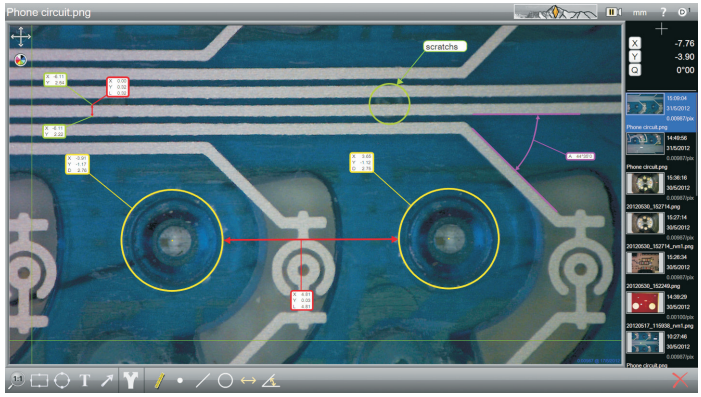
Vision ENGINEERING

DimensionOne

Annotation and measurement software



NAVIGATION INSTRUCTIONS

The symbols in the left-hand margin of each page of the manual will enable you to carry out the following functions:

The buttons in text below do not function. They are for illustrative purposes only.

Contents Click on this button to display the Contents page.

Back one page.

Forward one page.

Back button.

Forward button.

Click this button to print some or all of the document (specific pages can be chosen).

Exit Click this button to exit the user guide.

Press the Esc key to display normal Acrobat© Controls.

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Introduction

General

The DimensionOne™ software is designed to provide users of Vision Engineering's stereo microscopes, image capture and annotation capability with ultimate simplicity. Large icons and a 'menuless' format means the software can be used seamlessly to simply capture an image or for on-screen dimensioning.

Main features

Simply capture an image
DimensionOne™ can capture an image with one click of the mouse, or a touch of the screen.

Annotating captured images
Text, arrows and shapes can be added. There are a range of powerful constructions available including creating intersecting lines e.g. for bolt circles etc.

Font size adjustment and a palette of colours are available so that maximum contrast can be obtained between the captured image and the annotation.

Dimensioning
On-screen measurement can be utilised on any captured image with a choice of circles, lines, points, angles and distances.

Touch-screen capability
Simply touch the screen to capture an image, annotate it or measure it. With the usual swipe, pinch and touch of the fingers, the touch-screen facility minimises the use of the mouse making the image capture process even easier.

Opacity change
DimensionOne™ allows for the captured image to be modified with a change in opacity from 0 to 100%.

1. Initial set-up

1.1 System requirements

The following are the minimum system requirements that will enable DimensionOne™ to run efficiently:

- **Operating system** 64-bit. Microsoft Windows 8.1 or 10
- **CPU type** Intel Core i5, with CPU clock of 2.5 GHz
- **Chipset** Intel H81 chipset, or equivalent
- **Display card** Dedicated video graphics card, capable of 1600x1200 with live video streaming, or Intel HD4000 “on-board” video graphics card
- **Display resolution** 1600x1200
- **Memory** 8GB
- **Disk space** 200GB solid state hard drive - for installation, plus data and image storage
- **USB** USB2.0 ports (x4)
- **Adobe® Flash®** Adobe® Flash® Player v15
- **Other** Windows-compatible mouse and keyboard

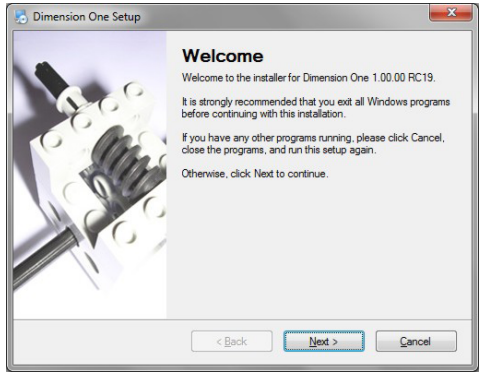
1.2 Software installation

First plug the security dongle into a USB port and wait until the 'Device driver software installed successfully' message is displayed before continuing. This may take a couple of minutes.

Ensure all previous versions of the software have been uninstalled before proceeding with the software installation.

- Insert the USB-stick supplied into a USB port on the PC.
- Navigate to the USB's content and double click on the setup.exe file.
- The DimensionOne™ installation screen will be displayed (*Figure 1*):

Figure 1: DimensionOne™ installation screen



- Click on **Next>**.
- Follow the on-screen instructions (including the validation of any operating system notifications) until the software is fully installed.
- Restart the PC.
- When running DimensionOne for the first time, go to section 2.3 *(pages 12-13)* on video source setup to complete the installation.

DimensionOne also supports an 'emulation', or demo, mode where no security dongle is required. This can be used to perform basic software functions in an 'offline' mode.

2. Getting started

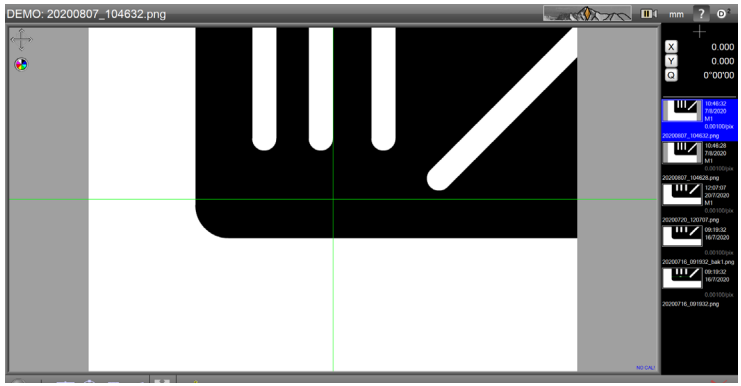
This section will describe the following:

- Starting DimensionOne™ (see below)
- Language selection (*page 11*)
- Video source setup (*page 12*)

2.1 Starting DimensionOne™

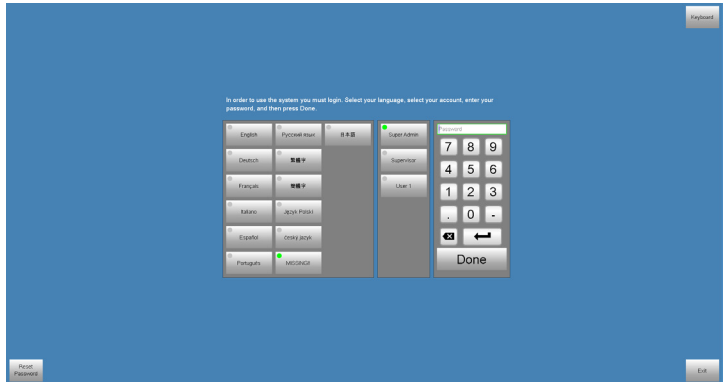
Double click on the DimensionOne™ icon Ⓓ[1] on your PC's desktop. If no security settings have been changed, the Home screen will be displayed (*Figure 2*).

