USB Camera cannot be used by other Applications	Polycom client does not release UVC device in operating system.	Terminate Polycom application if user desires to use HD-Camera with another application.
No HD Video	PC Limitation	720p requires 2GHZ Quad Core, VGA requires 3.2GHZ Pentium, CIF requires 2.0 Pentium.
No Audio with AV Bridge	Source not connected to Left Channel Audio Input	Vidyo only sends left audio channel of Stereo input. Make sure audio source is on left channel.

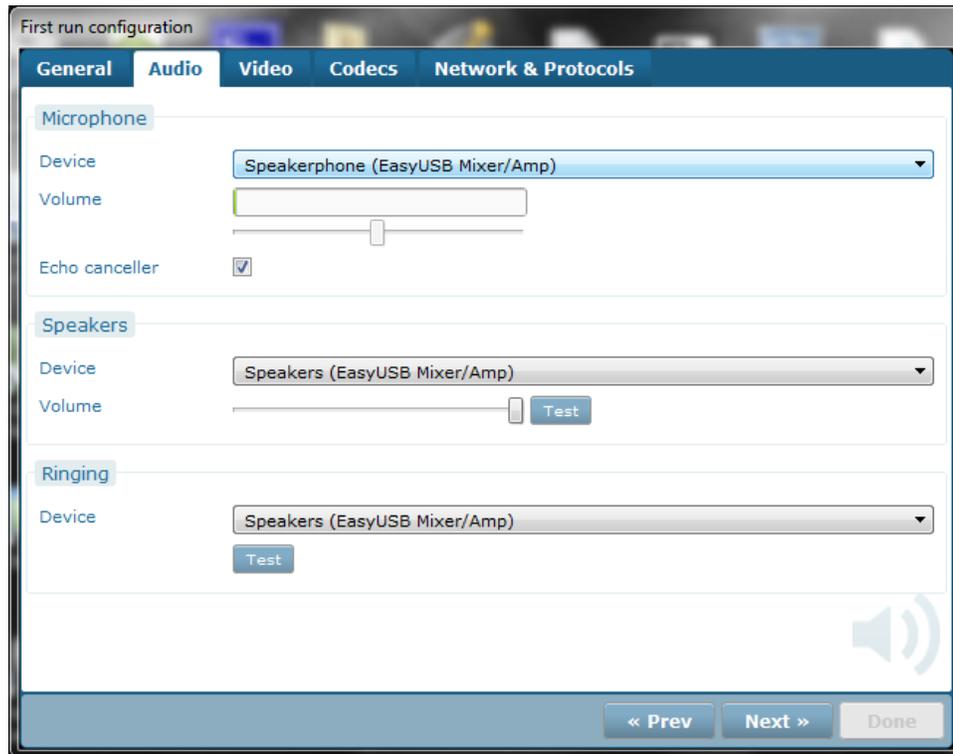
## 2.9 LifeSize (Mirial) ClearSea

- **General:** ClearSea is a Client Server based video conferencing application using SIP signaling and H.264 encoding.

