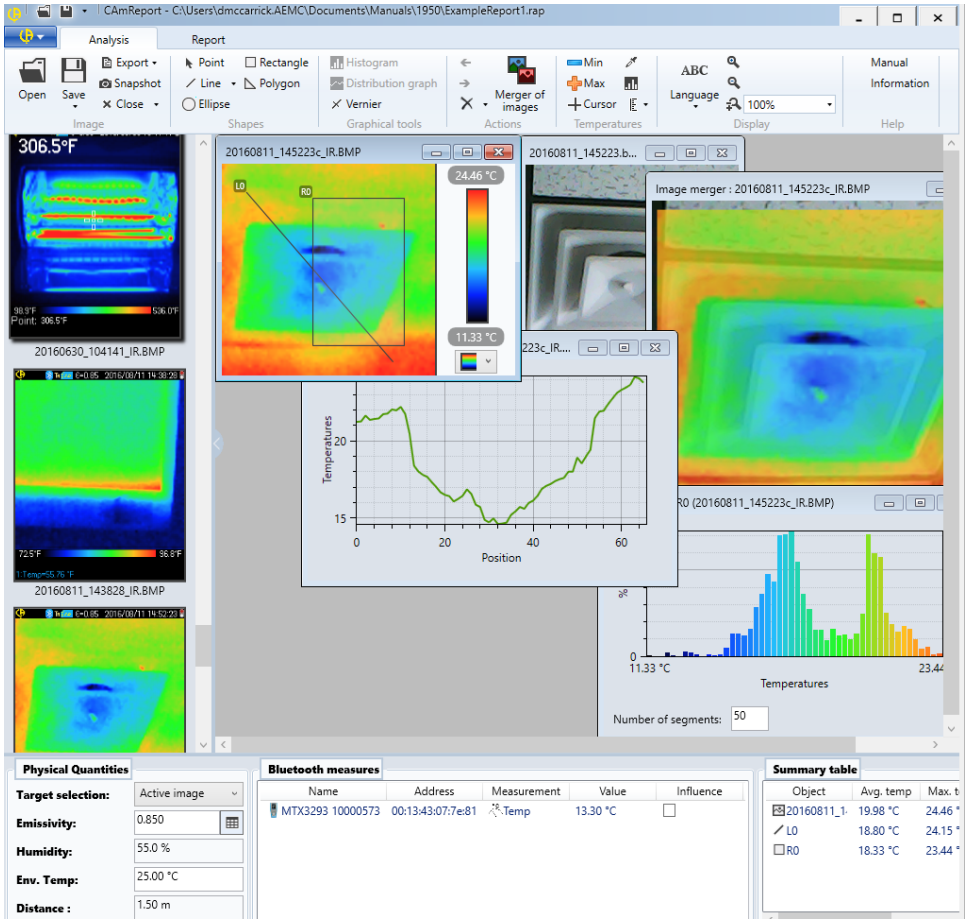
▪ ANALYSIS SOFTWARE

CAmReport



ENGLISH

User Manual

AEMC® INSTRUMENTS
CHAUVIN ARNOUX GROUP

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1. INSTALLATION

Before installing CAmReport, ensure your computer has the following minimum configuration:

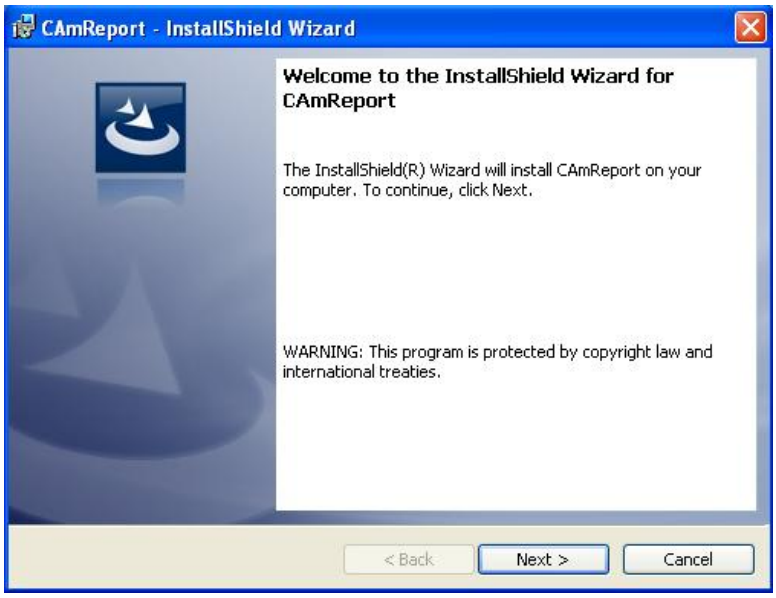
- Microsoft Windows 7/8 or later
- SP1 or later
- RAM: 512
- Memory: 850MB for 32 bit version, 2G for 64 bit version
- NET Framework 4.0 or later

To install CAmReport:

1. Insert the thumb drive that comes with the camera into an available USB slot in the computer.

2. In the thumb drive directory, locate the CAmReport setup file. The name of this file is in the format **setupCAmReport [version number].exe**.

3. Double-click this file to open the CAmReport InstallShield Wizard.



4. The Destination Folder screen appears, displaying the default folder in which CAmReport will be installed. To select another folder, click **Change**, specify the folder location, and then click **OK** to return to the Destination Folder screen. When the desired folder is displayed, click **Next**.

5. The InstallShield Wizard displays the installation settings. To begin installation, click **Install**.

6. When installation is complete, click **Finish** to exit the InstallShield Wizard. The CAmReport icon appears on your Windows desktop. Double-click this icon to start CAmReport.

If the message "**Setup cannot continue because this version of the .Net Framework is incompatible with a previously installed one**" appears, open the computer's Configuration panel, double-click **Programs and Functions**, and delete the older version of Framework. Then uninstall CAmReport and repeat the steps above to reinstall it.

2. GETTING STARTED

2.1 Starting and Exiting CAmReport

To start CAmReport, double-click its icon on your desktop. The CAmReport interface opens with the Analysis tab displayed (see § 3).

To exit CAmReport, do either of the following:

- Click in the upper left corner of the screen and then select **Close**.
- Click ✕ in the upper right corner of the screen.

2.2 Setup

2.2.1 Language

To select the language in which the CAmReport user interface appears:

1. Click the ABC **Language** icon in the toolbar at the top of the screen. This displays a list of available languages.

2. Click the desired language. The options and icons in the CAmReport interface immediately appear in the selected language.

2.2.2 Units

To select the units of measure for temperature and distance measurements:

1. Click the **Units** icon in the toolbar. This displays a menu of available units of measure for temperature (Kelvin, Celsius, or Fahrenheit) and distance (Meters or Foot).

2. Click the desired unit(s). All CAmReport data is immediately displayed in the selected units.

2.2.3 CAmReport Version

To check whether or not you are running the latest version of the CAmReport software:

1. Click **Information** in the toolbar. This displays the latest version number of the CAmReport software.

2. Go to the AEMC Instruments web page (www.aemc.com) and click **Software and Firmware Updates**.

3. Find the CAmReport entry in the list of available download links. If it displays a version number later than the number indicated in the CAmReport Information screen, click the link and follow the downloading instructions.

2.2.4 Additional Information

To view detailed information about CAmReport, click **Manual** in the toolbar. This opens a PDF version of the CAmReport User Guide.