Figure 2: Home screen



If users have been assigned passwords, the Login screen will be displayed (*Figure 3*)

Figure 3: Login screen



To login, proceed as follows:

- If necessary, click on the required language.
- Select the appropriate user button.
- Using the on-screen keyboard key in your password and click **Done**. The Home screen will now be displayed.

If you click on Exit, DimensionOne™ will be closed.

2.2 Language selection

If necessary, select your preferred language as follows:

- Click on the DimensionOne™ logo ❶ to reveal the drop down menu (*Figure 4*).
- Click on the **Settings** button ❷. The Settings screen will be displayed (*Figure 5*).

Figure 4: Settings button

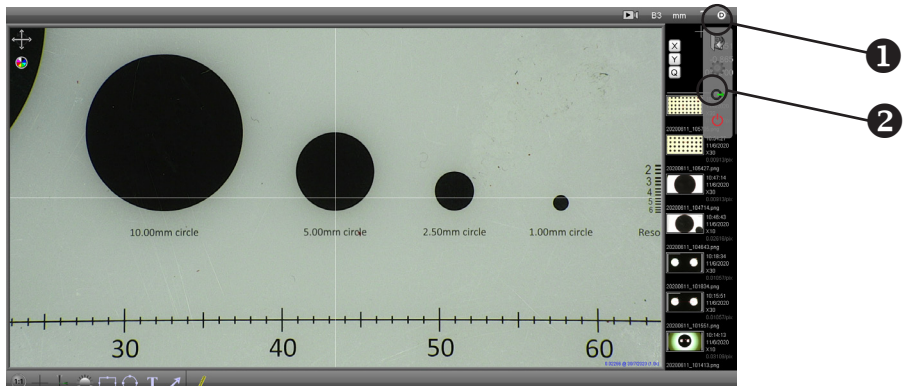
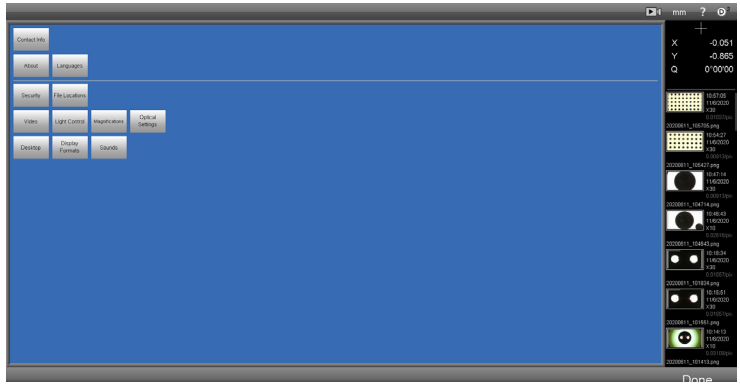


Figure 5: Settings screen



- Click the **Languages** button, click the required language from the list and click **Done** to return to the Settings screen.
- Click **Done** again to return to the Home screen.

2.3 Video source setup

If the default graphic is displayed in the capture area of the screen, proceed as follows to select the required video source:

- From the Home screen (*Figure 6*), click on the DimensionOne™ logo ❶ and then click on the Settings button ❷ from the drop down menu. The Settings menu will be displayed (*Figure 7*).

Figure 6: Settings button

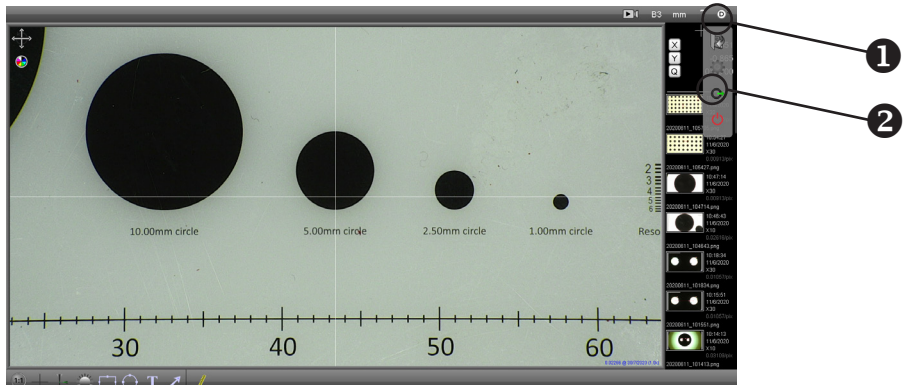
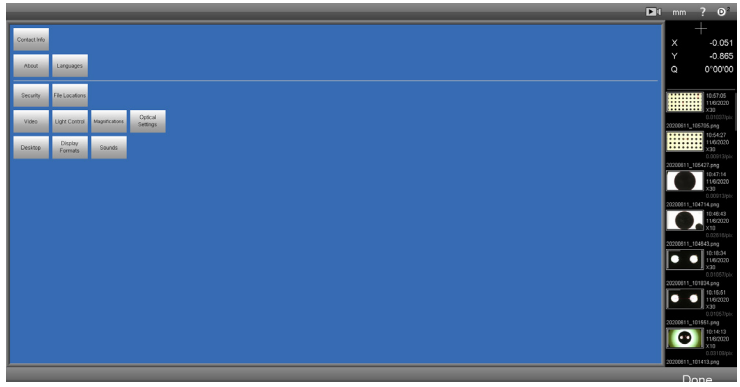
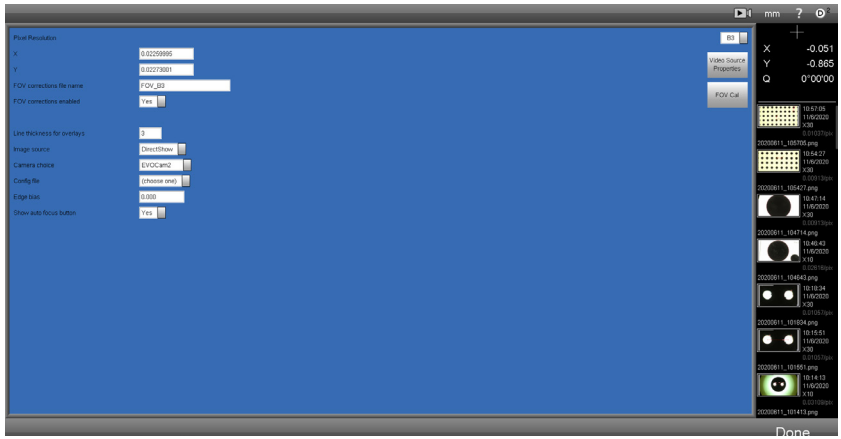


Figure 7: Settings menu



- Click the **Video** button. The Video setup screen will be displayed (*Figure 8*).

