# **BORGINSOLC** 2D VIDEO APP User Manual



# **2D Video App Capture**

Version 1.2.0.4 (3.91MB) 20/05/2022



# 2D Video App Analyse

# Version 1.0.28.0 (7.52MB) 09/12/2020



# 2D Video App Editor

Version 1.2.1.0 (886 kB) 20/05/2022



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# **1** Introduction

This document contains the information required to correctly use the BORGinsole 2D Video Applications. The BORGinsole 2D Video App is divided into three applications.

The **BORGinsole 2D Video App Capture** is used to capture videos from 1 to 6 IDS cameras. These videos are captured at the same time. You are able to change the framerate, exposure, gain and area of interest to get the desired video. Once the videos have been captured you can edit the video (cut/name/compress).

You can even do a configuration for two settings of 6 cameras (from version 1.1.3.1; e.g. when you have two practices with different camera setups or when you have cameras around a treadmill, but also in a pathway,...). The default is one time six cameras, but you can upgrade.

With the **BORGinsole 2D Video App Analyse** application, you can analyse up to six videos or pictures simultaneously and generate reports of the movements measured in the videos. It is possible to synchronize these videos, even if the framerate is different from each other. Videos can be played forward using different speeds, up to 18x slower than recorded. You can view each video frame by frame to make a detailed analysis of the patient. Drawings can be made upon the videos to measure angles, or to show specific findings to the patient while explaining the results of the analysis. In each video, up to six markers can be placed to generate automatic reports.

The **BORGinsole 2D Video App Editor** application. This application is used to cut, select AOI, to rotate and compress any video. You can do this when the video is too long. You cut the video shorter (so you only have the images you need) and it will take less data storage on your system. Or if you want to split one video in two or more videos. This way you can also upload videos in your podoCLOUD taken from your mobile phone, Ipad, drone, ...





# 2 BORGinsole 2D Video App Capture: Setup of the cameras

# 2.1 IDS software

The BORGinsole capture application works with IDS cameras. In order for these cameras to be correctly identified and rendered, it is important to use the IDS software and to check if all connected cameras are correctly configured and detected. The installation of the IDS drivers will include the IDS Camera Manager software and it also contains a detailed manual in case there are issues with the cameras.



One of the most important actions that you need to verify is related to the IDS Camera Manager. The BORGinsole Capture application uses the following two parameters of the camera:

- Serial number (SerNo.)
- Camera ID (Cam.ID)





If multiple cameras are used it is important to make sure that all camera ID's are unique. In case two or more cameras share a camera ID, you need to change the camera ID's using the IDS Camera Manager software. Select the camera you want to adjust > click 'Camera information' > adjust the ID number.

							x
amera list							
ree	Avail.	Туре	Cam.ID	Dev.ID	Model	SerNo.	
Yes	Yes	USB	6	1	UI-324xLE-C	4102989745	
Yes	Yes	USB	5	2	UI-324xLE-C	4102974999	
-Yes	Yes	ETH	1	1001	UI-524xCP-C	4103002949	
- Yes	Yes	ETH	2	1002	UI-524xCP-C	4103002952	
- Yes	Yes	ETH	3	1003	UI-524xCP-C	4102989919	
Yes	Yes	ETH	4	1004	UI-524xCP-C	4103002935	
ontrol cen	ter						
ontrol cen	iter ert mode						
	ert mode	al informatio	on		Camera in	formation	
	ert mode Gener	al informatio				formation ork service	
	ert mode Gener Creat		le		ETH netwo		
	ert mode Gener Creat	e support fi	le		ETH netwo	ork service	
	ert mode Gener Creat	e support fi	le		ETH netwo	ork service	
	ert mode Gener Creat	e support fi	le		ETH netwo	ork service	
	ert mode Gener Creat	e support fi	le		ETH netwo	ork service	
	ert mode Gener Creat	e support fi	le		ETH netwo	ork service	
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For detailed instructions on how to use the IDS software it is recommended to read the uEye manual.



# 2.2 Fixing video ranking in overview capture window

When opening the video Capture application, all the connected and installed cameras will be shown.

Installing cameras see: Ueye IDS Camera Manager'

The Capature application is ranking the cameras using the serial number. (e.g. in the first window the 'Post' camera is shown, the second 'Front',...)

DS Camera Manager

This ranking can be changed in the file "BorginsoleVideoCapture.exe.Config" . You can find this in the Capture folder.

To open > click right > 'open with' > Notepad (NL: kladblok) .When you scroll down, you will find this:

<pre><add key="CambResolutionSwitch" value="744"></add> <add key="CambResolutionStop" value="312"></add> <add key="CambResolution3Left" value="24"></add> <add key="CambResolution4Name" value="Total body 4"></add> <add key="CambResolution4Height" value="348"></add> <add key="CambResolution4Height" value="348"></add> <add key="CambResolution4Width" value="816"></add> <add key="CambResolution4Width" value="388"></add> <add key="CambResolution4Top" value="338"></add> <add key="CambResolution4Left" value="72"></add> <add key="CambBresolution4Left" value="72"></add>  <add key="CambBresolution4Left" value="72"></add>           <add key="CamIstaticSNumber" value="4102974999"></add> <add key="CamIstaticSNumber" value="4103002952"></add> <add key="CamIstaticSNumber" value="4102989919"></add> <add key="CamIstaticSNumber" value="4103002935"></add> <add key="CamIstaticSNumber" value="4103002949"></add> <td></td></pre>	
--	--

Here you can edit the ranking of the cameras. After 'value=' the serial number of the camera is shown. By switching the serial numbers with each other you can monitor the ranking.





# 2.3 Configuration/setup of the cameras in the BORGinsole Capture application

This step will set the different resolutions for the cameras. You can set four different resolutions/ areas of interest (AOI) for each camera. The BORGinsole Capture application can show six different cameras at the same time for one setting/practice.

You can even do a configuration for two settings of cameras (<u>e.g. when you have two practices</u> with different camera setups or when you have cameras around a treadmill, but also in a pathway, connected to the same computer). So you can configure 2x six camera's. The default is one time six cameras.

If you want to activate the second setting you have to open the folder:

C:\BORGinsole podoCLOUD\2D Video App Capture.

In this folder open the file: "BorginsoleVideoCapture.exe.Config" with notepad (NL: kladblok) (Right Click > open with), scroll down to the bottom and search:

- a. Default for one setting: <add key="HiddenActiveSetup" value="default" />
- b. For two camera settings change to: <add key="HiddenActiveSetup" value="2" />
- c. Close notepad (NL: kladblok) and save the changes

When you activated the second setting, at launch the BORGinsole Capture application will ask you which setting you want to open:



When the two setups are turning green it means that all cameras are well connected. If one or both are in red, the application is telling you that he is missing (a) camera(s). If this is the case, check that all the cables are well connected.

If you have one setting, the application will automatically open this one setting.



When you've activated the two setups, you can pin a camera to setup 1 or 2 and fixated its position. Open the folder:

C:\BORGinsole podoCLOUD\2D Video App Capture.