2.3 Analysis and Report Tabs

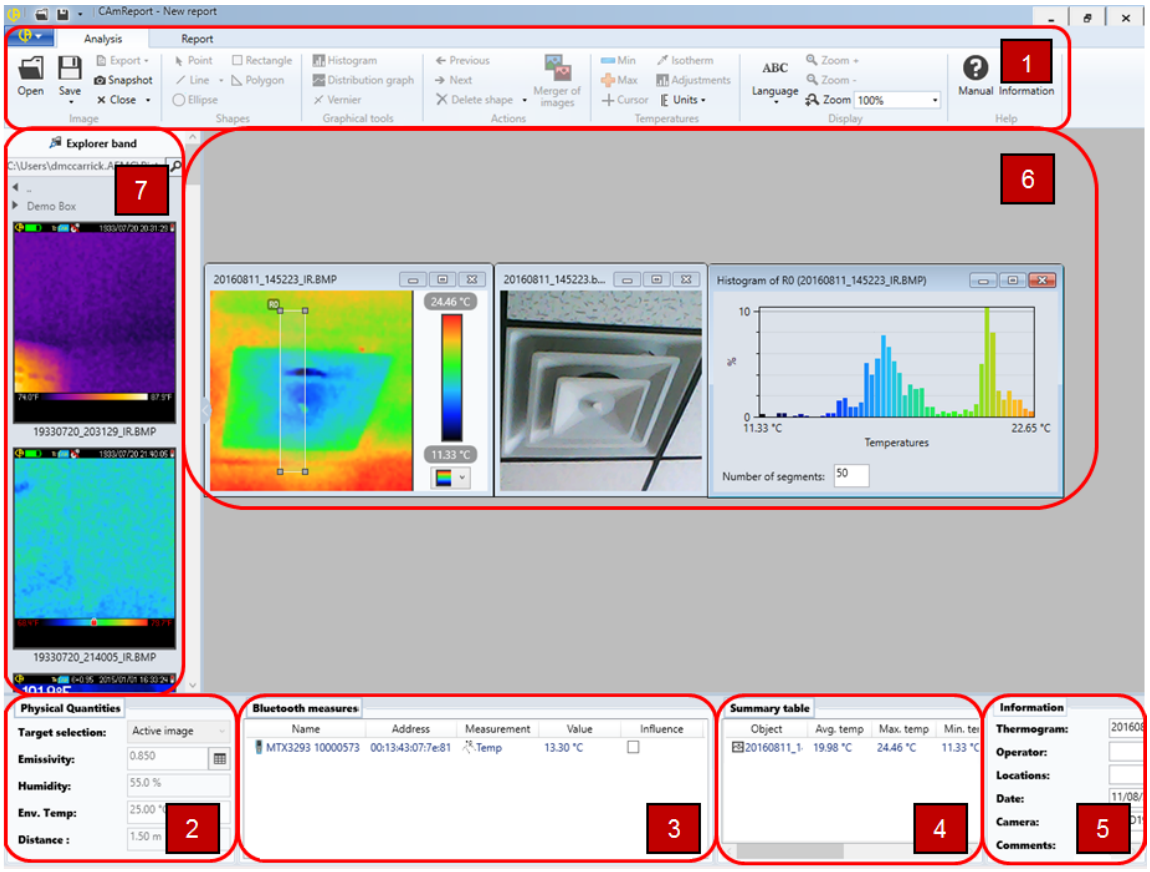
The CAmReport interface provides two main tabs:

- **Analysis** (§ 3) displays images and related data for analysis.
- **Report** (§ 4) enables you to create a report from the selected data.

To select a tab, click its name at the top of the CAmReport screen (see below).

2.3.1 Analysis Tab

When CAmReport starts, the Analysis tab is displayed by default. This tab is designed for viewing and analyzing images and the data they contain.



1. **Toolbar** contains options for selecting and displaying images and associated data.

2. **Physical Quantities** displays environmental factors for the selected image. These fields can be edited.

3. **Bluetooth measures** displays additional measurement data (if any) associated with the selected image. This data is measured by peripherals connected to the camera via Bluetooth, and is included with the saved image file. If the selected image file does not include Bluetooth peripheral data, this table does not appear.

4. **Summary table** displays the selected image's data, including temperature and environmental factors. This table is display-only.

5. **Information** lists general information about the image, including filename, the name of the operator who created the image, its creation date and location, and so on. These fields can be edited.

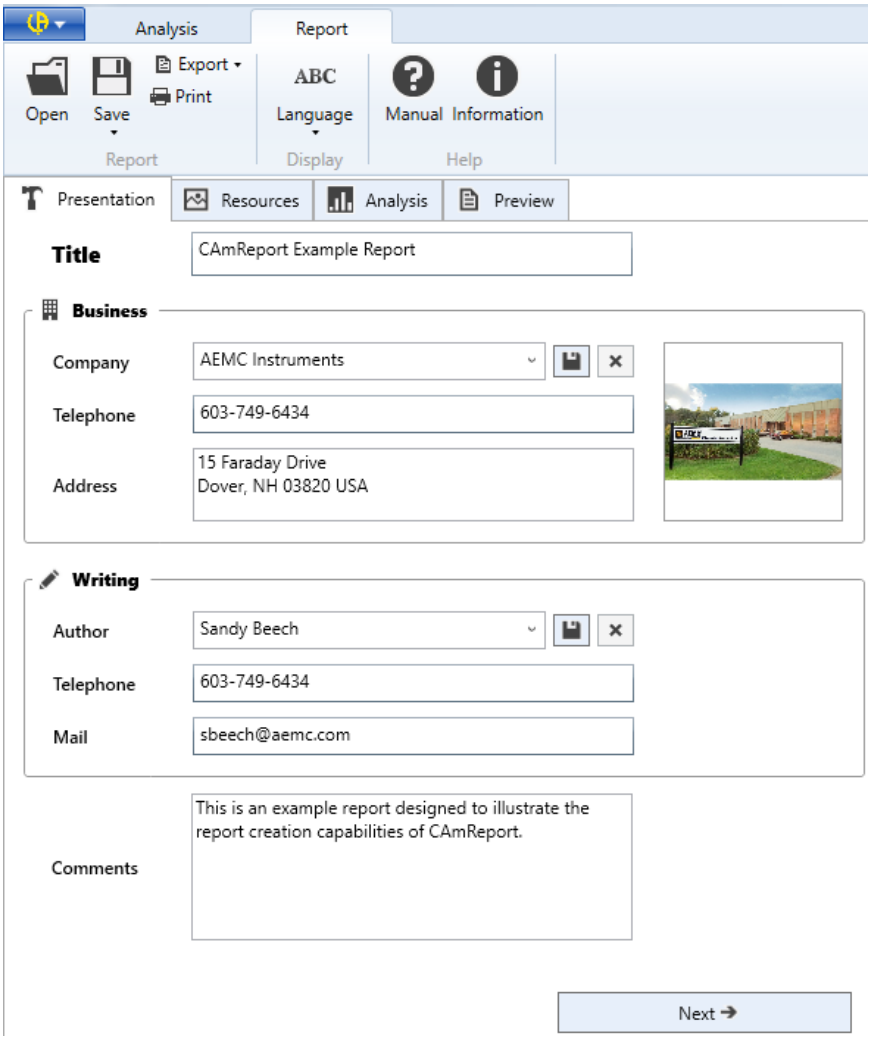
6. Display area for open image files. You can also create and display additional information from the image, such as the temperature histogram shown in the preceding illustration.

7. **Explorer band** lists IR images in the currently open folder. To select a folder, click at the top of the Explorer band and browse to the desired folder. Double-clicking an image displays it (along with its visible light image) in the display area. Multiple images can be open and displayed at the same time. You can hide the Explorer band by clicking the **<** icon on its right side; clicking **>** restores it.

For details about analyzing images, see § 3.

2.3.2 Report Tab

This tab enables you to create reports from the selected image data.



The Report tab consists of four sub-tabs:

- **Presentation** (shown above) enables you to enter general information about the report (title, business, operator, and so on).
- **Resources** selects images to include in the report, along with their associated analysis data.
- **Analysis** lets you merge images, add graphics, and modify other data.
- **Preview** allows you to preview, print, and export the report.

For more information about creating reports, see § 4.

3. ANALYSIS

The CAmReport Analysis tab provides tools for displaying and analyzing IR images. You can then use the Report tab (§ 4) to create reports from this data.

3.1 Toolbar

At the top of the Analysis tab is a toolbar of icons. Each icon activates a tool for viewing and analyzing image data.