Figure 8: Video setup screen



- When using Mantis Elite Cam HD or Lynx EVO Smart Cam / Smart Cam5 select uEye from **Image source** drop down list.
- When using other cameras select DirectShow from **Image source** drop down list.
- Select the desired camera (e.g. EVO Cam II) from the **Camera choice** drop down list.
- When the selection is complete, click **Done** to return to the Settings menu and again to return to the Home screen.

Before changes to the video settings can take effect, the software must be restarted.

The 'Config file' options (1 to 5) allow different camera settings to be saved. This functionality can be used with Mantis Elite Cam HD or Lynx EVO and is discussed further in section 5 on *page 43***.**

3. Operation

To view this manual whilst DimensionOne™ is running, hold down the Alt key and press the Tab key to toggle between the two.

This section will describe the following functions:

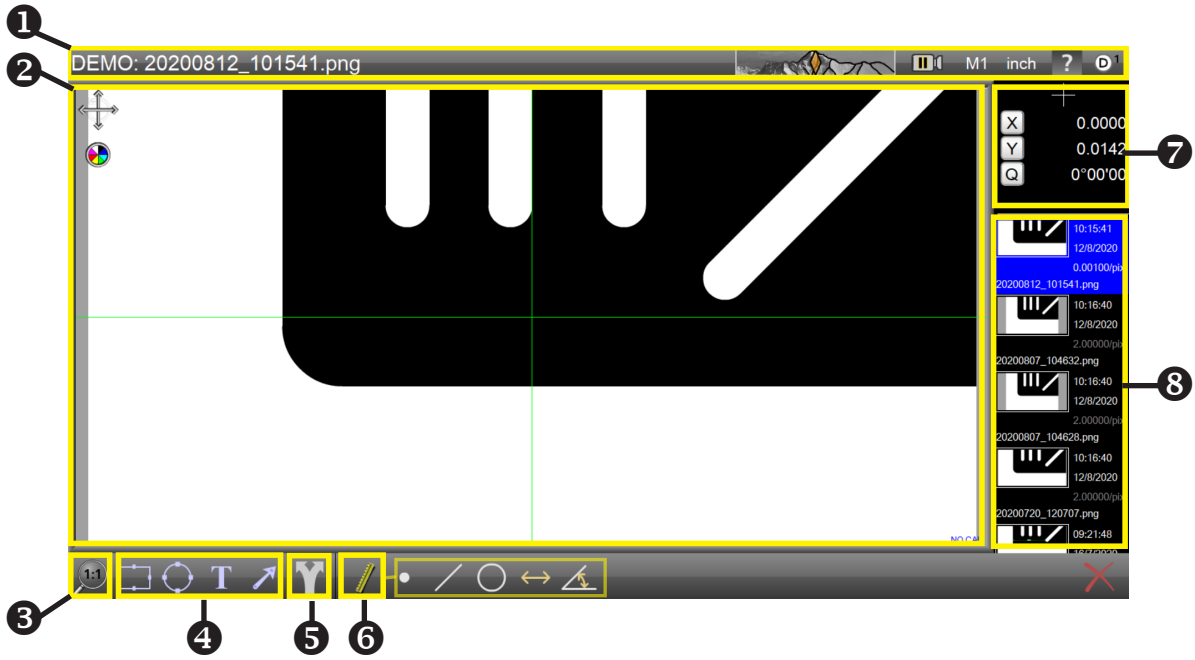
- Screen areas (*page 15*)
- Still capture (*page 16*)
- Handling captured images (*page 16*)
- Using the crosshair (*page 17*)
- Changing the display units (*page 18*)
- Controlling the image magnification (*page 18*)
- Add annotation (*page 19*)
- Measurement (*page 24*)
- Image control (*page 32*)
- Output options (*page 33*)

3.1 Screen areas

The Home screen consists of the following areas:

- ❶ Status bar
- ❷ Image area
- ❸ Displayed image magnification
- ❹ Annotation controls
- ❺ Output options
- ❻ Measurement controls
- ❼ Measurement display area
- ❽ Image list

Figure 9: Screen areas



3.2 Still capture

To capture a still from the image being displayed in the Image area, proceed as follows:

- Use the controls on the video source to obtain the desire image.
- Click on the icon in the Status bar. The icon will now be displayed as and a still image will be displayed at the top of the Image list. It will be highlighted blue to indicate it is currently being displayed in the image area and its filename will be displayed at the left-hand end of the status bar.

The default filename allocated to a still image is created from the date and time it was captured.

- Click on the icon, to return to displaying live video in the image area.

If an annotation (*page 19*) or measurement (*page 24*) is added to an image whilst in the video mode, a still capture will be taken automatically.

3.3 Handling captured images

Captured images can be renamed to aid identification, or deleted when they are no longer required, as follows:

3.3.1 Renaming a captured image

- Click on the image in the Image list which is to be renamed (scroll through the list if necessary). It will be highlighted blue and its current filename will be displayed at the left-hand end of the status bar.
- Click on the filename. It will be highlighted in green.
- Either type in the filename required, or click on the name again to edit the existing filename.
- When the filename has been changed, click **Done**.

3.3.2 Deleting a captured image

- Click on the image in the Image list which is to be deleted (scroll through the list if necessary). It will be highlighted blue and its current filename will be displayed at the left-hand end of the status bar.
- Click on the icon at the bottom right of the screen. The delete prompt will appear.
- Click **Yes** to delete or **No** to abort deletion.

If all the images in the Image list are deleted, the Image area will display the video source or the bitmap image according to the Image source and Camera choice settings (*page 12*).