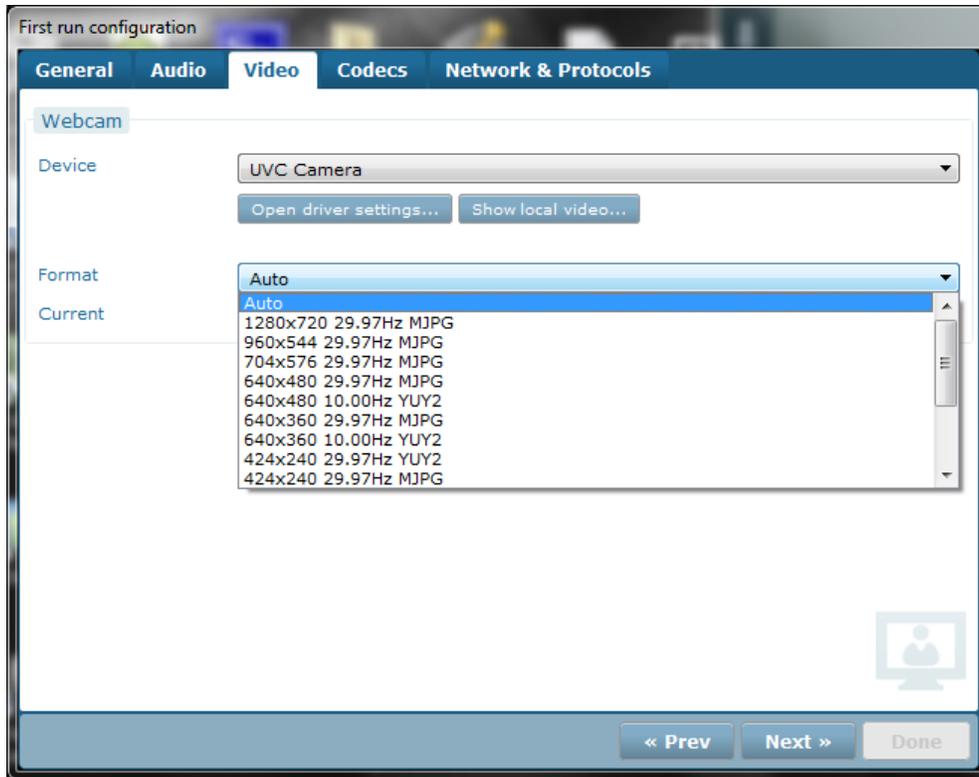
Table 2.9- Tested Versions

ClearSea	Operating Systems	EasyUSB Tools Product
8.2.0	Windows 7	EasyUSB Mixer Amp
		ClearView HD USB
		AV Bridge

- **Recommended Configuration:**
  - **Audio-** In the setting of the ClearSea client, set the Microphone and Speaker for the EasyUSB Mixer/Amp.



- **Video-** In the video tab, select the UVC Camera as the webcam device. ClearSea has ability to set the desired USB resolution for video stream in the drop down list. Recommend auto.



- **Troubleshooting:**

Symptom	Potential Issue	Resolution

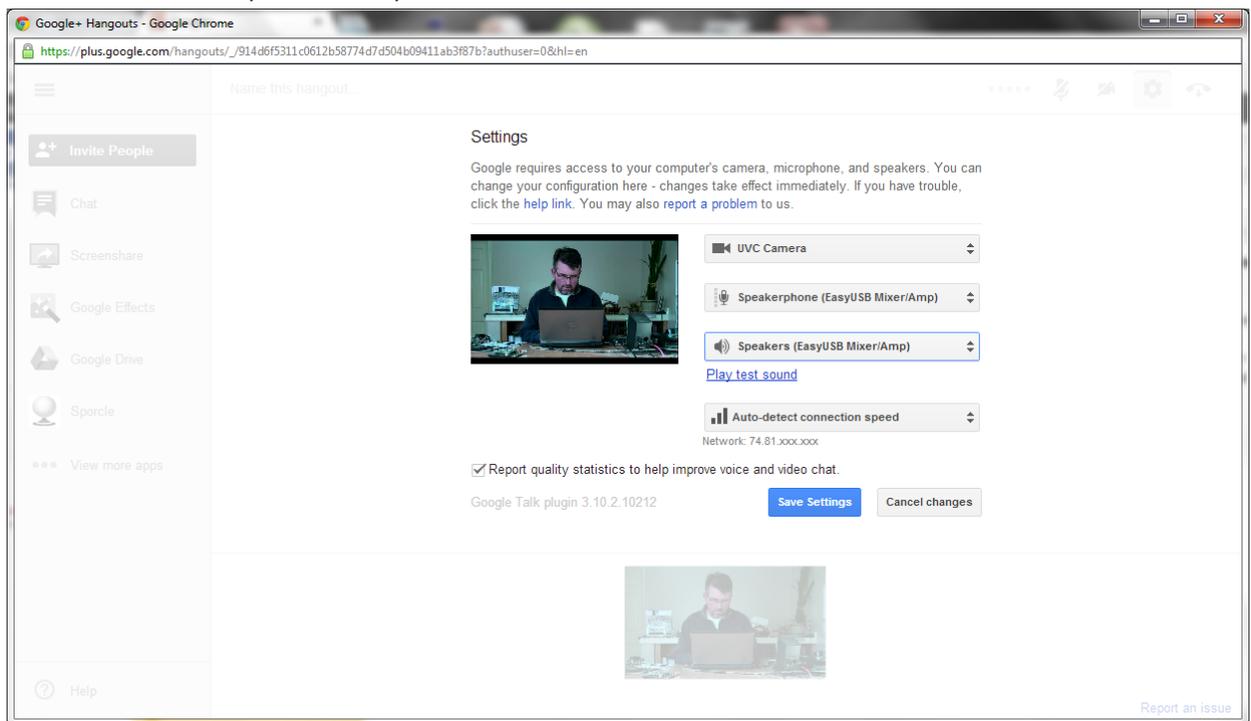
## 2.10 Google +

- **General:** Google+ is a web-based UC client based upon server-client architecture. It uses a proprietary signaling, video encoding, and audio encoding.

Table 2.10- Tested Versions

Google+	Operating Systems	EasyUSB Tools Product
N/A	Windows 7	EasyUSB Mixer Amp
		ClearView HD USB
		AV Bridge

- **Recommended Configuration:**
  - **Audio & Video-** Go to settings icon in the Google Hangout. Select EasyUSB Mixer/Amp as the microphone and speaker device. Select UVC Camera as the video source.