In this folder open the file: "CameraSetup.config" with notepad (NL: kladblok)

a. Search for:

<add key="Setup1\_Cam1StaticSNumber" value="4103049511" /> <add key="Setup1\_Cam2StaticSNumber" value="4103026330" /> <add key="Setup1\_Cam3StaticSNumber" value="4103636380" /> <add key="Setup1\_Cam4StaticSNumber" value="4103002963" /> <add key="Setup1\_Cam5StaticSNumber" value="4103002933" /> <add key="Setup1\_Cam6StaticSNumber" value="4103026331" />

In this case 6 cameras are fixated. In the first line you read 'Cam1StaticSNumber', here you define which camera should be positioned in place '1'. You do this by writing the serial number between the "" after value=

You can find the serial number in the IDS Camera Manager (see page 5).

If you only have (or want) to position 3 cameras, you write as serial number '0' by cameras 4,5,6:

<add key="Setup1\_Cam1StaticSNumber" value="4103049511" /> <add key="Setup1\_Cam2StaticSNumber" value="4103026330" /> <add key="Setup1\_Cam3StaticSNumber" value="4103636380" /> <add key="Setup1\_Cam4StaticSNumber" value="0" /> <add key="Setup1\_Cam5StaticSNumber" value="0" /> <add key="Setup1\_Cam6StaticSNumber" value="0" />

- b. Repeat this for setup 2
- c. Search for
  <add key="Setup2\_Cam1StaticSNumber" value="4103026333" />
  <add key="Setup2\_Cam2StaticSNumber" value="0" />
  <add key="Setup2\_Cam3StaticSNumber" value="0" />
  <add key="Setup2\_Cam4StaticSNumber" value="0" />
  <add key="Setup2 Cam5StaticSNumber" value="0" />

```
<add key="Setup2_Cam6StaticSNumber" value="0" />
```

- d. Put in the serial numbers of the cameras you want to be displayed in setup 2, according to the positions you want
  - In this example we have 1 camera in setup two
- e. Close notepad (NL: kladblok) and save the changes



The window to set up and configure the cameras in the application can be reached by clicking on the "Setup Cameras" option in the "Configuration" tab.

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Configuration	Help		
Setup Cam	ieras		
Language		۲	
Resolution		١	
White Bala	nce	۲	
Color Mod	e	×	

This will result in the following screen:

Para	rameter	n5 Cam6 General Video				
Para	rameter	ito cuino denerui video				
► Cam		value ^				
	n1Name	1 POST				
		1				
		na				
		1				
1.000		na	E/			
		na				
		1024				
		1280	- H			
		na				
		Voet	- 7			
		618		E CONTRACTOR		
		576	CONTRACTOR NO.			
0.00	and the second	364		Contract of the local division of the local		
		168			Contraction of the local division of the loc	
		0	and a statement of the	A DESCRIPTION OF THE OWNER OWNER OF THE OWNER OWNER OF THE OWNER OWNER OF THE OWNER OWNE OWNER OWNE	A CONTRACT OF A	
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		232			Card and a second s	
		0		A REAL PROPERTY AND A REAL		
		Heup Knie Voet			the second s	
		422				
		824	1			
		364	And and a second se		the second se	
		264				
Cam	IT I Nesolution stell	204				
			Rotation	n		
Resolution 1	~ Voet	Save Resolution	Max framerate: 80 O Left	🔿 None 🔘 Right		
Width:		576	Left:	168	Exp. :	
Height		618	Top:	364	Gain:	
	Save		Cancel	Reload		

On the top part (**blue border**) you are able to switch between the cameras that you want to configure or adjust, 'general' or 'video' settings.

In the setup table (green border) you can edit the parameters one by one. The parameter that you probably want to edit is Cam1Name, which will be the name used to identify the camera. (to know: The BORGinsole 2D Video App Analyse will op the video's ranking on alphabet or numbers. In this examples we use a number starting the name)

In the part of the screen with the **orange border** you will find the tools to easily set up the different resolutions for the camera. The video window will show the result of the setting: how big the resolution is, if the camera is rotated and what the maximum framerate is with this resolution. The part on the bottom (yellow border) serves to either save the changes you made or cancel the changes and reload the original settings. Keep in mind that once 'Save' has been pressed the new settings become the original settings. In like manner, when you change the resolutions, you must click first on 'Save resolution' and afterwards on 'Save'. If you forget to press on 'Save resolution', the adaptations you made will be lost.





# 2.4 Setting up different resolutions

The most interesting part of the configuration is the setup of the resolutions. When you use the application for the first time it will take a moment to set the resolutions. Once the resolutions are set, you usually do not have to change them anymore.

Resolution1	Voet	Save Resolution	Max framerate: 80	Rotation O Left O None			
Width:	,	576	Left:		168	Exp.:	
Height		618	Тор:	•	364	Gain:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	Save		Cancel	Reload			

This consists of the following steps:

- 1) Select the camera for which you want to configure the resolutions (top part, **blue border**, **page 9**)
- 2) Select one of the 4 resolutions that you want to use (green)
- 3) Fill in the name of the resolution (purple)
- 4) Change the Width/Height/Left/Top until you can see the desired area on the screen in which you are interested (orange). While adjusting 'Width' and 'Height', you will see the maximum framerate for this resolution (pink). The rotation option enables you to see how the resolution will look, when the video screen is rotated left or right. (black). Keep in mind when you have rotated the camera itself (not here in the resolution), Width and Height and Left and Top will be switched (Width will be Height and visa versa)
- 5) Save the resolution (red) + Press once more 'Save' at the bottom (yellow)

The resolutions will now be selectable in the main Capture window.

#### Note:

The handling to set resolutions is intended to easily switch between areas of interest (AOI) with one single camera. The goal is to set 'Width' and 'Height' as small as possible, which makes you only see the area of interest and to drop all the unneeded data. As a result to minimize the 'Width' and 'Height' you can render more frames and the framerate will be higher. In particular the 'Width' is very important. So if the framerate is low, it is advised to minimize the 'Width'. (take in mind that 'Width' and 'Hight' will change by rotating video's)



# 2.5 General settings

Under the general settings the following values can be configured.

m1 Cam2 Cam3 Cam4 Cam5 Cam6 General	Video			
Parameter	value			
GeneralStDuration	3			
GeneralStWalkspeed	4			
GeneralStRunspeed	11			
GeneralSaveLocation	C:\BORGinsole podoCLOUD\2D Video App Capture\Video_Data			
GeneralPatientsLocation	C:\BORGinsole podoCLOUD\Media\Video			
GeneralDualCard	Yes			
GeneralLink1	http://podiatrist.borginsole.com/			
GeneralLink2	http://podiatrist.borginsole.com/nl/opleiding			
GeneralLink3	http://podiatrist.borginsole.com/nl/onze-technologie/3d-insole-developer-1			
GeneralLink4	http://podiatrist.borginsole.com/nl/onze-technologie/cure-control			
GeneralAnalyseLocation	C:\BORGinsole podoCLOUD\2D Video App Analyse\BORGinsole2DVideoAPPAnalyse.exe			

GeneralStDuration: when you select a start point in the editing screen of the Capture application, automatically 'x' second later the application (here 3 seconds) will pinpoint the end of the video

GeneralStWalkspeed: here '4', so 4km/h is the default that will be shown

GeneralSRunspeed: here '11', so 11km/h is the default that will be shown

GeneralSaveLocation: the location for saving the edited videos, when you use podoCLOUD, the videos will automatically be saved in the 'Media' of the patient.