3.4 Using the crosshair

3.4.1 Moving the crosshair

- To move the crosshair in the XY plane, ensure the icon is displayed in the top left of the Image area. If the icon is displayed, click on it.
- Click and drag the mouse cursor on the Image area to move the crosshair. The movement will be reflected by the X and Y values in the Measurement display area.
- To zero the new position of the crosshair, click the **X** and/or **Y** buttons in the Measurement display area.

3.4.2 Rotating the crosshair

- To rotate the crosshair, ensure the icon is displayed in the top left of the Image area. If the icon is displayed, click on it.
- Click and drag the mouse cursor on the Image area to rotate the crosshair. The movement will be reflected by the Q value in the Measurement display area.
- To zero the new angle of the crosshair, click the **Q** button in the Measurement display area.

3.4.3 Changing the colour of the crosshair

- With nothing selected in the Image area, click on the icon in the top left of the Image area to change the colour of the crosshair. They will change in the following order:

  Dark blue
  Yellow
  Light blue
  Magenta
  Black
  White
  Green (default)

3.4.4 Resetting the crosshair position

To restore the crosshair to its default position (i.e. the centre of the image area with zero rotation), click and hold the left mouse key over the or icon for approximately 3 seconds.

3.5 Changing the display units

There are two possible unit buttons that can be displayed in the status bar:

- Inch/mm
- DD(decimal degrees)/DMS(degrees,minutes,seconds)

To set these buttons to appear, see *page 41***.**

▶ Click on these buttons to alternate between the units as required.

3.6 Changing the displayed image magnification

To change the magnification of the image displayed in the Image area, proceed as follows:

▶ Click on the icon at the bottom left corner of the screen. A selection of icons will be displayed as follows:

Displays the entire image.

Displays the full width of the image.

Displays the image at full size.

Drag over area to magnify.

Zoom in.

Zoom out.

When the **icon is selected, the full width of the image will be displayed but this may cause some of its height to be cropped.**

The scrolling wheel on a compatible mouse can be used to zoom in and out.

To pan the image in the Image area, hold down the right mouse button and drag it as required.

3.7 Adding annotations

If, after adding annotation to an image, another image is selected from the Image list, the annotation on the original image cannot be edited or deleted. However, new annotation can be added and edited.

Annotations in the form of rectangles, circles, text and arrows can be added to an image as follows:

3.7.1 Adding shapes

▶ Select the or icon as required and click and drag the cursor in the Image area from where the shape should start until the required area is covered.

If the image being displayed was direct from the video source a still capture will be taken automatically and an image will be added to the top of the image list highlighted in blue.

Whilst the shape is being drawn, the Measurement display area will display the position of the centre of the shape relative to the zeroed position of the crosshair (X and Y), and the width (W) and height (H) for rectangles and the diameter (D) for circles.

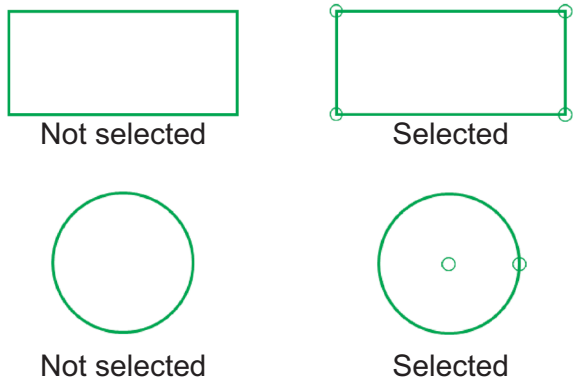
In order that correct measurements are displayed, the correct calibration file must be set in the Settings/Magnification (see section 3.8.9 on *page 31*). NOTE: if no calibration file is set, the displayed measurements will be incorrect.

▶ When the shape is completed (the mouse button released), the icon will no longer be highlighted and the position of the crosshair will be displayed.

3.7.2 Editing shapes

- Click on the border of an existing shape. It will now be displayed as shown below.

Figure 10: Shape editing



- To move a rectangle, select it and then click and drag it from one of its sides to the required position.
- To move a circle, select it and then click and drag from the circle at its centre to the required position.
- To re-size a rectangle, click and drag any of the circles in its corners until it is the required size.

The aspect ratio of a rectangle can also be changed when it is re-sized.

- To re-size a circle, click and drag the circle at its edge until it is the required size.
- To change the colour of a shape, select it and then click on the icon in the top left of the Image area. The shape will change colour in the following order:

Dark blue
Yellow
Light blue
Magenta
Black
White
Green (default)

- To delete a shape, select it and click the icon at the bottom right of the screen.

3.7.3 Adding text

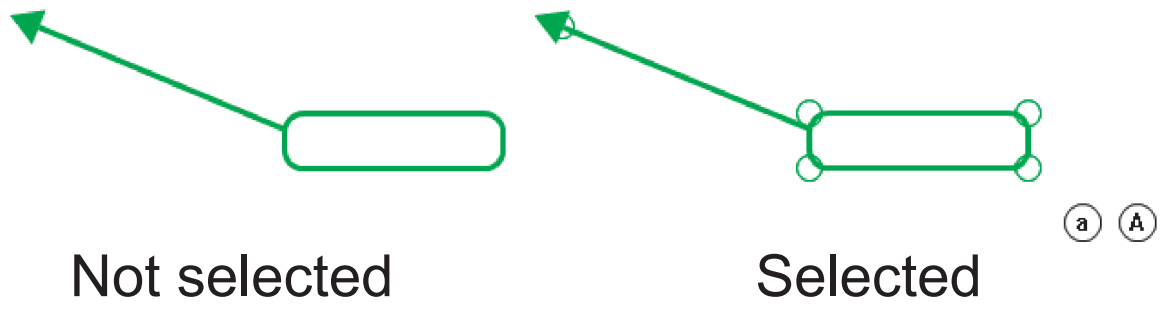
When text is added to an image, it will be in the form of an arrow attached to a text box.

To add text to an image, click the T icon and then click and drag from where the point of the arrow is required. Release the mouse when the text box is in the required position.

Whilst the text box is being drawn, the Measurement display area will display the position of the centre of the box relative to the zeroed position of the crosshair (X and Y), and the width (W) and height (H) of the box.

To add text, click the text box to select it (*Figure 11*).

Figure 11: Text box selection



Key in the required text and click the (a) icon to make the text smaller or the (A) icon to make it bigger.