- **Troubleshooting:**

Symptom	Potential Issue	Resolution

## 2.11 Encore by AGT (In progress)

- **General:**  
AGT and Vaddio are working together for compatibility. AGT is in process of a new release that will be compatible with Vaddio Revision 1.2.0.
- **Configuration**  
TBA
- **Troubleshooting**  
TBA

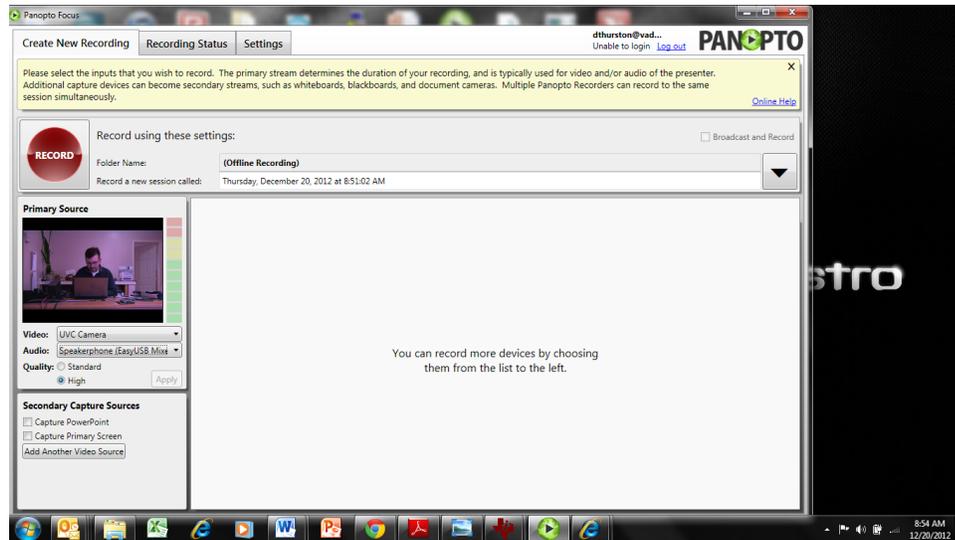
## 2.12 Panopto

- **General:** Panopto is a lecture/capture server based solution. It provides a method to locally capture USB audio and video sources that can be uploaded to server from distribution.

Table 2.12- Tested Versions

Panopto	Operating Systems	EasyUSB Tools Product
4.2.5602	Windows 7	EasyUSB Mixer Amp
		ClearView HD USB
		AV Bridge

- **Recommended Configuration**
  - **Audio & Video-** Select UVC Camera and EasyUSB Mixer/Amp as audio source. Audio levels controls can be adjusted in the operating system.



- **Troubleshooting:**

Symptom	Potential Issue	Resolution

### 2.13 Quicktime Media Player

- **General:** Apple's media player that allows use of UVC and UAC devices to be the sources allowing direct recording with movie recording feature.

Table 2.8- Tested Versions

Quicktime Version	Operating Systems	EasyUSB Tools Product
10.2	MAC OS X	EasyUSB Mixer Amp
		ClearView HD USB
		AV Bridge

- **Recommended Configuration:**  
N/A

## 3 General Troubleshooting

### 3.1 PC & OS Compatibility:

- **PC Requirements:** All UC softclients have minimum PC requirements for the application to run properly. Typically, higher PC CPU requirements are need to achieve HD video. Customers that are unable to obtain HD calls should verify PC meets softclient minimum CPU requirements.
- **Network Bandwidth:** Most UC clients require a minimum of 1-2 Mb bandwidth to support a 720p call. The UC clients will typically automatically reduce video resolution based upon available bandwidth. In addition, poor bandwidth can result in both video and audio anomalies during a call.
- **USB Connections:** The EasyUSB video devices require a USB 2.0 High Speed connection to the Host PC for HD Video. USB Host Controller, Hubs, or Repeaters that are not USB 2.0 High Speed may result in video and audio anomalies occurring.
- **Audio & Video Device Selection:** PC User must select the EasyUSB Tools devices as the WebCam and Audio device within the operating system and UC client for the products to work properly in conferencing application. Mixer/Amp **must be** selected as both Record and Playback device for AEC to work properly.
- **Windows 7:**
  - No major issues found.
- **Windows XP:**
  - User must have SP3 for USB volume controls to work properly with EasyUSB
- **Mac OS X:**
  - Mac OS 10.6 does not support volume control reporting to USB devices. If EasyUSB Mixer/Amp is connected to Mac running 10.6 or below, the volume indicators on the EasyMic Mic Pod will not be synchronized with the MAC. This works with 10.7 or above.