GeneralDualCard: only select 'yes' if you have a high end system when using +3 cameras

#### Note:

Except for the DualCard option, you can still make adaptations in the editing screen if you want to abandon the standard/default.



## 2.6 Tab 'Video'

In the last tab you see 'Video'. In this tab you can add movements and speeds. If you want beside 'Walk' and 'Run' another movement e.g. 'Jump' or 'Stairs' or any other movement you can add this here in the left column. The right column is used to remove movements or speeds. With 'Index of option to add' you can rank the new movement or speed in the dropdown menu. The application will only save any changes after you clicked on 'Save' on the bottom.

In the middle you also find 'Watermark status'. Here you can enable or disable a watermark. Below you can set the path to the pictogram you want to use as watermark. Take care by using watermark, it will influence your data, de file is becoming bigger.

m1 Cam2 Cam3 Cam4	Cam5 Cam6 Genera	l Video					
			Current drop down				
			Walk ~	2.5 ~	Set current	Speed option to Defa	ault
Text o	of additional option:			Movement or s	peed	Movement	~
Move	ment or speed	Movement	$\sim$	Select option to	) remove	Walk	~
Index	of option to add	1	~			Remove	
		Add					
			Watermark status:	Disabled ~			
			Watermark locatie	C:\BORGinsole podoCLC			



# 2.7 Changing screen sizes

The screen resolution of the application itself can be changed by clicking the desired resolution (currently five main screen resolutions defined). The current selected resolution will be in **BOLD** (blue). The recommended resolution (based on resolution of the screen) will be in green characters. If you use the recommended resolution it will also turn green (and in bold).



# 2.8 Changing White balance

After clicking 'White Balance' you get a dropdown menu with a few options. The need to change this, depends of your individual setting (little or much sunlight or primarily artificial light). You can test and see which option suits the best. The differences between the options are very close. In most cases no changes are necessary.





# 2.9 Colour Mode



Here you can change between 'Mono' and 'RGB'. RGB means that the Capture application will record and show the images in color. Mono means it will appear in grey/black/white. Mono can give an advantage when you have little light in the room.



# 2.10 Basic setup

1. Install "Light Meter" App on your mobile phone Check light: 800lx is minimum needed for high Speed (we recommend 1000lx on the flour of the treadmill))

2. Position camera to subject on treadmill (Type IDS UI-3240LE-C-HQ; 3040LE-C-HQ)



Wide: camera to subject 150 to 160 cm 3. Position Camera on the Tripod (Type IDS UI-3240LE-C-HQ)





The camera is turned 90° on the Tripod This is an opportunity to use maximum resolution of a walking (running) subject



90° turned view

Focus of the lens (type Kowa LMVZ4411)







🚺 Light Mete

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# 3 BORGinsole 2D Video App Capture: Capturing Videos

# 3.1 Main Capture screen

In the main Capture screen you will see either 2/4/6 panels/window views. On each panel the view of one of the cameras will be shown. When you have an odd number of cameras, one of the panels will show a static image.



# 3.2 Record/Stop/Picture/Recorded videos

In the top left you can: start recording, stop recording, take a picture or open the last recorded video with the floppy disk symbol. If a record time has been set, the recording will automatically stop once enough frames have been captured. It is possible to select the needed record time with the dropdown menu.



## Note:

If a camera is rotated, during the recording the rotation will be disabled. After the recording has stopped, the video will be transposed in order to rotate it in the correct angle. Because this converting is very CPU intensive, there will be a delay before opening the editing screen.

# 3.2.1 Taking a picture

First select/activate/deactivate the camera(s) you want to use by clicking on the different numbers of cameras.



Click on and the following window will appear. Here you can give your picture a name and choose the desired location where you want to save the picture: 'Save Cloud only, 'Save Local only', 'Save Cloud & Local' or 'Save Custom only'. When you choose 'Save Cloud only' the picture will automatically be saved in the patient's file in 'Media' when you work with the podoCLOUD.





# 3.3 Framerate/quality/render frequency/recorded duration/frames lost/ frames captured

On the top toolbar in the middle you will find the control elements to either change the framerate, quality or render frequency. These settings are very important in case of frames being lost. Losing frames occurs when your computer gets more information in a short time than it can handle, or you have a connection problem.

and the second second second second						
Framerate	80	Quality 100 -	Render Frequency 1/5 -	Record Duration	Frames lost	Frames captured

Too many lost frames will result in a shorter actual duration and the videos will not be usable for analysis. When this occurs, the amount of frames lost can be reduced by lowering the framerate and/or the quality. And also controle the connection: camera- cable- PC

The maximal framerate will depend on the amount of cameras and the selected resolutions. The application will render all the selected cameras at a same time, so, for synchronized analysis the framerate will be equal to the lowest framerate of one of the cameras with that corresponding resolution. As mentioned earlier 'Width' is the major limitation factor.

The render frequency defines how many of the captured frames will be displayed on the screen while recording. Selecting a high framerate can result in issues because of the PC being unable to cope with the high amount of frames that it needs to render on the screen. By reducing the render frequency on less powerful computers, you will be able to capture videos on a higher framerate. In real time the application does not show all the images, but on the background the application is saving all of them.

The frames captured is the least amount of actual captured frames by one of the cameras. This is useful on some of the less powerful systems where some of the video data is being buffered. This can result in a higher record time than you selected since one or more of the cameras are behind in transferring the data to the PC. The recording will only stop when the frames captured of all active cameras have reached the requested frames (record time\*framerate = requested frames, seen by 'Frames captured')



# 3.4 Enabling video for recording/picture and change resolution



In the top left corner, next to the floppy disk symbol you can see how many cameras the Capture application found. The numbers and colors correspond to the camera views below. If the number is colored, the camera is enabled and will record frames when pressing the record button. If it is white, this camera will not save the frames. By clicking the number you can easily select the cameras you want to use for recording. Another possibility is to use the checkboxes (green border), to the left of the video name. When the box is selected, the camera is enabled during the recording.

1 POST Voet	Voet Knie 🗸 🗸	

The dropdown at the right of the video name can be used to switch between the four camera resolutions (areas of interest) that were configured in the 'Setup Cameras' screen.

# Note:

When you also use the Analyse application: it is important to know that the application will open the videos according to the alphabet. So if you want the Analyse application to open the videos in a certain ranking, it is advised to work also with numbers. E.g. '1 Post'/ '2 Front',... You can set the name of the camera: see page: 9





# 3.5 Changing the exposure/gain and rotating the video

On the right part of the screen, you will find a panel that contains the options to edit the gain/exposure and rotation of the camera.