3.7.4 Editing text

- To re-size the text box, select it and then click and drag on one of the corner circles until it is the required size and in required position (the call-out arrow head will remain in the same position).
- To move the position of the call-out arrow head, select it and then click and drag the arrow head circle until it is in the required position.
- To edit the text in a text box, select it. The text cursor, although not shown, is always at the end of the text. Use the Backspace key to delete text or key in text to add it to the end of existing text.
- To change the colour of a text box, select it and then click on the icon in the top left of the Image area. The shape will change colour in the following order:

  Dark blue
  Yellow
  Light blue
  Magenta
  Black
  White
  Green (default)
- To delete a text box, select it and then click the icon at the bottom right of the screen.

3.7.5 Adding annotation arrows

- To add an arrow, click the icon and click and drag the cursor from where the arrow head is required.
- Release the cursor when the length and position is as required.

3.7.6 Editing arrows

- To edit an arrow, click on it to select it (*Figure 12*).

Figure 12: Arrow selection

- To move the position of the arrow head, select it and then click and drag the arrow head circle until it is in the required position.
- To move the position of the arrow tail, select it and then click and drag the arrow tail circle until it is in the required position.
- To delete an arrow, select it and then click the icon at the bottom right of the screen.

3.8 Measurement

Before using the measurement tools, either for the first time or after the magnification of the source video has changed, carry out the calibration procedure detailed on *page 30***.**

The measurement functions are as follows:

- **Point** This displays the X Y coordinates of a point relative to the current crosshair zero position.
- **Line** This displays the best fit line through up to 9 selected points.
- **Circle** This measures the diameter of a circle derived from 3 or more points
- **Length** The measure the distance between 2 points or features
- **Angle** This measures the angle between two existing lines, or derived from 4 or more points

Points are entered by moving the crosshair to the desired position (using the left mouse button) and then either pressing the right mouse button (while keeping the left button held down) or using the left mouse button to click in the Points Entry box (top right of screen).

Further details for each measurement function are given in the following pages.

When a measurement function is selected, on-screen instructions are also displayed on the right of the screen.

3.8.1 Displaying the measurement icons

▶ Click the icon to display the measurement icons.

3.8.2 Resolution and precision

The terms resolution and precision have totally different meanings in the context of this dimensioning system and should not be confused with each other.

Resolution

The term resolution refers to the accuracy of the equipment generating the video image in the Image area. The higher the precision of the equipment, the more accurate the image supplied to the Image area.

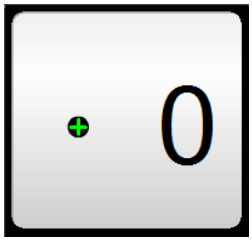
Precision

The term precision is directly related to the operators ability to place points on the image accurately. The more precise the operator is about placing points on the image, the more accurate the readings will be.

3.8.3 Point

▶ Click the icon. The Point position box will be displayed in the Measurement display area (*Figure 13*).

Figure 13: Point position box



▶ Position the crosshair at the point position is to be measured and click in the Points Entry box. The counter will display 1.

Up to 9 points can be placed and the resulting point will be an average of those points.

▶ Click to delete the each point and make another one or click to accept.

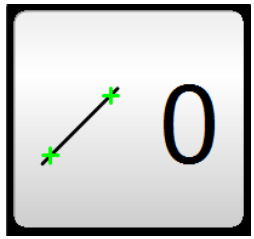
▶ When accepted, a box displaying the XY coordinates relative to the crosshair current zero position will be displayed.

▶ To delete the measurement box, select it and click .

3.8.4 Line

▶ Click the icon. The Line box will be displayed in the Measurement display area (*Figure 14*).

Figure 14: Line box



▶ Position the crosshair at the first point in the required line and click in the Points entry box. The counter will display 1.

▶ Position the crosshair at the second point in the required line and click in the Points Entry box. The counter will display 2.

Up to 9 points can be placed and the resulting line will be an average of those points. The angle of the line to the horizontal and the X and Y coordinates of the midpoint of the line are displayed.

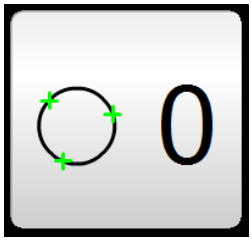
▶ Click to delete either point and make another one or click to accept the position of both points.

▶ To delete the line, select it and click .

3.8.5 Circle

▶ Click the icon. The Circle box will be displayed in the Measurement display area (*Figure 15*).

Figure 15: Circle *box*



▶ Position the crosshair at the first point in the required circle and click in the Points entry box. The counter will display 1.

▶ Position the crosshair at the second point in the required circle and click in the Points Entry box. The counter will display 2.

▶ Repeat this for a third time.

Up to 9 points can be placed and the resulting circle will be an average of those points.

▶ Click to delete each point and make more or click to accept the position of all the points.

▶ When accepted, the diameter of a circle passing through the average position of all points will be displayed.

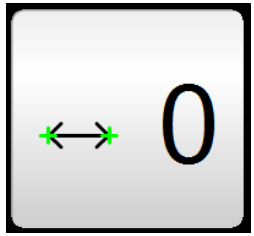
▶ To measure the radius of an arc, click the icon (which appears at the base of the screen after has been clicked) .

▶ To delete the circle, select it and click .

3.8.6 Length

- Click the icon. The Length box will be displayed in the Measurement display area (*Figure 16*).

Figure 16: Length box

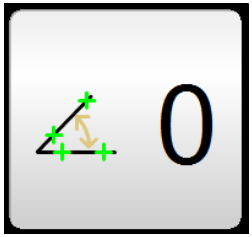


- Position the crosshair at the first point in the required length and click in the Points entry box. The counter will display 1.
- Position the crosshair at the second point in the required length and click in the Points Entry box. The counter will display 2.
- Click to delete each point and make another one or click to accept the position of both points.
- When accepted, the length of the line will be displayed.
- If measuring between circles or a line and a circle, click the Icon (which appears at the base of the screen after has been clicked) for alternative distances
- To delete the length, select it and click .

3.8.7 Angle

▶ Click the icon. The Angle box will be displayed in the Measurement display area (*Figure 17*).

Figure 17: Angle box



▶ Position the crosshair at the first point in the first line of the angle and click in the Points entry box. The counter will display 1.

▶ Position the crosshair at the second point in the first line and click in the Points Entry box. The counter will display 2. Up to 5 points can be entered on the first line

▶ Repeat the above 2 steps for the second line (the remaining points up to a total of 9 can be entered here).