Icon	Tool
Image: These tools are for opening, saving, exporting, and closing image files.	
Open	Opens an image or report file. Clicking this icon displays the Open dialog box (§ 3.2).
Save	Saves the in-progress report. All current work, including open images, parameters, and other selections are saved in a report (RAP) file. Clicking this icon opens the Save As dialog box, enabling you to save the file under its existing name, or under a new name. The latter option creates a new file and leaves the original file unchanged.
Export	Exports the selected image as a data table, in either TXT (text) or CSV (spreadsheet) format.
Snapshot	Saves the selected image as a "snapshot" image (PNG) file (§ 3.6.1).
Close	Exits the selected file (§ 3.2).
Shapes: These tools define a point, line, or geometric shape. These enable you to analyze specific points or regions of interest within the image (§ 3.5.1).	
Point	Places a point within the selected IR image. The data associated with the point is displayed in the Summary table at the bottom of the display (§ 3.5.1.1).
Line	Draws a line in the IR image. This line can consist of a single segment, or multiple joined segments (polyline). The line can then be used to create a distribution graph of temperatures along its length (§ 3.5.1.2).
Ellipse	Draws an ellipse in the IR image (§ 3.5.1.3).
Rectangle	Draws a rectangle in the IR image (§ 3.5.1.3).
Polygon	Draws a user-defined polygon in the IR image. This can have any shape or number of sides (§ 3.5.1.3).
Graphical tools: These tools display graphical data associated with a line or shape.	
Histogram	Displays the temperature data contained within a shape (ellipse, rectangle, or polygon) as a bar chart (§ 3.5.1.3).
Distribution graph	Displays a graph of the temperature distribution along a selected line (§ 3.5.1.2).
Vernier	Adds a "Vernier" point to the selected single-segment line. A dotted red vertical line appears in the associated distribution graph at the location defined by the Vernier point (§ 3.5.1.2).
Actions: These tools work with shapes placed in the IR image; and also allow you to merge an IR image with its associated visible light image.	
Previous	Undoes the previous action performed via a Shapes tool.
Next	Restores the next previously undone action.
Delete shape	Deletes the selected point, line, or shape. This tool also lets you delete all points, lines, and shapes from an image (§ 3.5.1).
Merger of images	Combines an IR image with its associated visible light image (§ 3.4.2).

Temperatures: These tools affect the display of temperature data in the selected image (§ 3.5.2).	
Min	Identifies the minimum temperature point in the selected image (§ 3.5.2.1).
Max	Identifies the maximum temperature point in the selected image (§ 3.5.2.1).
Cursor	Displays the temperature and the pixel coordinates of the current cursor location (§ 3.5.2.2).
Isotherm	Creates an isotherm in the selected image. Selecting this tool displays a dialog box for defining the isotherm characteristics (§ 3.5.2.3).
Adjustments	Displays a dialog box for defining the maximum/minimum temperature range for the image's color palette (§ 3.4.1).
Units	Selects the units of measure for temperature and distance (§ 2.2.2).
Display: These tools zoom in and out of the selected image, and also set the language for the CAmReport interface.	
ABC Language	Displays a list of available languages in which the software's options, dialog boxes, and other components appear (§ 2.2.1).
Zoom +	Expands the selected image (§ 3.3.2).
Zoom -	Reduces the size of the selected image (§ 3.3.2).
Zoom	Resizes the selected image. Options range from 50% to 275% of the original image size, in increments of 25% (§ 3.3.2).
Help: Opens the User Manual and displays software version information.	
Manual	Displays the CAmReport User Manual (§ 2.2.4).
Information	Displays a screen showing software version information (§ 2.2.3).

3.2 Opening Image Files

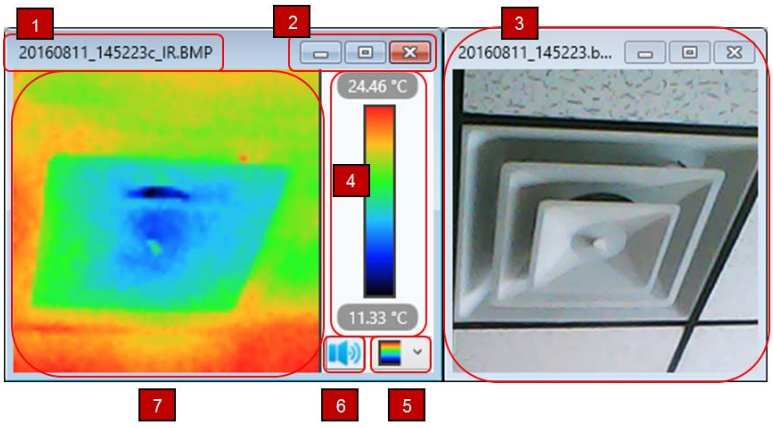
There are two ways to open and display image files:

- Click **Open** in the toolbar. This displays the Open dialog box for browsing your Windows folders and selecting the file to open. When you select an IR file, it appears along with its associated visible light image in the display area of the Analysis tab. If you select a visible light file, it appears without its associated IR image(s).

- Select a file from the Explorer band on the left side of the Analysis tab. Only IR images are listed; when you select a file it appears along with its associated visible light image. If you open two or more IR images that share the same visible light image (for example derived images), the visible light image is only displayed once.

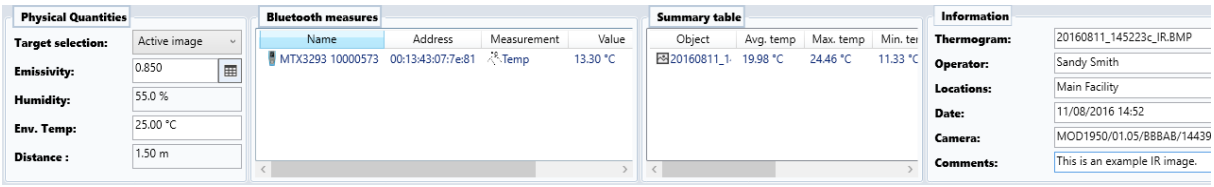
You must use **Open** to display a visible light image without opening its associated IR image.

A typical image file is displayed as follows:



1. IR image file name.
2. Minimize/Maximize/Exit icons. These function as they do in Windows. Note that closing the IR image also closes the associated visible light image; while closing the visible light image does not close the IR image.
3. Visible light image associated with the IR image.
4. Color palette with maximum/minimum temperature range.
5. Color palette selection icon.
6. Audio playback icon. This only appears for files with an associated audio (.AVI) file.
7. IR image display area.

At the bottom of the screen are tables containing data from the open image file.



Note that the example image shown above contains measurement data provided by a peripheral connected via Bluetooth (in this example an AEMC Multimeter Model MTX 3293). This data is displayed in the **Bluetooth measures** table.

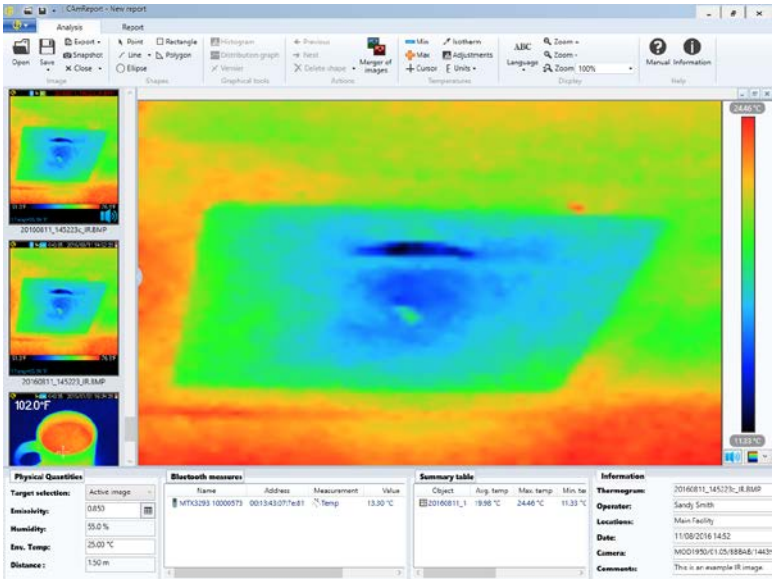
To close an image file, select it and click **Close** in the toolbar. If you have edited the image, a message appears asking you to confirm the closing.

To close all open files, click the **Close** downarrow and select **Close all**.

3.3 Viewing Images

3.3.1 Expanding the Image

You can expand the image by clicking the icon in the image box. The image box expands to the size of the display area.



To restore the image to normal size, click .