Clicking on the name of the camera or clicking on one of the tabs in the panel to the right will result in: going to the corresponding tab page of the camera. A visual aide to recognize which camera is edited, is the background color of the elements. These will be the same color as the name of the camera.

The exposure and gain will have an influence on the brightness of the frames. The exposure itself is also influenced by different resolutions and framerate.

### A few guidelines regarding exposure and gain:

First of all on your camera itself, there is also the possibility to adjust the exposure. This exposure, on the camera, must be as close as possible. Put your bar of 'exposure' in the Capture application around 75% and search the right regulation of exposure on the camera itself: this means a good view with as little light as possible. Putting the bar at 75% still gives you a margin to go brighter and darker. The nearer the exposure will be to close (with enough light to see), the sharper your frames will be. Try to use the 'Gain' as little as possible. This will increase the brightness of your frames but will also give you less sharper frames.



# 3.6 Increasing the window of one of the displayed camera views



When double clicking on one of the camera windows, the window will enlarge to the maximum.

The other camera windows will be presented in the right column in a smaller window. If you double click on one of the smaller displays, it will switch to the larger displayed format. To go back to the overview, just double click again on the larger displayed window.



# 4 BORGinsole 2D Video App Capture: Editing screen of the videos

# 4.1 Main edit screen

This screen is used to cut the desired piece from the videos you captured and to compress the videos. As long as this screen is open the rendering of the cameras will be disabled. This is done to reduce the CPU usage.

Cut & Save Captured Video's



The slider in the bottom is used to change the start time from where you want to cut. You select the starting point for cutting and from there on the application will save 'x' seconds (the amount of seconds inserted under 'Standard duration', in this case '3'. Here you can still adjust how many seconds you prefer. To adjust the 'default settings for 'Standard duration' see general settings as reviewed earlier (page 11).

Rightclick to set End	

When you click right on the slider, the editor will show you the end of the video. You can also slide this point to adjust the end of the video (longer or shorter) if needed or recommended.



## 4.2 Selecting the video



By clicking on the button of one of the cameras, the corresponding video will be shown. A grey button means that the camera was not active during the last recording.

## 4.3 Compression

It is possible to set a compression factor by selecting the desired value in the dropdown menu.

C	ompression	Factor	
	20	$\sim$	

The compression factor 20 does not mean the size of the video is reduced with a factor of 20 but it means that the constant flow factor will be 20. A higher value results in a higher compression. (less quality and less data)

**Setting a compression factor is strongly recommended** because this will ensure a smaller file size (expressed in bytes) and it will take less data storage on your computer). General '20' is the best option balance between data and quality.

## 4.4 Location of saving



To save the video's you can choose between four options:

- Save local & cloud: videos are saved in the podoCLOUD and local on your computer
- Save local only: videos are only saved locally on the computer
- Save cloud only: videos are only saved in the podoCLOUD
- Save custom only: you can select a folder to save the videos (this can be useful when you are temporally out of internet)



How is the location 'Save local only' defined?

1) When you have the podoCLOUD, you have to make a folder

In the podoCLOUD > open the record of the patient > go to 'Media' > at the bottom you find 'Local file/ Add / Change Local folder

Lokale map/Lokaal besta	and toevoegen/wijzigen		Add / Change Local Folde	er / Local File	
Media-type	Kies uw media-type	•	Type of media	Choose your media type	•
Bestands-/mapnaam			File / Folder Name		
Link naar map/bestand			Link to folder/file		
🖺 Opslaan			🖺 Save		

Select 'Type of media', fill in File / Folder name and insert the link to the folder/file To insert the 'Link to the folder/file': open your windows/file explorer (NL: Windows verkenner) > go to the folder where you want to save the videos > at the top > click right > click on 'copy link' > paste this in the podoCLOUD



2) When you don't have the podoCLOUD: The default path will be C:\BORGinsole 2D Video APP Capture\Video\_Data. You can change this path > Open Capture> Left top 'Configuration' > 'Setup Cameras' > 'General' > after 'GeneralSaveLocation' in the column 'value' > insert the link of the path where you want to save your videos

Cam1	Cam2 Cam3 Cam4 Cam5 Cam6 General	Video
	Parameter	value
•	GeneralStDuration	3
	GeneralStWalkspeed	4
	GeneralStRunspeed	11
	GeneralSaveLocation	C:\BORGinsole podoCLOUD\2D Video App Capture\Video_Data
	GeneralPatientsLocation	C:\BORGinsole podoCLOUD\Media\Video
	GeneralDualCard	Yes
	GeneralLink1	http://podiatrist.borginsole.com/
	GeneralLink2	http://podiatrist.borginsole.com/nl/opleiding
	GeneralLink3	http://podiatrist.borginsole.com/nl/onzetechnologie/3d-insole-developer-1
	GeneralLink4	http://podiatrist.borginsole.com/nl/onzetechnologie/cure-control
	GeneralAnalyseLocation	C:\BORGinsole podoCLOUD\2D Video App Analyse\BORGinsole2DVideoAPPAnalyse.exe



# 4.5 Creating the name and saving the video

The video name will be created in the following format:

#### Timestamp\_"Name Camera"\_"text filled in"\_Movement\_speed.avi

Create video name
Walk v 4 v
VValk V 4 V
Save Cloud only $\sim$
Save
Cancel
Save & Analyse

The timestamp and name of the camera are predefined. Adding a text can be done by writing it down in the textbox under 'Create video name'. This is optional. The movement is either Walk or Run (or other movements you added), depending on what you selected (likewise for speed). Here you can still adjust if the speed was not the standard/default given speed.

When you press the save button, all videos will be saved in the location you selected in the dropdown menu. During this saving the selected part will be cut from the video and will be saved under the format explained above. If a compression factor was set then the videos will also be compressed. When the Capture application was opened with the podoCLOUD and you want to save in the cloud, the video(s), will automatically be saved in the patient's folder in 'Media'.

(no local storage on your computer, and your data is available everywhere, with internet connection of course, if your computer crashes, **NO** data will be lost)

If you select the option "Save & Analyse" the video will first be saved, similar like the "Save" button and afterwards the videos will open in the BORGinsole 2D Video App Analyse application. As the Analyse application opens, the Capture application will close.

Only when you select 'Save Cloud only' it is not possible to use the 'Save & Analyse' button, because it is difficult to save in the cloud while opening the videos. You have to go to 'Media' of the patient to open the file(s).

### Note:

Based on the length and the compression factor it can take some time before all videos are compressed. In order to make this go as smooth as possible, the rendering of the videos will remain disabled until all videos have been converted. Wait to close the Capture application until the videos are rendering again. Otherwise you will close the application while it is still saving and compressing the video(s), and you have the possibility that the saving of the video(s) was not completed. If by any chance this would happen, click at the top menu in the floppy disk button and the editing screen from the last recorded video(s) will open.