Up to 9 points can be placed and the resulting lines will be an average of those points.

▶ Click to delete any of the points and make another one or click to accept the position of all the points.

▶ When accepted, the angle between the 2 lines will be displayed.

▶ To display alternative possible angles, click the icon (which appears at the base of the screen after has been clicked) .

▶ To delete the angle, select it and click .

3.8.8 Calibration

Before using the measurement tools, either for the first time or after the magnification of the source video has changed, carry out the calibration procedure as follows:

- Set up a name and group for the calibration. Go to **Magnifications** in the **Settings** menu and select **New**.
- Enter a file name in the **Name** box on the left of the screen (e.g. '20x' to indicate the magnification - see *Figure 20*) and enter a group name (e.g. the lens name, or user name, or the date). Then click the green 'tick' in the bottom right of the screen to exit the **Magnifications** window.
- Click **Done** to exit the **Settings** window and return to the display screen. The file name is displayed in the top right of the screen next to the icon.
- Calibration is achieved by measuring a circle of known diameter.

Figure 18a: Calibration card

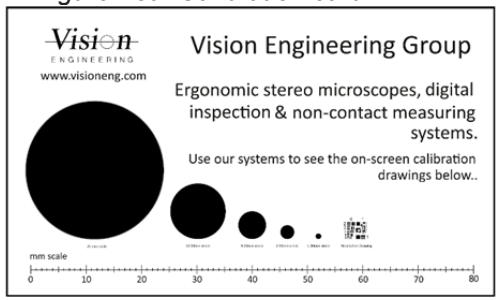
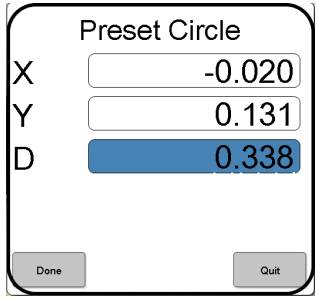


Figure 18b: Circle calibration box



1. Place a calibration slide (Figure 18a) or a circular subject with a known diameter, under the lens of the video source.
2. Once focused, used the circle measurement tool (see *page 27*) to measure the diameter.
3. With the results in the measurement display area, click and hold the left mouse button until the calibration box (Figure 18b) is displayed.
4. Click in the **D** (diameter) field and enter the relevant known value of the circle diameter measured and click **Done** to complete the pixel calibration.
5. Check the calibration accuracy by making a measurement of the calibration circle. Be prepared to repeat the calibration procedure (steps 2 to 4) if necessary. **NOTE:** this may be necessary when performing the calibration at a magnification setting for the first time; this is because the pixel calibration is a correction to whatever the current calibration size is, and so if the initial value is not close, the pixel calibration will need to be repeated to improve the calibration. Typically, a first calibration may accurate to ~0.5% and the repeat calibration accurate to 0.1% or less.

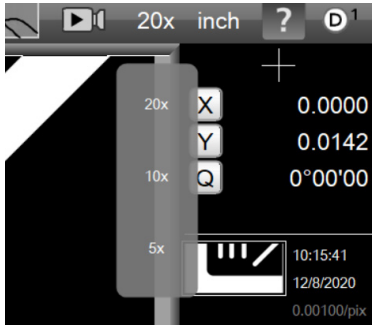
- Repeat the calibration procedure at all required magnification settings. On completion it is recommended that the software is backed up to ensure that the calibration information is saved; go to the **Settings** menu, open the **About** window, select **Backup Now** in the bottom left of the screen.

3.8.9 Changing the calibration file

Calibration files can be recorded and saved as described above at different magnification settings or for different lenses. To change the calibration file:

- Mouse-click on the calibration file name in the top right of the screen; this will bring up a drop-down menu showing the other calibration files in the group (see *Figure 19*). These can be selected by a mouse-click.

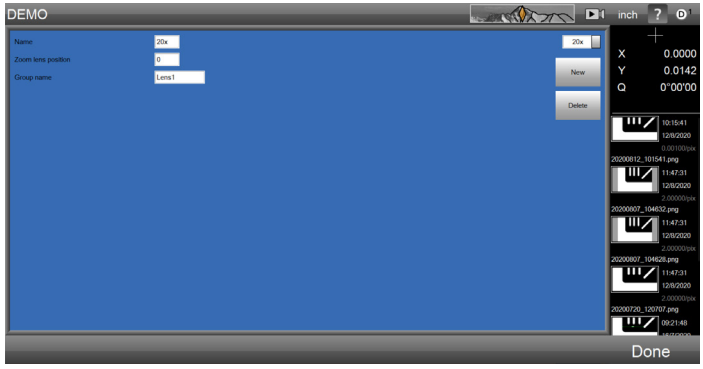
Figure 19: Magnification settings drop-down menu



To access files in a different group:

- Select Magnifications in the Settings window, and use mouse-clicks to change the calibration file displayed in the top right hand corner of the screen (see *Figure 20*). Here you can either:
- Select the calibration file required and click Done to return to the Settings screen and click Done again to return to the main display screen.
  OR - select any calibration file in the same group and return to the main screen and change to the calibration file required as described above.

Figure 20: Magnifications window

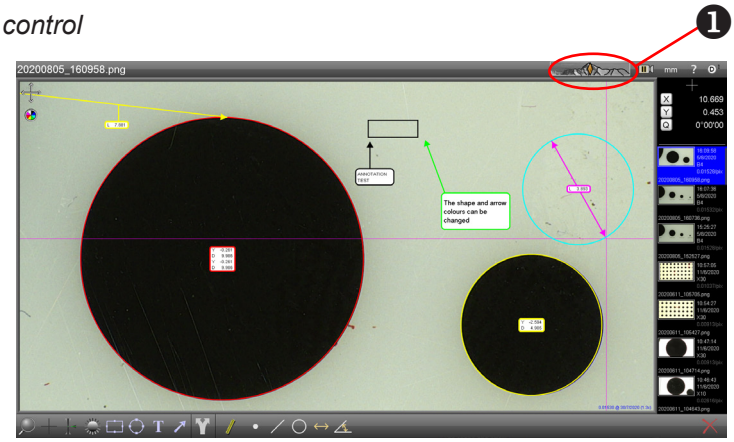


3.9 Image/annotation contrast control

When an image has had annotations and/or dimensions added, the emphasis of image to additions can be altered so that the image is stronger than the annotations/dimensions or vice-versa.