3.3.2 Zoom In and Out

When the image is normal size, you can use the Zoom functions to increase and decrease its size. These functions are controlled by three toolbar icons:

- **Zoom +** increases the image size in 25% increments, to a maximum of 300% original size. To do this, select the image and click **Zoom +**. The **Zoom** field displays the percentage the image is expanded.
- **Zoom –** decreases the size of the image. It functions similarly to **Zoom +**.
- **Zoom** displays the image size in percent. You can click this field to select a percentage from a drop-down list. Options are 50 through 275%, in increments of 25%.

You cannot use Zoom functions on images that have been expanded via the icon.

3.4 Adjusting the Image

CAmReport provides options for modifying and adjusting how the image is displayed on the screen; and what data is displayed with it.

3.4.1 Color Palettes

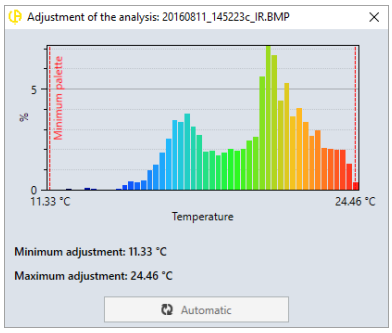
You can change the color palette used to display the IR image. Note that this does not affect the original stored image. To do this:

1. With the IR image displayed, click to display a list of available palettes.
2. Select the desired palette. The image is immediately displayed in the colors defined by the selected palette.

For example, the image to the left has the black and white palette selected.

The color palette includes the high (top) and low values of the palette's temperature range. Measurements that fall outside the high and low values in the range are displayed with the colors of the top and bottom end of the palette, respectively.

You can adjust the palette's color range. To do this, click **Adjustments** in the toolbar to display the **Adjustment of the analysis** dialog box. Then proceed as follows:

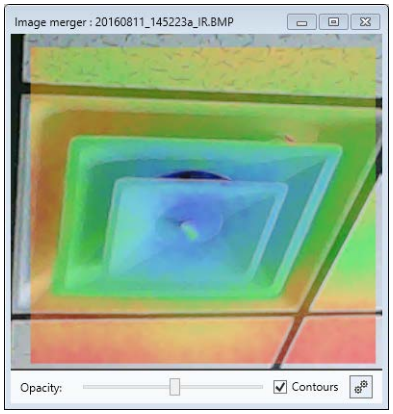


1. Select and drag the dotted vertical line labeled **Minimum palette** to the location of the desired minimum palette range value.
2. Select and drag the **Maximum palette** line to the desired maximum palette value.
3. Exit the dialog box. The palette range will now be applied to the selected image, with all points hotter than the maximum value displayed in the maximum palette color and all points cooler than the minimum displayed in the minimum color.

To restore the palette to its original settings, select the **Automatic** button in the **Adjustment of the analysis** dialog box.

3.4.2 Merging Images

You can merge an IR image with its visible light image to display them as a single superimposed image. This can help make it easier to associate regions in the IR image with their visible counterparts. To do this, select the IR image and click **Merger of images**. This displays an image consisting of the IR and visible light images superimposed.



You can manually adjust the alignment of the images by holding down the left mouse button on the IR image and dragging it to the desired location. Click to automatically set alignment.

At the bottom of the image are two fields:

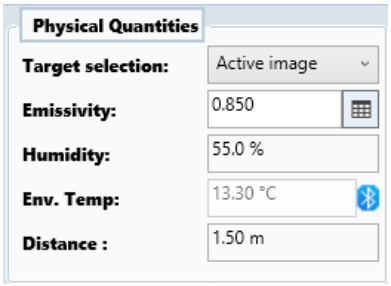
- **Opacity** is a "sliding" control that determines the opacity of the IR image. Slide the control to the left to decrease opacity and to the right to increase opacity.
- **Contours** when checked displays contours in the visible light image.

3.4.3 Parameters of Influence

Parameters of influence are factors that can affect the IR image. These include:

- emissivity of the material(s) shown in the image
- ambient temperature
- relative humidity
- distance to the target

The Physical Quantities menu at the bottom left of the screen enables you to compensate for these factors to minimize their effects. The **Target selection** field defines whether the compensation settings apply to the entire selected (active) image; or a point, line, or shape within in. The remaining fields in this menu let you adjust the following parameters:



- **Emissivity**. When you click a menu appears listing the emissivity factors for a number of common materials. You can select an entry from the table, or enter a new material/emissivity combination.
- **Humidity** is the relative humidity in the target's vicinity.
- **Env. Temp** is the temperature in the target's vicinity. You can enter this manually. You can also use a measurement from an instrument connected to the computer (if any) by clicking the **Influence** checkbox in **Bluetooth measures**.
- **Distance** is the distance between the camera and target.

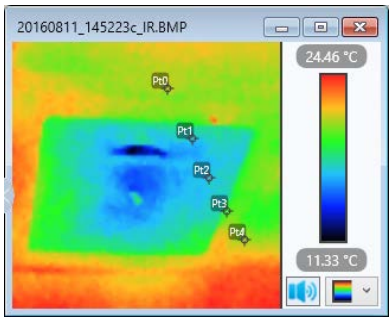
3.5 Analyzing Images

3.5.1 Points, Lines, and Shapes

These tools create a point, line, or geometric shape (ellipse, rectangle, or user-defined polygon) within a selected IR image. This enables you to analyze specific points or regions of interest within the image. The data associated with each of these items appears in the Summary table at the bottom of the screen. Creating a line enables you to display the temperature points along the line as a distribution graph. Shapes allow you to display the data they contain in histogram (bar chart) format.

The following sections describe how to create a point, line, or shape. To delete a point, line, or shape, click the **Delete shape** icon in the toolbar, and then click the item to be deleted. You can also click the downarrow to the right of **Delete shape** and select **Delete all shapes** to remove all points, lines, and shapes from an image.

3.5.1.1 Point



The **Point** toolbar icon lets you place a point within the selected IR image. The data associated with the point appears in the Summary table at the bottom of the display. To add a point to an image:

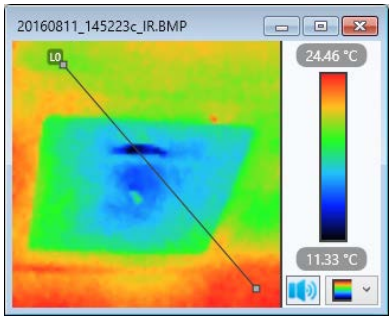
1. With the IR image open, click **Point**.
2. Move the cursor to the location where you want to place the first point.
3. Left click the mouse. The point appears in the image (for example Pt0).

You can add multiple points to an image. Points are named **Pt[n]**, with n representing the sequence in which the point is added. For example, the first point is named Pt0, the second Pt1, and so on (see the preceding image).

Points can be moved and deleted. Moving a point refreshes its data in the Summary table.

3.5.1.2 Line

The **Line** toolbar icon creates a line in the selected IR image. This line can then be used to define a distribution graph of temperatures along its length. To add a line to an image:

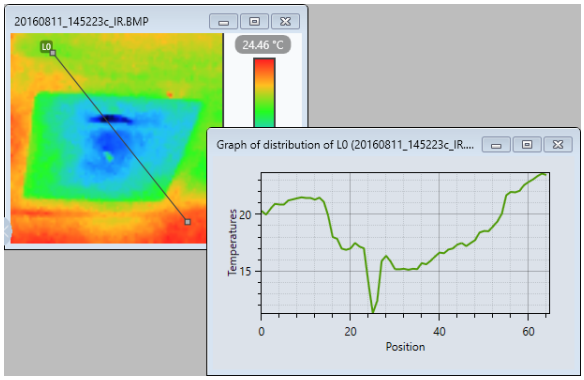


1. With the IR image open, click **Line**.
2. Move the cursor to the location where you want to place the beginning of the line.
3. Hold down the left mouse button, and drag the cursor to the location where you want the line to end.
4. Release the button. The line appears in the image.