# 5 BORGinsole 2D Video App Analyse:

5.1 Overview of the main screen



BORGINSOLE 2D VIDEO APP

#### 1. Menu

In this menu you can open files (up to six videos OR pictures at once), generate reports, change the amount of videos that you are viewing, change the language or find the manual. Here you can also change the video names, the location of the captured videos and set normal values for each joint that you would like to analyse.

#### 2. Markers images

In this side bar you can see the markers that you have saved. These are important to generate the automatic reports. If you double click on one of the images, the video will go to that moment without the drawings you made upon the video. In the BORGinsole Analyse application, you can also upload pictures. Also on the pictures you can measure angles (e.g. X-knees).

Markers Video	Subtalar Left (-2147483,6 fps)
Subtalar Left ~ Marker 1	
Pre Head Contact	-15,67°
0 Time 1	
Marker 2	
	-12,54°
Marker 3	
Contact	
www4"	and the second s
0.000 e s	
Marker 4	
Mid Mid	
Stance	in the second seco
P 1 -6°	
Marker 5	
Heel	And a state of the
Lift 1	
💾 🧵 -2°	
Marker 6	
100 C	
0,000 e : s	

Name of the marker image :		
Type of the marker image :	lage	
Chose the location where the m	Jpeg	
Save in cloud	larker must be stored .	
		Brows
		Browse

You can save these images by clicking on the floppy disk symbol. When you work with the podoCLOUD and you select 'Save in cloud', the picture will automatically be saved in the patient's file in 'Media'.

#### 3. Main video regions

These are the areas to analyse the videos. In these screens, you can add drawings to analyse the videos and explain your findings to the patient. When you analyse one, two or three videos, you can place drawing upon the three screens. Screen number three is then also seen as main screen. When you analyse more videos (more than three), you can only place markers on the two main screens (it is possible to switch screens with the switch symbol).

#### 4. Side video area

This area is where the 3<sup>rd</sup> ,4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> video are displayed (when there are that much videos). It is possible to synchronize all the videos to the first video while playing and analysing the videos. In this side area, you cannot place drawings or angles onto the videos.

#### 5. BORGinsole wheel

This wheel shows the other BORGinsole applications you can use and it will redirect you to the BORGinsole website.

#### 6. Switch video button

This button makes it possible for you to switch videos from the side video area to the main video area. Doing this allows you to draw onto all videos loaded at that moment. Adding markers to all the loaded videos makes it possible for you to make a complete report about a patient or to compare a patient with himself in time.





#### 7. Synchronize button

By clicking on this button, the video will be synchronized to the first video, the left main video area. This is a handy tool to view a same moment in different planes. In the first main screen, there is a button 'Sync All', to synchronize all the videos in one click.

#### 8. Open video

This button leads to the folder where the videos are stored on your system. It always opens the folder which was opened the previous time. When videos are linked to each other (with timestamp), all these videos will open systematically and subsequently in order of the alphabet/numbers of the camera name (see page 19).

#### 9. Settings of the drawing

With these buttons you can configure the layout of your drawings. You can choose different thicknesses, colors, **bold**, *italic*, <u>underlined</u>, the size for the text or digits,... You can set a standard for every drawing. The 2D BORGinsole Analyse application will always save and use the setting you applied the last time.

#### 10. Drawings bar

This bar shows all the possible drawings that can be made on a video in the main video regions. The possibilities are the following: Drawing a horizontal or vertical line and drawing a free line. Drawing angles: draw a line and the angle to horizontal will be calculated, the next option is the angle of the line you draw to vertical that will be calculated and at last you can draw a free angle. The lines of the free angle do not need to cross each other, the application will automatically extend these lines until they cross. Afterwards you click between the legs and the degrees of the angle will appear. You can also draw a circle, a rectangle/box, arrows and a grid or text. When you want to delete these drawings, you have to push the delete button (see point 13).

#### 11. Markers bar

This function is used to create automatic reports. When you save a marker by clicking on it, the frame will be saved, as well as the drawing you made upon it. If you draw a free angle but you don't click between the legs and click on a marker, the application will say that the angle was zero. You can save up to six markers. You will also notice that at your left the marker images are shown with little pictures in a side bar, if the option 'Show Marker Images' under 'Video Settings' in the top menu is selected.

#### **12.** Duplicate

With this button you can duplicate the first video. This way you can analyse easily two times the same video without saving that video twice (no double storage on your computer). This handy tool has come to life so that you can create a report of one video (say posterior view) and analyse two different things (say one video: left foot and the other video: right foot)

#### 13. Reset and delete button

The reset button is used to turn the zoom back to 100%. To erase your drawings (lines/angels/grids/...), you can use the delete button.





#### 5.2 Top menu

#### 5.2.1 File

You can open up to six synchronized videos by selecting one video from a specific folder. The videos must have been saved by a specific format for this feature to work. When they are not saved in this format, you will have to open the corresponding videos



manually. The format works as follows: the digit(s) or words/letters at the beginning of the video name must be the same, followed by an underscore. If you use the BORGinsole 2D Capture application, the format will be like this: <YYYYMMDDHHMMSS\_> (year- month- day- hour- minutes- seconds). For example a video captured in the frontal plane: 20200811132117\_2 FRONT\_\_Walk\_4

#### 5.2.2 Video settings

#### 🚺 BORGinsole 2D Video App Analyse



#### Amount of videos:

here you can change the amount of videos displayed in the BORGinsole 2D Analyse application. You can choose up to six videos to view at the same time. Note: it is only possible to place drawings on the two main video areas.

Location of Local videos: This option is used when you work with the podoCLOUD. This should contain the location of the local map (from the cloud) where the videos are saved. In this folder you should find all the subfolders of the different patients. The Analyse application will always search first here for the videos before getting them from the cloud (the advantage is that you don't have to download the videos). If you don't use the podoCLOUD, nor the Capture application you can ignore this option.

<u>Location of captured videos</u>: This option is used when you don't work with the podoCLOUD, but you DO work with the Capture application. This should contain the location where you save your videos in the Capture application.

<u>Video names</u>: you can change the name of the videos displayed in the video area to generate reports. The names are also displayed just on top of each video screen. When you go with your computer mouse over the name, the original name (name you gave the video as you saved) will appear.



Generate: this feature makes it possible to create automatic reports using the marker images.

Normal Angle settings: this button opens a window where you can insert, adjust or remove normal angle values for several joints, for up to six different markers/moments.

#### 5.2.4 Language

Makes it possible to change the language of the application.

#### 5.2.5 Manual

Here we open a file with the link to the online updated manual.



## 5.3 Main video regions

In these main video regions, you can analyse the videos and place drawings upon them. If you only want to see the area of interest of the frame, you can use the scroll wheel of your mouse or, on a laptop, first click on the video, use two fingers and spread out to zoom. When you zoom it is important that you stay on the image of you video, if you have black space around the video, it can give problems for creating a report (the drawings will be shifted left/right/upwards or downwards).