## 3.2 EasyTalk USB Audio Solution

Symptom	Potential Issue	Resolution
No audio out Amp	AMP went into overload protection.	Power cycle MAMP and it will reset internal class-D amplifier
No Audio Sent to Far-End	UC client microphone is muted	Some UC clients (Skype) have their own Mute function that is independent of the USB Record Mute.
No Audio Heard when connected to TV	HDMI Audio Input selected on LCD	The line output of the Mixer/Amp can be used to connect to LCD Display to use it internal speakers. However, some LCD Displays will automatically switch to the HDMI Input audio instead of the RCA input. In this configuration, make sure the RCA input on the LCD Display is selected when connected to Mixer/Amp.
UC Client Mute and EasyMic Indicator Not Sync	Operating systems do not support acknowledgement of Mute from USB device	Both Windows and Mac Operating systems will not recognize a mute activation originating from the EasyMic. Therefore, the EasyMic Pod may show microphone are muted but software shows audio is not mute. However, audio will actually muted. No workaround is available.
EasyMic audio heard out MAMP	EasyMic heard out Loudspeaker	Windows 7 has a sound property ('Listen') that allows the record device to be looped to the playback device. Disable if this is enabled.
MAMP not recognize as Sound Device	DIP Switch 8 Enabled	DIP 8 places the MAMP in firmware update mode and will disable the USB functions so PC will not recognize device.
	Windows Register conflict with MAMP	Windows stores all connected USB devices in the registry. If a firmware update changes certain USB parameters, it can cause windows to get confused and not be recognized as EasyUSB device. To resolve, uninstall the UVC driver and reconnect the EasyUSB. This process clears the registry of the old parameters associated with the device.
Far-End Hears Echo	MAMP not selected as Playback Device	EasyMic AEC needs speaker reference to work properly. MAMP must be selected as both Record and Playback device otherwise the far-end may hear echo.
Echo or choppy audio when line out connected to external amp	Volume changes occurring on external amp.	Volume changes for room's speaker system that occur external to the MAMP will cause AEC to re-adapt and may result in short period of echo or suppression.

Speaker Audio seems low	More level needed into room speakers	DIP 5 on the MAMP will enable a compressor/expander function that will add up to 9dB of additional gain out the amplifier.

### 3.3 ClearView HD-USB PTZ Camera

Symptom	Potential Issue	Resolution
No Video	Another application has control over Camera	Only one UVC device can be used by an application at one time. If another software application has control over camera, no video can be streamed to the current application. Fix by closing application that is not active but has control over camera.
	Initialization Issue	Load Version 1.2.0 on the camera. A issue was corrected that could cause video to not be initialized on bootup. Version 1.2.0 has a fix to prevent this from happening.
Video Artifacts when Client is sending low resolutions	Sharpness Setting on Camera	Some softclient can produce video artifacts when downscaling to low resolutions. This video quality can be improve by disabling the sharpness feature on the camera. This is done from the IR remote Data Screen button. Navigate to special>image adj> sharpness and set to off.

### 3.4 AV Bridge

Symptom	Potential Issue	Resolution
No Video	Another application has control over AV Bridge	Only one UVC device can be used by an application at one time. If another software application has control over camera, no video can be streamed to the current application. Fix by closing application that is not active but has control over AV Bridge.
No Audio	Check if Audio Source is input on Left Channel.	Some applications only support Left Channel in USB audio. Check if audio source input is on left channel.
Stair Step Video image with WebEx	Check if WebEx client is T28.7 or greater	WebEx added support for MJPEG cameras in T28.7.
	Check if AV Bridge is set to 4:2:0 color space on web pages	AV Bridge must be set to USB Color Space setting of 4:2:0 .

### 3.5 Extreme USB Extender

Symptom	Potential Issue	Resolution
Video Freezes when using Extreme USB	Long USB Cable used on Device Side.	The USB Cable on the remote end of the USB Extreme should not exceed 3-feet. Longer cable may affect video sync through the Extreme USB

		system.
No Video at Host PC	Host PC not powering Local End.	The Local End (PC) of the Extreme USB is powered by the PC in the normal configuration. The HOST PC must be able to supply 500mamps from the USB Port. Some PC may not meet the USB spec, in these conditions the AC adapter must be used on the Local End of the ExtremeUSB system.
Distorted audio when used with EasyUSB Mixer/Amp	Extreme USB is not compatible with EasyUSB Mixer/Amp	The EasyUSB Mixer/Amp is not fully compatible with ExtremeUSB and user may experience distorted audio on the Playback channel. The AV Bridge audio sub-system is compatible with Extreme USB.