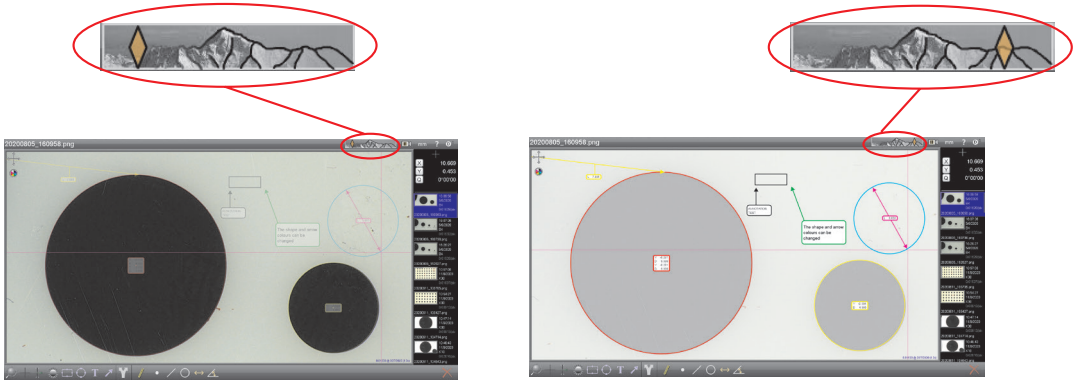
This is achieved by the Opacity control ❶ in the Status bar (shown in *Figure 21* in the neutral position).

Figure 21: Opacity control



▶ Click and drag the orange slider to the left and the image is more prominent. Slide it to the right and the annotations/dimensions are more prominent (*Figure 22*).

Figure 22: Image control



3.10 Output options

Click on the icon to output the image currently displayed in the Image area in the following ways:

- **Print** This will print immediately to the default printer
- **Save to file** This will open the **Save file** dialogue box. Edit the filename (if required) and navigate to the required location (if required). Select Bitmap, JPG or PNG file type as required and click **Save**.
- **Email** This will open a new email with the file attached.

4. Settings

This section describes how to setup the software to meet a user's or a system's individual requirements, and covers the following:

- Accessing the settings menu (*page 35*)
- Software version information (*page 36*)
- Read/Write settings (*page 36*)
- Backup/Restore (*page 36*)
- Set language (*page 36*)
- Security (*page 37*)
- File locations (*page 39*)
- Video settings (*page 40*)
- Magnification settings (see section 3.8.9 on *page 31*)
- Desktop settings (*page 41*)
- Display formats (*page 42*)
- Sounds (*page 42*)
- Using custom settings files with Mantis Elite Cam HD and Lynx EVO Smart Cam (*page 43*)

4.1 Accessing the settings menu

To access the settings menu, proceed as follows:

- Click on the DimensionOne™ logo ❶ to reveal the drop down menu (*Figure 23*).
- Click on the **Settings** button ❷. The Settings menu will be displayed (*Figure 24*).

Figure 23: Selecting settings

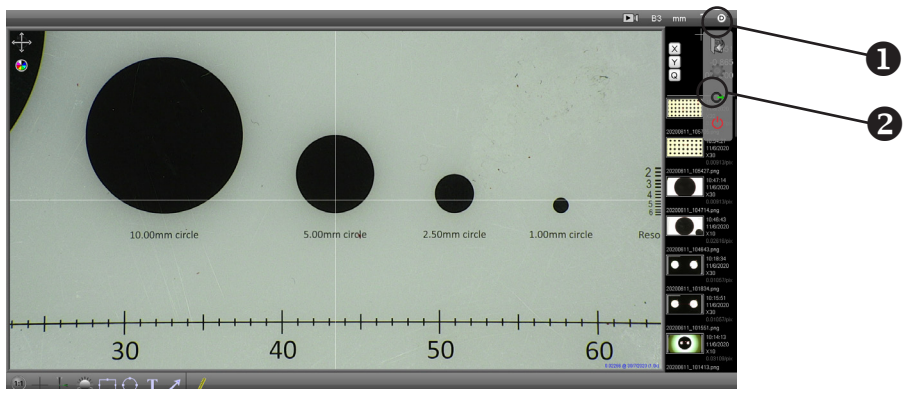
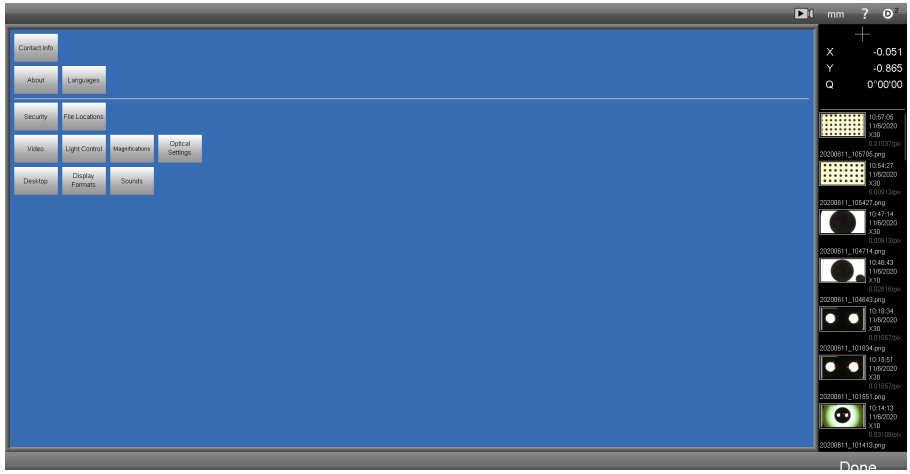


Figure 24: Settings menu



4.2 Software version

To access the information regarding the software, select **About** from the Settings menu.

4.3 Read/Write settings

These settings are not functional.

4.4 Backup and restore

The settings (e.g. calibration file being used) for the current user can be backed up and subsequently restored if necessary as follows:

It is always advisable to backup information to an external source. This can be achieved by setting the backup file location accordingly (*page 38*).

- Ensure the user is correctly logged on.
- From the Settings menu, click **About**.
- To backup the current user's settings, click **Backup now**.
- To restore a backed up settings file, click **Restore backup** and select the relevant backup file.
- When complete, click **Done** to return to the Settings menu.

4.5 Set language

To set the language used by DimensionOne™, proceed as follows:

- From the Settings menu, click the **Languages** button.
- Click the required language from the list and click **Done** to return to the Settings menu.