You can place drawings upon the videos by using the drawings bar (earlier explained in point 10, page 28) or by using the right mouse button. The right mouse button gives you the following options:

- Move Video
- Draw Horizontal Line
- I Draw Vertical Line
- / Draw Free Line
- Z Draw Horizontal Angle
- / Draw Vertical Angle
- X Draw Free Angle
- 0 Draw Circle
- Draw Rectangle
- S Draw Arrow
- 🗮 Draw Grid
- ·· Draw Text
- Draw Clear

- <u>Move Video</u>: after zooming in, you maybe want to move the video screen. You can select this option and drag where you want to go, seeing only the part of the total frame you want to analyse. Afterwards you can push the reset button and the zoom will be reset at 100%. As said before, make sure you have no black space around the video, it can give problems for creating a report (the drawings will be shifted left/right/upwards or downwards).
- Draw Horizontal Line: allows you to place a horizontal line on the video
- Draw Vertical Line: allows you to place a vertical line on the video
  - <u>Draw Free Line</u>: allows you to draw an line as you please
  - <u>Draw Horizontal Angle</u>: by clicking this option you can draw a line and the angle to horizontal will be calculated
  - <u>Draw Vertical Angle</u>: by clicking this option you draw a line and the angle to vertical will be calculated
- <u>Draw Free Angle</u>: allows you to place an angle on the video by drawing two lines (they do not have to cross each other, the application will automatically extend the lines) and by clicking between the legs to view the angle.
- Draw Circle: you can draw a circle. The point where you click will become the centre of the circle
- Draw Rectangle: you can draw a rectangle/box by clicking this option
- Draw Arrow: you can draw an arrow
- <u>Draw Grid</u>: you can create a grid. The distance between the starting point and endpoint defines the grid size
- Draw Text: you can insert text on the video
- Draw Clear: clears all drawings.

# Note 1:

You can change the size of the main video areas and the side video areas as you like, by using:  $\uparrow$  (you get this when you place your mouse between the video screens). This allows you to make your video areas as small and big as you wish. This can be very handy if you have multiple computer screens. For example, you have two computer screens and want to see the main video areas on the first screen and the side video areas on the second screen.



# Note 2:

Drawings do not zoom in and out with the video, nor will they follow joint movements when playing the video or progressing to the next frames.

# <u>Note 3:</u>

When you draw a free angle, you can select the angle you want to measure. You will always have a positive and a negative angle, depending on where you click (see image, I try to set the same angle). On the top you get the negative value and at the bottom the positive value. This is very important when you set normal values for your reports. You have to pay attention that the positive or negative values correspond to each other, otherwise your curves will also not correspond (when you take e.g. negative values when you set the markers and you use the positive values in your normal settings of your report, **it will not match**!)



# 5.4 Videoplayer

- Open file: to open your folder where you saved the videos or pictures. The application will automatically go to the last location where you opened a video or picture
- Play button: 🕑 starts or pauses the video
- Play speed: shows the playing speed of the video. The speed of the video can be slowed down 6,12 or 18 times recording speed
- Stop button: stops the video and returns to the beginning of the video
- Loop button: 🖻 the video will play in loop, at the end it will restart automatically
- Switch button: (button in the side video areas), allows to change the positions of the videos. This handy feature makes it possible to change a video from a side video area to a main video area where you can place drawings and markers
- The sync button: synchronizes the video with the first video, displayed at the left main video area, in the first main video screen there is also the sync All button, to synchronise all videos in one click.
- The arrow buttons: Allows you to browse frame by frame through the recorded video. Next to the right arrow, the time of the video is displayed

▶ 6x ∨ ■ 🗢 ◇			1
<	>	0.000	s



## 5.5 Markers

Placing markers is very easy. You can create up to six markers, that represent a moment/frame of the video. It is always possible to use less markers. By doing this, the marker/moment will be left out of the report. E.g. it is possible to use only markers 1, 3 and 6.

After selecting the right frame, you can place drawings onto the video and create a marker by clicking on one of the markers 1 2 3 4 5 6. After doing so, the drawings will disappear and the selected marker will turn green . When you have selected the option 'Show Marker Images' under 'Video Settings' in the top menu, a small image will appear in your left to the corresponding marker. You can save this image separately from the report by clicking on the floppy disk button.

When all the markers are created, a report can be generated.

For example: a report for gait analysis can look like this

- Marker 1 : Pre Heel Contact
- Marker 2 : Initial Heel Contact
- Marker 3 : Forefoot Contact
- Marker 4 : Midstance
- Marker 5 : Initial Heellift: heel comes off the ground
- Marker 6 : Late Heellift: You can see the metatarsal heads (forefoot)

### Note:

When you accidentally clicked a marker two times and you placed a drawing, e.g. an angle, the angle will be lost. As mentioned, if you click on a marker, the frame with the drawings are saved and the drawings will disappear. Meaning if you click twice, you get the frame **without** the drawings. In the report, this will result in an angle of zero degrees.



## 5.6 Generating a report

When all the desired markers are placed, clicking the generate button under the 'Reports' option in the top menu will give you the following screen. First you can choose the format of the video report: Word, PDF or Word and PDF. PDF needs less storage, but you cannot adapt afterwards, in Word you can still make changes, but it takes more storage.

This screen gives the opportunity to decide which video you want as base to generate a report (which video will appear on the left in the report). When clicking next, a report is created based on the markers you placed. If you select multiple boxes, you can create multiple reports, each time with the video you selected as base. You can create up to a maximum of four reports at the same time. This is possible by creating markers on four videos. You can do this by using the switch button, as explained earlier (by doing this you can also put markers on the other videos that were initially placed in the side video area).

Rapports						×
Rappons						^
	<u>Generate</u>	Report : Chose Base \	/ideos			
Please select the format of the report to export to the CLOUD :	Pdf		~			
Please select the base videos to make markers as 'Video 1' on the documen	a report (max. 4 base vi Comparing the selecte	ideos possible). Each sele d video results with anothe	cted video creates a sep r or with a reference, is p	arate report with the cro ossible in the next step	eated	
		⊠ Subtalar Left				
		🗌 Subtalar Right				
Cancel			Ne	xt		
Select Videos						





A curve is displayed on the top of the screen with the created angles (A) from the (in this case six) markers. When you click on Normal Settings (B), you can implement the normal values for the joint you want to analyse. You can create these values as you like. It is not up to us to state what is normal, so you can adjust and add values as you like, for several joints and in different planes. By clicking on 'C', you can select the joint you want to display and the normal values with the curve will be shown (in **blue**). Under 'video 1' (D), the first video is displayed on which you created your markers (this is the video you set as Base in the previous step). Here you see the name of the video you chose. You can adjust this as explained earlier, under 'Video Settings' in the top menu > Video Names. If you notice at this point the name is not correct, you can close this screen and adjust (and reopen this screen), no marker information will be lost. Under 'video 2' (E) You can select another video (or the same if you opened video 1 twice, in this case, for Subtalar Right). Also the curve of this video will appear with the angles. You can use 'video 1' and 'video 2' to compare left/right or compare the left or right now with the past or future to monitor progression. Under 'reference' (F) you can open the same or another video. This is as the word says a reference video, and the same moments (in time) from video 1 will be reflected here. No graph or markers from this video will be shown. You can use this for an overall look if you used zoom, or to have a look at another joint in the same time moments as in video 1.