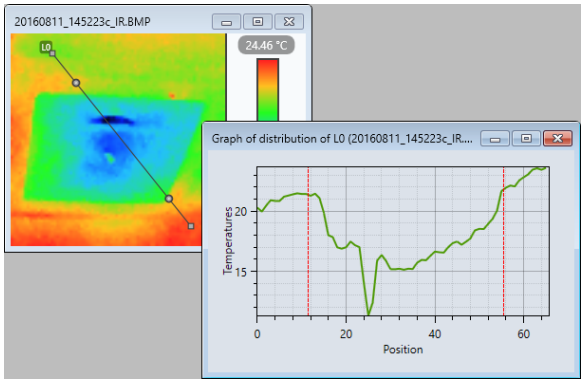
Note that a line can consist of multiple line segments. To do this, select **Line**, click the downarrow, and select **Polyline**. Tap the left mouse button to end a line segment and begin another. Click the right mouse button to complete the line.

You can add multiple lines to an image. Lines are named **L[n]**, with n representing the sequence in which the line is added, starting with 0. The name of the line appears at its start point. Lines can be moved by clicking and dragging to a new location. They can also be resized by clicking an end point and moving it to a new location. Modifying the size or location of a line refreshes its data in the Summary table and Distribution graph, if any (see below).

Distribution graph: To create a Distribution graph of the temperatures along the line, select the line and click the **Distribution graph** icon in the toolbar. A graph showing the temperature measurements along the line appears.



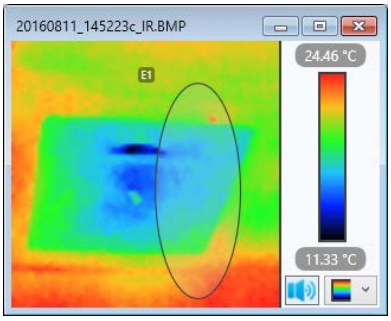
Vernier: You can add a “Vernier” point to a single-segment line. To do this, select the **Vernier** icon in the toolbar. Move the cursor to the location on the line where you want to place the Vernier point, and then click the left mouse button. The Vernier point is identified by the icon. In addition, a dotted red vertical line appears in the distribution graph at the location associated with each Vernier point.

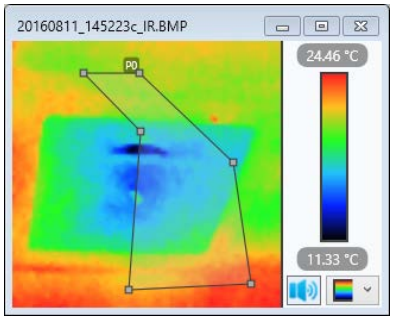


Note that distribution graphs created from polylines (multi-segment lines) display Vernier lines for each line segment junction point. You cannot add a Vernier point to a polyline.

3.5.1.3 Ellipse, Rectangle, Polygon

Three toolbar icons (**Ellipse**, **Rectangle**, and **Polygon**) let you define an area within an image. This enables you to analyze specific regions of interest within the image. The steps for creating one of these shapes are similar.





1. With the IR image open, click the toolbar icon associated with the desired shape.

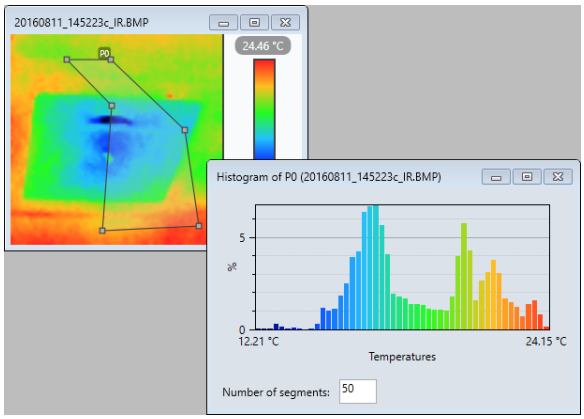
2. Move the cursor to the location where you want to place the shape.

3. To create an **ellipse or rectangle**, hold down the left mouse button and drag the cursor. As you do, the shape appears. Drag the cursor until the ellipse/rectangle is the desired shape and size, and then release the mouse button. For example, the illustration to the left shows an ellipse.

   To create a **polygon**:
   - Move the cursor to the start of the first side of the polygon.
   - Hold down the left mouse button and drag the cursor to the location where you want to place the end of the side, and then click the left mouse button.
   - Move the cursor and left-click to create the other sides of the polygon. When finished, click the right mouse button to complete the polygon (see the illustration to the left for an example).

Shapes and be moved and resized. Multiple shapes can be added to an image.

Histogram: You can create a bar chart of the temperature distribution of measurements contained within a shape. To do this, select the shape and then click the **Histogram** icon in the toolbar. A bar chart of the temperature distribution appears.



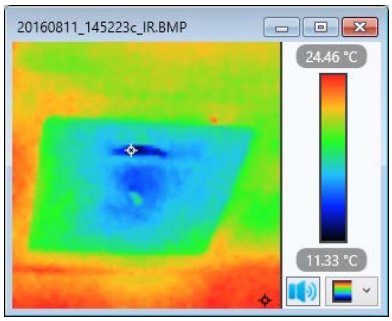
Note that you can change the number of individual bars in the histogram via the **Number of segments** field. A summary of the data contained within the shape also appears in the Summary table.

3.5.2 Temperature Analysis

The **Temperatures** tools affect the display of temperature data in the selected image. This includes identifying the minimum and maximum temperatures in an image, displaying the temperature at the current cursor location, and displaying the image with an isotherm. These tools also perform configuration including setting the maximum/minimum temperature range for the image color palette (§ 3.4.1) and selecting the temperature and distance units of measure (§ 2.2.2).

3.5.2.1 Minimum and Maximum Temperatures

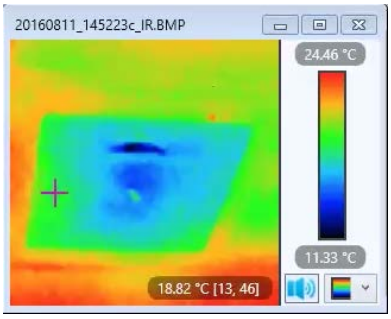
Two toolbar icons, **Min** and **Max**, identify the points in the IR image with the minimum and maximum temperatures respectively.



Clicking **Min** places the symbol at the location in the image with the lowest temperature. Clicking the icon a second time removes the symbol. The **Max** icon functions similarly for the point with the highest temperature. In the example shown at left, the minimum temperature point appears slightly above and left of center, and the maximum temperature is in the lower right corner.

Note that the image's minimum and maximum temperatures also appear in the Summary table at the bottom of the screen.

3.5.2.2 Cursor Location Data



The **Cursor** toolbar icon displays the temperature and the pixel coordinates of the current cursor location.

When you click this icon, the cursor changes to the symbol. As you move the cursor within the image, the temperature and coordinates of the cursor's location is displayed in the lower right corner of the image.

Clicking the **Cursor** icon a second time turns OFF this feature.

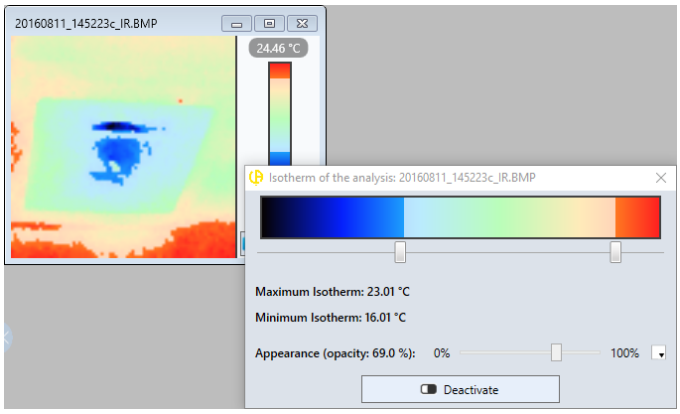
3.5.2.3 Isotherm

The **Isotherm** icon displays the selected IR image as an isotherm. This lets you "isolate" a temperature range within which all points are displayed in the same color. Isotherms can help identify specific temperature regions of interest within an image, such as hot and cold spots.

Clicking the **Isotherm** icon displays the Isotherm dialog box for configuring the isotherm parameters.

- At the top of the dialog box is a palette with two “slider” indicators for selecting the isotherm range. As you move these sliders, the maximum and minimum isotherm temperatures are displayed below the palette.
- **Appearance** defines the opacity of the isotherm. A slider lets you select from 0% (transparent) to 100% (opaque). A value between 0 and 100% displays the colors within the isotherm range at a reduced intensity that allows the colors outside the range to stand out.
- In the lower right corner is a drop-down field that displays a color selection box. This lets you set the isotherm color.