4.6 Security

The first time the software is used, the security function will enable the Super Admin user to set the supervisor's password and up to 5 users' access rights and password. If the system is only ever going to be used by one person or all the users are to have equal rights, the security settings do not have to be changed.

4.6.1 Initial security setup

This function enables the Super Admin to set the access rights for a supervisor and up to 5 users as follows:

- From the Settings menu, click the **Security** button. The Super Admin security screen will be displayed (*Figure 25*).

Figure 25: Super Admin security screen

- Click in the password field and click on the numbers and symbols now displayed at the base of the screen to enter the required Super Admin password.
- If required, enter the number of days the password will be valid for in the field below.
- Unless the DimensionOne™ should always start with Super Admin logged in, set the **Automatically login as this user** field to No.
- The table below outlines the access rights of the supervisor and up to 5 users.
- Click on the drop down list to the right of the screen to select supervisor and the required users in turn.
- When the supervisor or a user is displayed in the drop down field, their displayed name, password information, account status, login status and access rights can be adjusted.
- When all required users' information has been adjusted, click **Done** to return to the settings menu.

4.6.2 General security setup

Anyone that has been granted access to the security setup screen by the Super Admin can access this screen and make changes as follows:

- From the Settings menu, click the **Security** button. The security screen will be displayed.
- When the supervisor or a user is displayed in the drop down field to the right of the screen, their displayed name, password information, account status, login status and the following access rights can be adjusted:
  - Language settings
  - Video settings
  - Display formats
  - File locations
  - Security settings
  - Sounds settings
  - Desktop settings
  - Backup/restore settings
- When all required users' information has been adjusted, click **Done** to return to the settings menu.

4.7 File locations

Although DimensionOne™ has predetermined folder locations for various file types, the user can select a different folder location for the following file types:

- Backups
- Exports
- Images

To select a folder for any of the above file types, proceed as follows:

- From the Settings menu, click the **File locations** button.
- Click on the required file type and navigate to the required folder.
- Click **OK** to make the change. The folder location will be displayed in the Location column.
- Click **Done** to return to the Settings menu.

4.8 Video settings

To access the video settings, proceed as follows:

- From the Settings menu, click the **Video** button.
- Make any changes necessary and click **Done** to return to the Settings menu.

4.8.1 Pixel resolution

This setting has been calculated from the latest calibration (*page 30*), DO NOT CHANGE.

4.8.2 Line thickness for overlays

This value changes the thickness of the lines displayed for annotations and dimensioning.

4.8.3 Image source

Select between **Bitmap** (to display the default graphic in the image area), **Direct Show** (to enable Windows(TM) to display compatible video in the image area) or **uEye** (to display the image with settings taken from **uEye software**) from the drop down list. See *Section 5*.

The DimensionOne™ software will have to be restarted for a change to this field to take effect.

4.8.4 Camera choice

Select the required camera from the drop down list.

The DimensionOne™ software will have to be restarted for a change to this field to take effect.

4.8.5 Video source properties

Click this button to access the selected camera's video properties.

The DimensionOne™ software will have to be restarted for a change to this field to take effect.

4.9 Desktop

To access the application settings, proceed as follows:

- From the Settings menu, click the **Desktop** button.
- Make any changes necessary and click **Done** to return to the Settings menu.

4.9.1 Lock window layout

If the window layout is locked, none of the screen area sizes can be changed.

4.9.2 Display inch/mm button

Alter this field to if you wish to display this button in the Status bar, in a pop-up menu at the base of the screen, or not at all.

4.9.3 Display dms/dd button

Alter this field to if you wish to display this button in the Status bar, in a pop-up menu at the base of the screen, or not at all.

4.9.4 Display keyboard button

The keyboard button is only used to call up a keyboard on a tablet computer.

Alter this field to if you wish to display this button in the Status bar, in a pop-up menu at the base of the screen, or not at all.

4.9.5 Shutdown computer on exit

If this field is set to Yes, the computer will shut down automatically when the DimensionOne™ is closed.

4.9.6 Display at full screen size

If the field is set to Yes, the DimensionOne™ software will display full screen with no minimise window or close controls.

4.9.7 Restore defaults at launch

If this field is set to Yes, all the settings that have been changed will be reset to the default state (see also *page 36*).

4.9.8 Crosshair to click

With this option set to Off, the crosshair will perform as described on *page 17*. When set to On, the crosshair centre will move to wherever the left mouse button is clicked (not suitable for touch-screen use).

4.10 Display formats

To access the Display format settings, proceed as follows:

- From the Settings menu, click the **Display formats** button.
- Make any changes necessary and click **Done** to return to the Settings menu.

4.10.1 Resolution settings

Set all the resolution settings to be realistic according to the quality of the equipment and magnification used.

4.10.2 Current inch/mm flag

Set this to be the preferred setting for this button.

4.10.3 Current dms/dd

Set this to be the preferred setting for this button. dms = degrees/minutes/seconds, dd = decimal degrees.

4.10.4 Use comma for decimal point

Set this to Yes or No as required.

4.10.5 Date format

Set this field to display the date in either DD/MM/YY or MM/DD/YY format.

4.11 Sounds

To access the Sounds settings, proceed as follows:

- From the Settings menu, click the **Sounds** button.
- Click in the Enabled column against the sound status to be changed and click **Done** to return to the Settings menu.

5. Using custom settings files with Mantis Elite Cam HD and Lynx EVO Smart Cam

- Install uEye Cockpit software (supplied with Vision Engineering Mantis Elite Cam HD and Vision Engineering Lynx EVO Smart Cam).
- Open uEye Cockpit software and adjust settings to create the optimal image for your subject.
- From the **File/Save Parameters/To file** option, save the Save the settings to ...Metlogix/Settings folder.

The file name MUST be saved as one of five file names to correspond to the 5 'Config file' settings that can be found in the Settings Menu, in the Video sub-menu.

File name	'Config file' setting in DimensionOne
DimensionOne-1.ini	1
DimensionOne-2.ini	2
DimensionOne-3.ini	3
DimensionOne-4.ini	4
DimensionOne-5.ini	5

- Once the parameters are set the file can be modified in uEye Cockpit and recalled in DimensionOne.

- Note: when using IDS Peak Cockpit software (supplied with e.g. Smart Cam 50) the file extension should be .cset

i.e.

File name	'Config file' setting in DimensionOne
DimensionOne-1.cset	1
DimensionOne-2.cset	2
DimensionOne-3.cset	3
DimensionOne-4.cset	4
DimensionOne-5.cset	5

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