At your right you have the option to write a comment with each marker/phase (G).

If you had selected multiple boxes to generate multiple reports the button in the bottom right will say 'Next'. When the report(s) is/are finished, you can click the Generate button (H). Then this window will appear and you can choose the location to save your video report:

Store Location Report		-		×
Chose the location where the report(s) must be s Save in cloud	itored :			~
			Browse	

This Word document consists of several templates. You can still modify everything in this document. You also have the option to create these templates as you like.

See below an example of a report. If you benefit of the podoCLOUD, the personal details of the patient will be automatically filled: First name, Last name and Birthdate.





# 5.7 Adjust the templates for the report

You can adjust the templates for the report. For example you can set your logo and your contact information at the top of the report.

To adjust the templates:

- Open the folder of the BORGinsole 2D Analyse application. The default path is C:\BORGinsole 2D Video APP Analyse
- In this folder you can find 4 <u>.dot</u> files: Rapport1Video.dot; Rapport2Video.dot; Rapport3Video.dot; Rapport4Video.dot Create a new folder within the folder of the BORGinsole 2D Analyse application and name this folder 'old templates' and drag the 4 <u>.dot</u> files in the new folder (cut and paste)
- 3. Open Rapport1Video.dot and adjust: the layout, your logo, contact information, adjust the names of the six markers,...
- 4. Save the adaptations by clicking on 'save as'. Please mind that you have exactly the same name as before 'Video1Rapport' and the extension should be Word template (in Dutch: 'Word-sjabloon') and the extension must end with <u>.dot</u>. Only in this way the application will recognize the changes you made! Save the new <u>.dot</u> file in the general folder of the BORGinsole 2D Analyse application.
- 5. Repeat this for all the <u>. dot</u> files. If you do not do this for all the <u>.dot</u> files, you will either not have the possibility to create several reports or the adjustments of the templates will not be applied to all the reports.

## 5.8 BORGinsole wheel

The BORGinsole wheel displays all the applications BORGinsole offers. If you click on one of the symbols the BORGinsole website will open.





# **2D Video App Editor**

Version 1.1.0.1 (871 kB) 09/12/2020

# 6 BORGinsole 2D Video App: Editor

# 6.1 The use

This application is used to cut, rotate, select AOI and compress any video. You can do this when the video is too long. You cut the video shorter (so you only have the images you need) and it will take less storage on your system. Or if you want to split one video in two or more videos. This way you can also upload videos taken from your mobile phone, Ipad, drone, ... Once you've done this, you can also upload these videos in the podoCLOUD

and analyse the video with the BORGinsole Analyse application.



In the op right you see 'Select Video'(A). Click on this button and open the video you want to cut and compress. When needed, you can also rotate the video by clicking 'Left' or 'Right' under 'Rotation' (B). Likewise as in the BORGinsole Capture application you can set a 'Compression Factor' (C).

Under 'Create video name' you can give a name to the new video.

Also as in the BORGinsole Capture application you can select Walk/Run and the speed (D).

Under 'Save Location' you can set the path where you want the video to be saved(E).

AOI stands for 'Area Of Interest'. When you click this button (F)

you can select the area of interest and to drop all the unneeded (like you see in the two pictures above). You click in the frame, so you select the upper corner left and make your needed frame resolution. The not selected area will become black.

The cutting of the video works as follows: move the silder to the desired starting point and click 'Set Start' (G). Move the slider again to the desired endpoint of the video and click 'Set End' (H).

At last you click on 'Create Video'(I) to cut the video. When you are done, click on 'close'(J). If you want to cut multiple videos repeat the process (you don't have to re-open the editor application).





# 7 Troubleshooting

4K PC/laptop screen: Video is not scaling correctly with the available screen space for the Capture app.

On a High DPI screen, Windows will scale all elements of the application except the video/frames. The higher the scaling, the more this issue will appear. As such it is required to disable the display scaling for High DPI settings. This is an option under the Compatibility tab when viewing the properties of the

application.( BORGinsole2DVideoAPPAnalyse.exe ) (right mouse click) Once this option is enabled, it is important to select the '3800\*2000' resolution which is made for 4K screens. Performing these two actions will result in the most efficient window to work with.

	<b>()</b> BorginsoleVideoCapture.exe Properties
	General Compatibility Details
Open         Image: Run as administrator         Troubleshoot compatibility         7-Zip         Edit with Notepad++         TortoiseHG         Scan for threats         Send to         Cut         Copy         Create shortcut         Delete         Rename	If you have problems with this program and it worked correctly on an earlier version of Windows, select the compatibility mode that matches that earlier version. <u>Help me choose the settings</u> Compatibility mode Run this program in compatibility mode for: <u>Windows XP (Service Pack 3)</u> Settings Run in 256 colors Run in 640 x 480 screen resolution Disable visual themes Disable desktop composition Disable desktop composition Privilege Level
Properties	Run this program as an administrator



#### *Camera framerate: unable to select framerate above 'xx' in Capture application*

The BORGinsole 2D Video App Capture application is limiting the selectable framerate based on the IDS cameras. In other words if 4 cameras are active, the maximum framerate that you can select will depend on the lowest maximum framerate reported of the 4 cameras.

Example: Cam1 max: 40 FPs, Cam2/3/4: 80 FPS => If Cam1 is active, the maximum framerate will be 40.

Factors that can influence this maximum are:

- Amount of horizontal lines in area of interest (height)
- Cables used to connect to the camera (using second rate can result in a lower maximum framerate)
- Type of camera
- Available bandwidth

#### Using videos from the capture software in (Powerpoint) presentations

To use the videos you have recorded with the BORGinsole 2D Capture application you have to convert the video from AVI to ASF. You can do this with lots of different softwares. If you do not have these programmes just type in google 'convert avi to asf'. A possible link that can help you: http://www.convertfiles.com/convert/video/AVI-to-ASF.html

#### Capture application crashes when opening editor screen

Open task manager trough CTRL+ALT+DELETE (nl: taakbeheer) and check how many 'Memory' your computer is using. You can reduce this by closing other (background) apps.

# When I open (a) video(s) in the folder on my pc the standard programme is not the BORGinsole 2D Analyse application, can I change this?

To change the standard program you click with the right mouse button on the video and select 'open with'> 'select standard program'> 'browse' > now select the path to the BORGinsole 2D Analyse application (The default path is: C:\BORGinsole 2D Video APP Analyse) > click on the 'BORGinsole2DVideoAPPAnalyse.exe' (application) and press open.