For example, in the following illustration the isotherm range has been set from 16.01° to 23.01° C. The isotherm color is white, with 69% opacity.



In the preceding example, only areas with temperatures above 23.01° C or below 16.01° C are displayed in full color. Note that you can click **Deactivate** in the Isotherm dialog box to toggle between the isotherm and the full image.

3.6 Snapshot and Copy

The Snapshot and Copy commands enable you to create a file from a histogram or distribution graph.

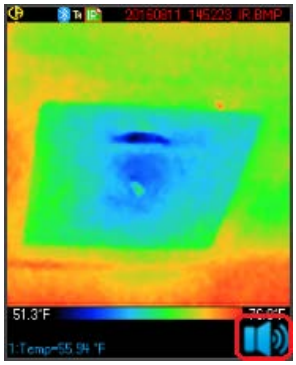
3.6.1 Snapshot Command

This command lets you save the selected histogram or distribution graph as a new file. To do this, right click on the image and select **Snapshot** (or alternatively, click the **Snapshot** icon in the toolbar). The Save As dialog box appears. Enter a name for the new file and click Save. Note that histograms and distribution graphs are saved as PNG files.

3.6.2 Copy Command

To copy a histogram or distribution graph, right click on it and select **Copy**. This copies the selected image to the Microsoft clipboard. You can now paste the image into a compatible application, where you can edit and save it in a new file.

3.7 Audio



An audio recording can be included as part of an image file. This allows you to record a description and other information relevant to the image. Image files that include audio appear in the Explorer band with the symbol in the lower right corner (see the example to the left). This symbol also appears with the IR image when you open it.

To listen to the audio recording, click in the IR image. While the recording is playing, the symbol changes to ; you can click this to stop the audio playback.

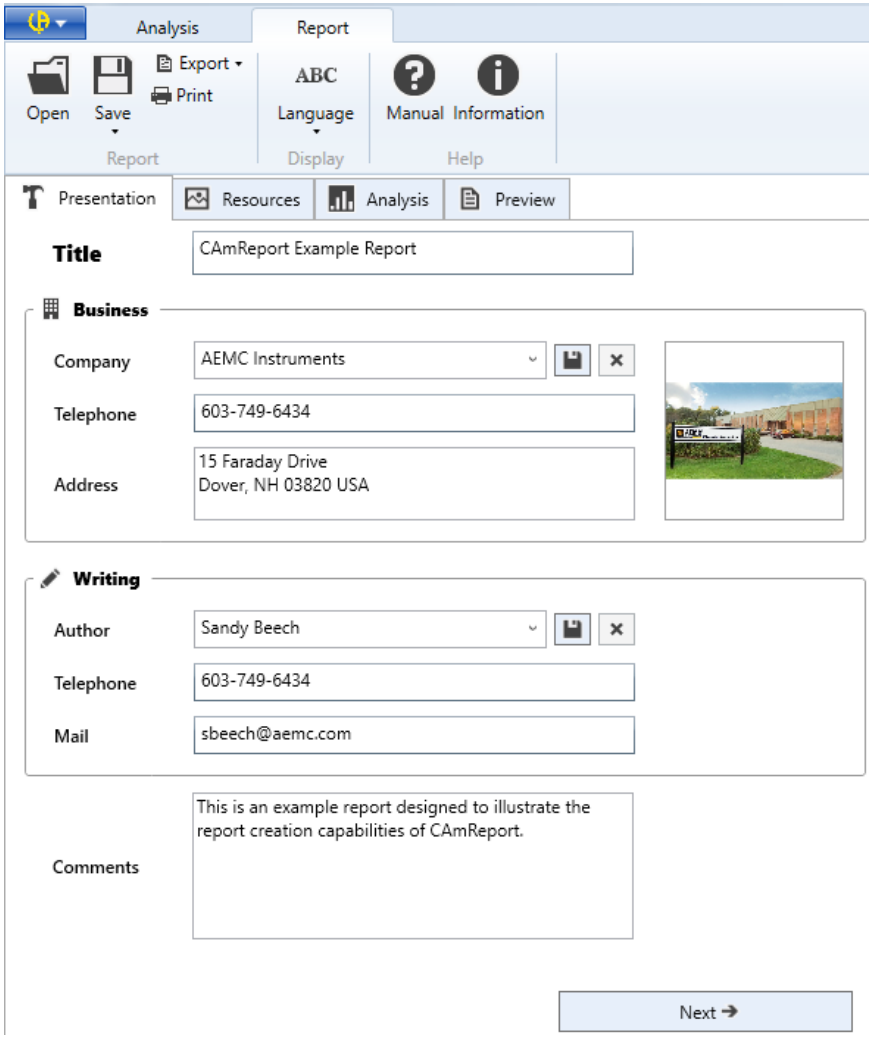
4. REPORTS

The Report tab enables you to generate reports from image data. The reports can then be saved and distributed for further analysis. This tab consists of four sub-tabs:

- **Presentation** enables you to enter general information about the report (title, business, author, and so on) (§ 4.1).
- **Resources** selects images to include in the report, along with their associated analysis data (§ 4.2).
- **Analysis** lets you merge images, add graphics, and modify other data (§ 4.3).
- **Preview** allows you to preview the report, print it, or export it in either PDF or Microsoft Word DOCX format (§ 4.4).

4.1 Presentation

This tab enables you to enter general information about the report. This information will appear in the report's front page.

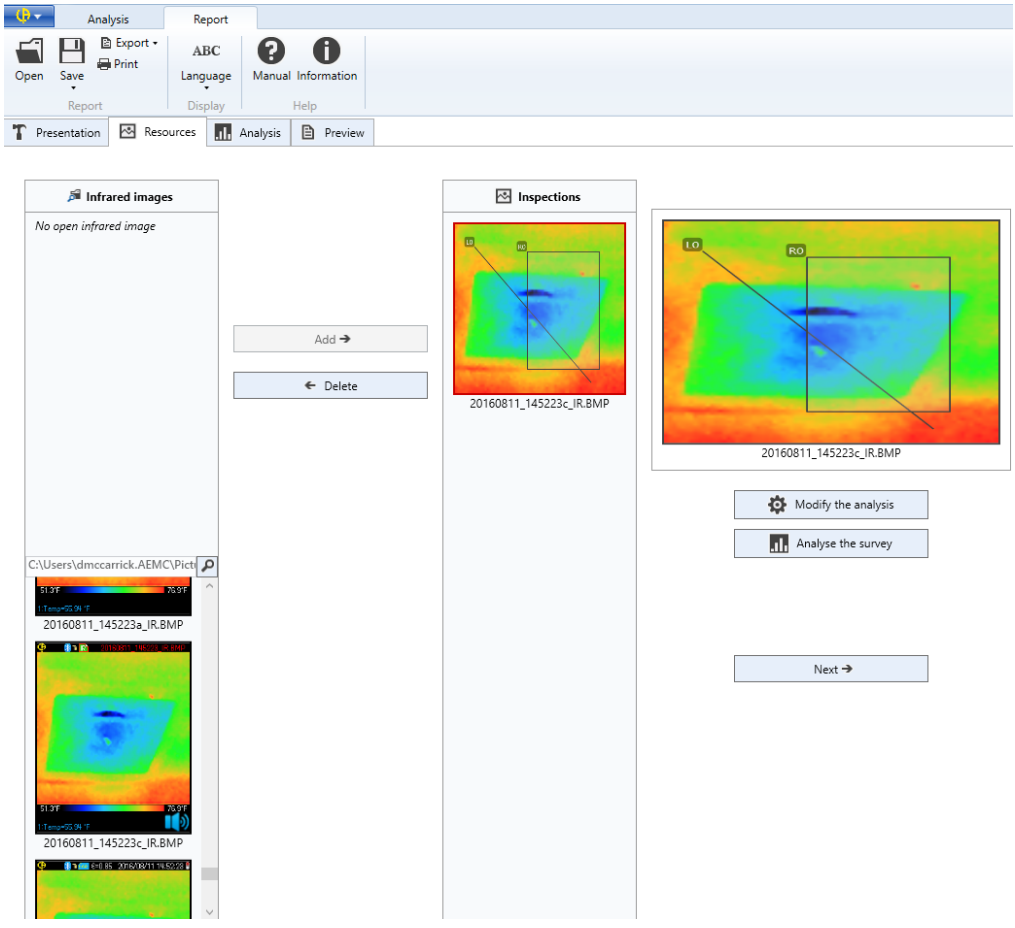


- **Title** is the title of the report as it will appear in the report's first page.
- **Business** provides fields that identify the company producing the report. This includes the company name, telephone number, and address. This also includes a field on the right for selecting a graphic image. When you click this field, the Open dialog box appears for locating and selecting the image file. Note that you can save the entered setup information by pressing the icon, and erase it by pressing the ✖ icon. Saved setups are listed when you click the downarrow in the Company field; clicking the setup name populates the remaining Business fields.
- **Writing** enters information about the person generating the report. This includes the author's name, phone number, and email address. As with the Business fields, you can press to save the setup information and ✖ to erase it.
- **Comments** enables you to enter a description and other explanatory text about the report.