Problems 'Open with' to set the BORGinsole 2D Analyse application as default program

You can find the instructions by the link below:

http://www.volnapc.com/all-posts/what-to-do-when-open-with-doesnt-work-properly-in-the-windowscontext-menu

Here you can find the program you need (in the middle of the page you can find 'Download OpenWithView'): http://www.nirsoft.net/utils/open with view.html







#### Set BORGinsole 2D Video App Analyse as default for .avi files

Open control panel (dutch: configuratiescherm) (> Select Programs) > Default programs> associate a file type or protocol with a program

Selecteer de programma's die standaard door Windows worden gebruikt

	Uw standaardprogramma's instellen Een programma als standaard instellen voor alle bestandstypen en protocollen die dit programma kan openen.
緟	bestandstype of protocol aan een programma koppelen
	Een bestandstype of protocol altijd in een specifiek programma openen.
	Instellingen voor Automatisch afspelen wijzigen
	Cd's of andere media automatisch afspelen.
	Programmatoegang en standaardprogramma's instellen
	Toegang tot bepaalde programma's beheren en standaardprogramma's voor deze computer instellen.
Now Or:	it depends on the version of windows you are using
Scroll	down to 'avi' > browso and solect POPCinsole Analyse as your default program

Scroll down to '.avi' > browse and select BORGinsole Analyse as your default program Or:

You see a tab Video player > browse and select BORGinsole Analyse as your default program

<u>Browse Analyse application</u>: look on C/ BORGinsole podoCLOUD/2DVideoAppAnalyse/... select the .exe or C/ BORGinsole/2DVideoAppAnalyse/... select the .exe

#### **Overlay**



When you get this problem you just have to click on 'continue'. This will only happens when you are switching between programs/screen windows. No information will be lost.

#### The capture application does not find a camera or has problems opening

If your exposure is fully opened and the screens stays black. This is an indication that the application does not find the camera.

The first thing you have to check is that the firewall does not block the program. START button > Configuration / control panel > System and security > Windows firewall > Allow a program or a feature through Windows Firewall > check if the BORGinsole software is selected, if it is not adjust it.



If the firewall allows the BORGinsole application and you still have no connection, check your Antivirus. Check if the Antivirus blocks the BORGinsole application.

### Note:

If your camera is connected with an Ethernet connection, you also have to check the internet security.

If you are using an Ethernet connection camera and there is still no connection, you should go to the network and sharing center. Check if the connection with the camera is not disabled in the tab 'Change adaptor settings'. If this is not the case: click right on the network connection of your camera > click 'Properties' > double click 'Internet Protocol version 4 (TCP/IPv4)' > the given IP address should look like this: **100.100.**50.**1** The bold characters must be exactly the same, except for the number '50'. Keep in mind it has to be a plurality of ten.

Finally, if you still have troubles opening the BORGinsole application or finding the cameras check whether the cameras ID are correctly assigned. There has to be a camera with ID number '1'. Also two cameras cannot have the same ID number.

IDS Camera Manager - 64-Bit

Cam.ID

5

Type

USB

Dev.ID

1

UI-324xLE-C

SerNo.

4102974999

Free

Yes Yes

1. Open the 'IDS Camera Manager



2. You will get the following screen

This is an example when six cameras are correctly assigned. The 'Cam. ID' numbers are ranked from one to six and no cameras have the same ID number.

- 3. If this not the case, you need to adjust
- a. Select the camera you want to adjust
- b. Click 'Camera information'
- c. Adjust the Camera ID

4. Close the 'IDS Camera Manager' and re-open the BORGinsole application.

Introl center  Expert mode  General information  Camera information  Create support file  Additional functions  Camera information  ETH network service  Automatic ETH configuration  ET	Expert mode     General information     Create support file     ETH network service	
Expert mode General information Create support file Additional functions Automatic ETH configuration	Expert mode           General information           Create support file           ETH network service	
Create support file  Create support file  Additional functions  Automatic ETH configuration  ETH network service  IDS:	Create support file ETH network service	_
Additional functions Automatic ETH configuration		

Device ID: 1				
Manufacturer			Date of QC	
IDS GmbH			11.03.2016	
Camera ID 5	User EEPROM (max	<. 64 characters)		
Firmware	~			
		Cancel	ОК	





Analyse application blocks when analysing/ black window, no video screen



This fault can occur when updating Windows. The latest version of Windows mediaplayer has a bug (and the Analyse application uses Window mediaplayer).

- 1) Use the Tweaktool (latest version)
  - a. C:\BORGinsole podoCLOUD\Install\2. BORGinsole drivers\Drivers 2D Video App Capture en Analyse\ CodecTweakTool\_633.exe
  - b. Or download from the internet

ding analyse uuuuu.JPG are 3.JPG		
ding analyse CodecTweakToo vare.JPG 8.exe	1: De Codec tweak tool staat voorlopig op je bureaublad	
dBrake	Bestandsbeschrijving: Codec Tweak Tool Bestandsversie: 6.1.8.0 Aanmaakdatum: 19-3-2017 14:40 Grootte: 984 kB	

2) Open the Application and click on 'MS Codec Tweaks'

Codec Tweak Tool 6.1.8   K-Lite	Codec Pack 12.9.5 Full	×	
General:			
Fixes	Generate log		
Settings:			
Reset	Backup	Restore	
Configuration:			
DirectShow Filters	VFW Codecs	Audio output	
Codec and Filter Management	•		
DirectShow (x86)	ACM/VFW (x86)	Preferred splitters	
DirectShow (x64)	ACM/VFW (x64)		
Miscellaneous:			
Thumbnails	Various Tweaks	File Associations	
Win7DSFilterTweaker:			2: De MS codec tweaks
Preferred decoders	Media Foundation	MS Codec Tweaks	2: De MS codec tweaks geopened
		Tweaks to disable	certain codecs from Microsoft
Help		Exit	



3) Select the codes of Microsoft and click on 'apply'

Microsoft Codec Tweaks	×
<ul> <li>Disable Microsoft DTV-DVD Audio Decoder</li> <li>Disable Microsoft DTV-DVD Audio Decoder (64-bit)</li> <li>Disable Microsoft DTV-DVD Video Decoder</li> <li>Disable Microsoft DTV-DVD Video Decoder (64-bit)</li> <li>Disable Mpeg4s Decoder DMO</li> <li>Disable Mpeg4s Decoder DMO (64-bit)</li> <li>Disable Mpeg43 Decoder DMO (64-bit)</li> <li>Disable MP3 Decoder DMO</li> <li>Disable MP3 Decoder DMO (64-bit)</li> <li>Disable MP3 Decoder DMO (64-bit)</li> <li>Disable MP3 Decoder MFT</li> <li>Disable HEVC Video Decoder MFT (64-bit)</li> <li>Disable FLAC Audio Decoder MFT (64-bit)</li> </ul>	3: aanvinken van de microsoft DTV-DVD opties
	4: Apply
Help Reset Apply	Apply & Close Close

## Analyse application does not play all the videos synchronously

In this case you have to check if all the cables are well connected. When you record with the Capture application you will also see that the application will record a bit longer than you selected.