When you complete the Presentation tab, click **Next** ➔ (or select **Resources** at the top of the screen) to open the Resources tab.

4.2 Resources

This tab allows you to select the data to include in the report.



- **Infrared images** lists all IR images that have been downloaded to the computer. To include an image in the report, select it and click **Add** ➔ (or simply drag the image file to the **Inspections** field).
- **Inspections** lists all the images selected for inclusion in the report. To remove an image, select it and click ➔ **Delete**.

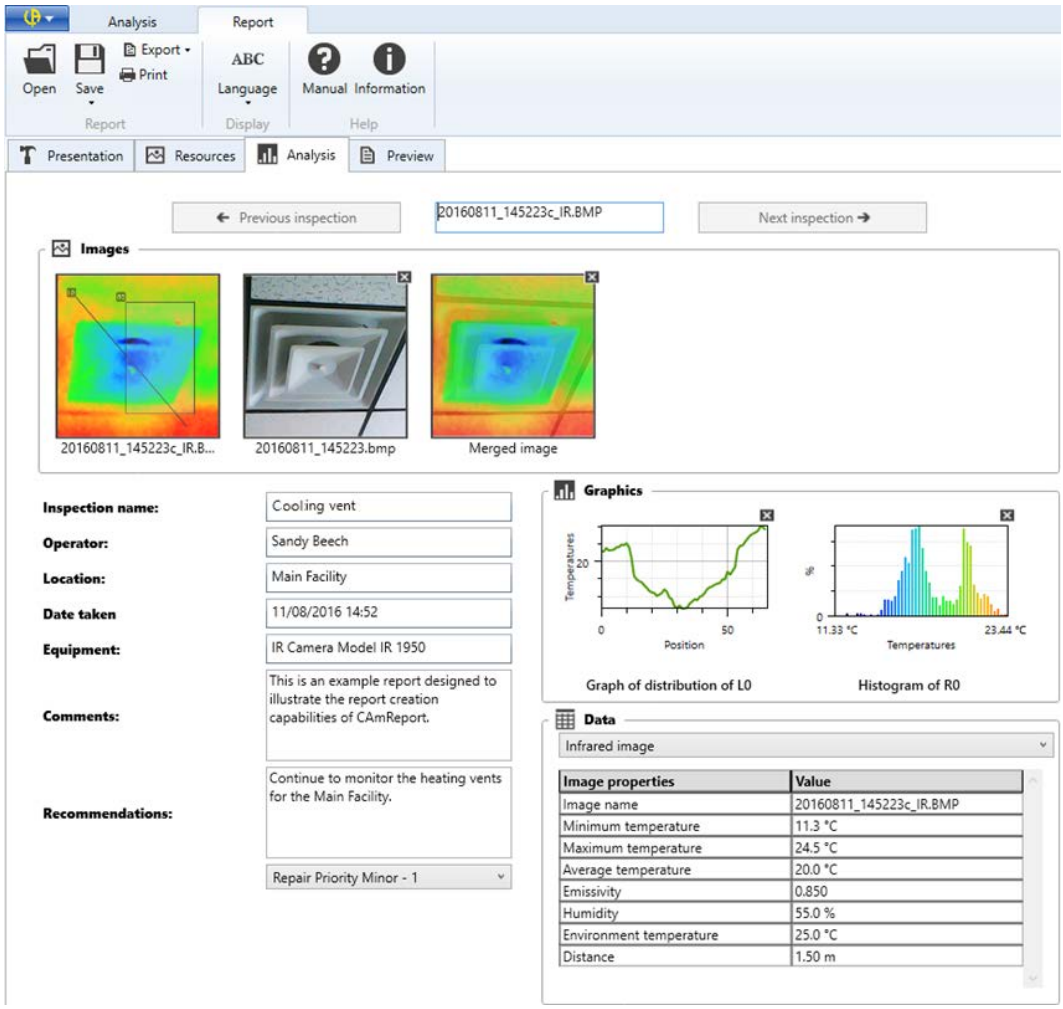
- To the right is a field that displays the image currently selected in **Inspections**. This includes any points, lines, or shapes that have been added to the image.
- **Modify the analysis** lets you edit image's data analysis. This opens the Analysis tab (§ 3.5) for performing additional data analysis in the image.

When finished with the Resources tab, open the Analysis tab by clicking one of the following:

- **Analyze the survey** button
- **Next** ➔ button
- **Analysis** tab at top of screen

4.3 Analysis

The Analysis tab selects the analysis data and other associated information to include in the report. (Note that this sub-tab differs from the main Analysis tab described in § 3.)



This tab creates a separate "Inspection" page for each selected IR image and the images, graphics, and data associated with it. The image filename is displayed at the top of the tab. The buttons **Previous inspection** and **Next inspection** let you navigate through other image files (if any) included in the report.

The **Images** field lists all IR images selected for this Inspection page. This can optionally include the associated visible light image and the IR/visible light merged image, which you can add by clicking **Add digital image** and **Add merge image** respectively. You can remove the visible light and/or merged images by clicking in the upper right corner of the image.

Below left are informational fields. These include:

- **Inspection name** (entered by user)
- **Operator** (entered by user)
- **Location** (entered by user)
- **Date taken** (read from image file, cannot be modified)
- **Equipment** (read from image file, can be modified by user)
- **Comments** (entered by user)
- **Recommendations** (entered by user)
- **Repair Priority** (selected from drop-down list, options range from **Minor – 1** to **Urgent – 5**)

To the right are two fields, **Graphics** and **Data**:

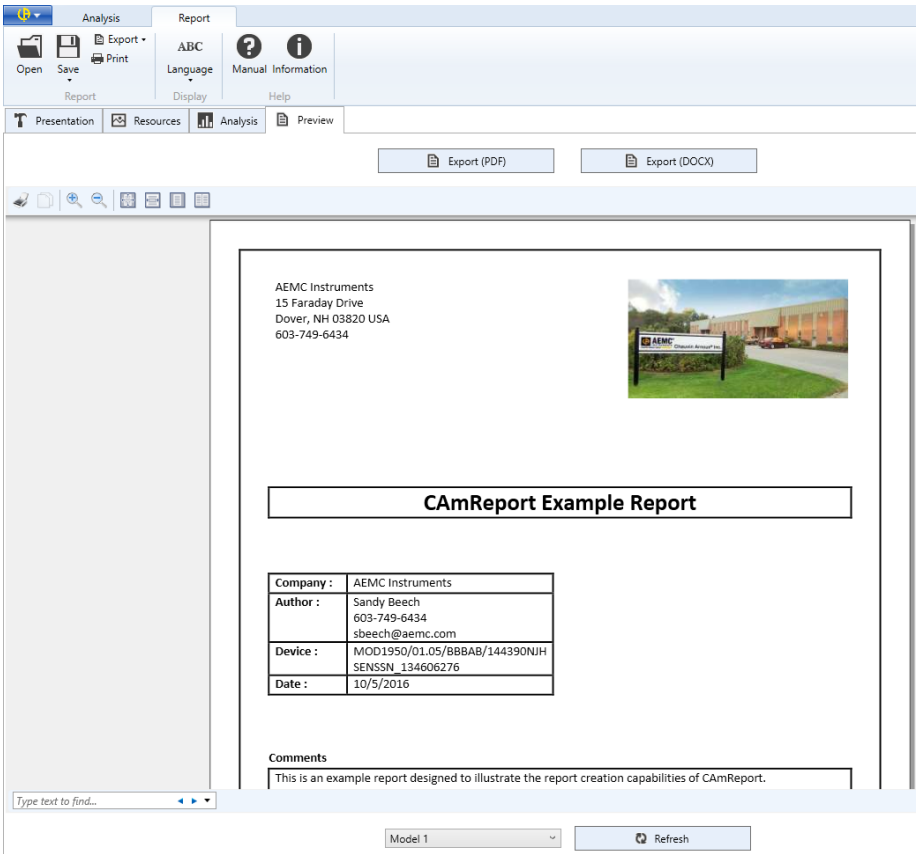
- **Graphics** displays distribution graphs and histograms (if any) associated with the image. You can remove a graphic by clicking in its upper right corner. To add a graphic, click the drop-down field and double-click the desired graphic (or click **Add** when the graphic is displayed in the field). The drop-down field only appears when graphics are available to add.

- **Data** displays measurement data associated with the image. A drop-down list lets you display data from the IR image, any shapes it contains (distribution graphs or histograms), and any measurements recorded by instruments connected to the camera via Bluetooth.

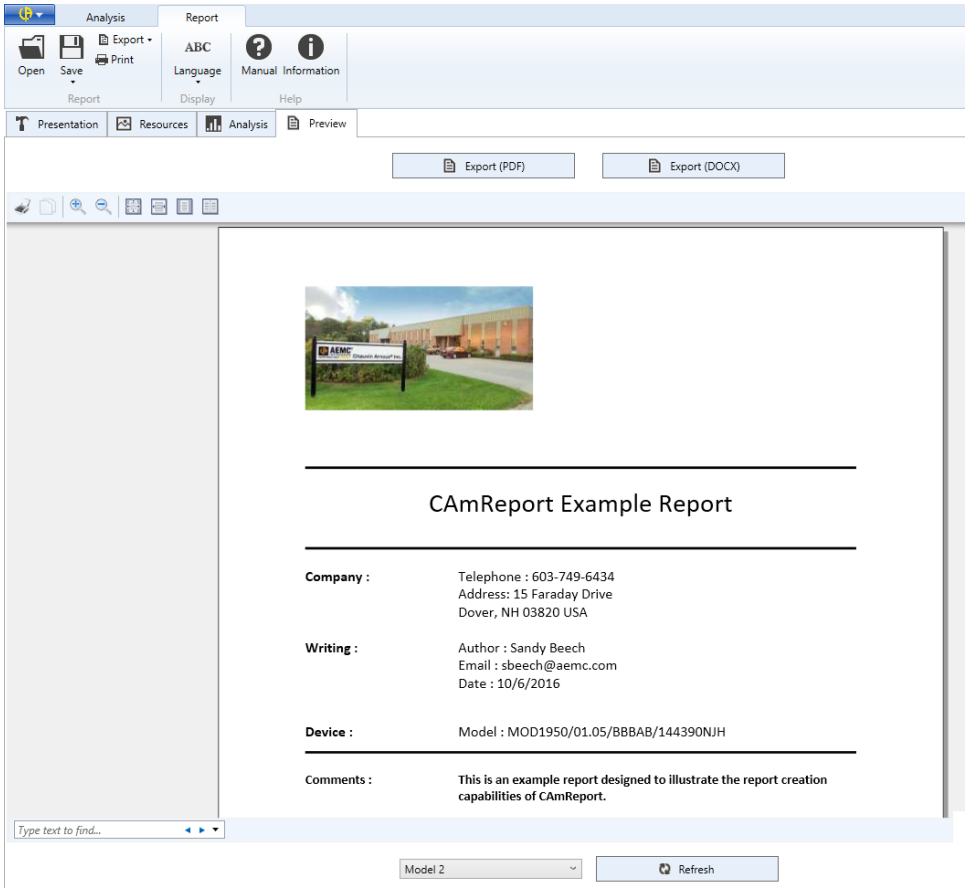
To display the Preview tab, click **Preview** at the top of the Report tab.

4.4 Preview

This tab lets you view, export, and print the complete report.



Use the mouse to scroll through the pages of the report. Reports can be formatted with three different templates (**Model 1**, **Model 2**, and **Model 3**), selected from a drop-down field at the bottom of the screen. For example, the preceding illustration shows a report formatted with the Model 1 template. The following illustration shows the same information formatted with the Model 2 template:



At the top of the tab are two buttons for exporting the report to a file in either PDF or DOCX format. Clicking either button displays the Save As dialog box for saving the report file on your computer (see also § 4.4.2).

Below these buttons is a toolbar consisting of the following icons:

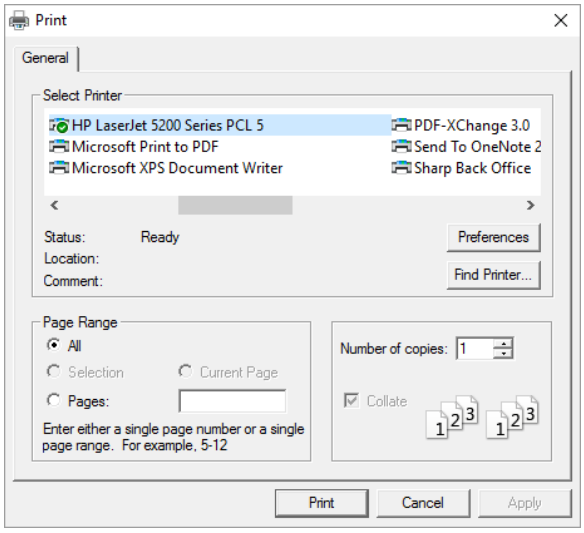
Icon	Tool
Print	Prints a copy of the report. Clicking this icon opens the Print dialog box for selecting a printer and setting print parameters (§ 4.4.1).
Copy	Copies the selected content to the Clipboard. The content can then be pasted into another file. This icon is only active when content is selected.
Zoom in	Expands the content displayed on the screen.
Zoom out	Reduces the size of the content displayed on the screen.
Normal margins	Displays the report with normal margins.
No margins	Displays the report with no margins. The report content fills the entire display area.
Wide margins	Displays the report with wide margins. This allows you to view an entire report page without scrolling.
Two pages	Displays the report two pages at a time.

At the bottom left is a field for entering strings to search the report. A drop-down menu provides search options (match whole word only, match case, and so on).

4.4.1 Printing Reports

The basic steps for printing a CAmReport report are as follows:

1. Complete the fields in the Presentation, Resources, and Analysis sub-tabs.
2. Open the Preview sub-tab. CAmReport creates the report and displays it on the screen.
3. Review the report to ensure it is ready for printing. If any changes are required, go back to the appropriate sub-tab(s) and make them.
4. Click the **Print** icon in the Preview sub-tab toolbar and complete the Print dialog box.
5. Click the **Print** button at the bottom of the Print dialog box to print the report.



In addition to using the **Print** icon in the Preview sub-tab, you can print a report from other sub-tabs in the Report tab by clicking the **Print** icon in the Report tab toolbar. This prints the report most recently previewed in the Preview sub-tab.

When printing via **Print**, note the following:

- You must preview a report before printing it. If you attempt to print a report without previewing it, **Print** prints the last report previewed**.** If you attempt to print a report without previewing any report during the current CAmReport session, you will receive an error message.
- If you preview a report, and then make changes to it without previewing it again, **Print** prints the version of the report that was previewed. To print the report with your modifications, you must preview it again.

4.4.2 Exporting Reports

When previewing a report, you can click the **Export (PDF)** or **Export (DOCX)** button to create a PDF or DOCX version of the report. The Save As dialog box appears for naming and saving the file.

You can also create PDF and DOCX versions of the report from other sub-tabs by clicking **Export** in the Report tab toolbar and selecting either PDF or DOCX from the drop-down menu. As with using **Print**, you should preview a report before exporting it with **Export** to ensure your latest changes are saved.

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