FLIR Tools+ and Report Studio

Creating and Processing Word Templates

http://www.infraredtraining.com

FLIR Report Studio Overview

- Report Studio is a Microsoft Word Reporting module that is enabled with the activation of the FLIR Tools+ license.
- Custom Microsoft Word templates can be created using the FLIR tab in Word.
- Templates can contain multiple IR page styles (IR only, IR and photo, etc.).
- Templates can also contain cover pages, back pages, etc.
- A new Wizard-style interface is included for creating reports with Report Studio. Images are accessible in the Wizard from any folder on the PC.
- Images can be edited directly from the Wizard, or from within the Word Report.
- Reports can be created from inside the FLIR Tools+ library.
- Reports can also be created using a ‘drag and drop’ Rapid Report Desktop shortcut.
Objectives for this Training Guide

- Demonstrate how to create a new template from the FLIR Tab in Word.
- Insert the IR and Photo placeholders.
- Use Tables and Fields to show image information.
- Display Text Annotations and Notes in a table.
- Show how multiple DATA sections can be added to the same template.
- Add a Summary Table.
- Add a cover page with Report Properties.
- Save a new Word template.
- Create a report using the Report Studio Wizard.
- Create a report from the FLIR Tools Library.
- Create a report using the Rapid Report shortcut.
- Edit a thermal image in the Word report.

When FLIR Tools+ is activated, the FLIR Tab is automatically installed in Word.
From this tab you can create a new template and insert images, tables and other objects onto the page.
• The first step in the template design process is to select **Create new template** from the FLIR tab. You have two options:
  • **Create new template** creates a new, blank template.
  • **Create from existing template** allows you to edit a template, make changes, and save it as a new template.
  • For this tutorial, we will select **Create new template**.

• Anytime a new template is created, or edited, the **FLIR Task Pane** is displayed to the left of the page.
• The Task Pane shows the three section types that can be included in a template. When creating a new template you are presented with three types of sections:
  • All templates must have at least one **DATA** section. This is where you would place the IR image, photo, and any tables that would show IR image data.
  • The **INTRO** and **FINAL** sections are optional. This is where you could add front and back pages. A Summary Table can be used in the INTRO and FINAL sections.
• The INTRO and FINAL sections can be deleted, if you right-click on the section and click **Delete Template Part**.

• If you right-click on the DATA section it cannot be deleted, however you can add another DATA section by clicking **Add Template Part**.

• This feature allows you to create templates with **multiple page styles**. For example, you can have an IR and Photo page, and an IR Only page. When the report is created using the Wizard you can select the desired page style for the selected images, or allow the Wizard to decide which page would be best.

• For this tutorial, **right-click** on the DATA section and **Add Template Part**. Type **IR Only** for the name of the section and click **OK**. Now you’ll see the new DATA section in the Task Pane.
• One consideration, before adding any objects to the page, is with regards to the page **Orientation** and **Margin** size. You can change these settings at any time, but from a design standpoint it can be easier to set them beforehand so you have a better feel for your page space.

• There is nothing unique to the FLIR software about these settings. They are accessible from the **Layout tab** in Word.

![Page Layout Settings](image)

• The first DATA page will consist of the IR image, visual photo, and some tables and fields.

• To help with formatting, you can insert the IR and photo placeholders inside a Word table. First, click somewhere towards the top of the DATA page. Then, from the **Insert** tab, click **Table** and select a table with 1 row and 2 columns.

![Table Insert](image)
• Click inside the first table column. From the FLIR tab, click the Thermal Image button to insert an IR image placeholder.

• Click inside the second table column. From the FLIR tab, click the Digital Image button to insert a placeholder for the photo.
• To resize the IR or photo placeholders, you have to first right-click inside the object and click **Resize**. This effectively “unlocks” it, so you can **click and drag** the corners to change the size.

• While in resize mode you can use Word’s paragraph alignment tools to adjust the alignment of the image box in the table cell.

Use the alignment buttons to set the position in the cell.
Typically you would want to show some information on the page about the thermal image. This can be accomplished using **Tables and Fields**.

- If you click **Table**, from the FLIR tab, you can see a list of pre-defined tables that can be added to the page. If you click “Measurements”, for example, it will instantly place a table on the page that shows all measurement data in the image.

- A “Camera Info” table will show only camera details, like camera model and serial number.

- In most cases you would want to have a combination of these different types of data in a single table. To create a custom table, click on **Table...** at the very top of the Table menu.
• From the **Insert Table** window, click the **Create** button.

• The **Add/Edit Table** window is where you can begin to design your custom table.

• The first step is to give the table a **new name**. Custom tables are always saved so they can be easily re-used in other templates and reports. They can also be exported for use on a different PC.

• The information is divided up into a variety of groups, or categories. Each group contains several fields.

• If you find a field that you would like to **add** to the table, simply **double-click** on it, or click the **Add** button, to add it to the table preview area at the bottom.

• To **delete** an item, click on it once in the table preview area. Click the **Remove Field** button (trash icon), or click the **Remove** button, to delete it from the table preview.
• All custom tables will appear in the Custom area on the Insert Table window.

• Click Edit if you wish to make any changes to the selected table.

• Click OK to place the selected table onto the page.

Click Edit if you wish to make changes.

• Here is what the table should look like on the page.

• It will always have two columns; one for the label, and one for the value that is populated once an image is inserted into the placeholder.
A benefit of being in Word is that the FLIR tables behave much like any standard Word table. All of Word’s formatting options are available to you, so you can apply borders and shading to the tables once they are placed on the page.

You can **click the 4-way arrow** to select the entire table. From the **Table Tools** tab, click **Design** to see the options. Click on any of the **Table Styles** to quickly apply a pre-defined format, or you can manually select the desired borders and shading.

The table content **cannot** be changed after the table has been placed on the page. Instead, you can delete the table and then insert a new, modified version.

First, **select the entire table**. Then **right-click** and select **Delete Table**.
• Click **Table** from the **FLIR tab**, and then click on your custom table. Click **Edit** to make changes.

Select your table.

Click **Edit** to make changes.

• Add or remove content as needed, and then click **OK** to save changes. Click **OK** once more to place the new table on the page.

Double-click to add a field.

Click the Trash Icon to delete a field.
• **Fields** can be used to show a single image parameter or temperature value on the page, without using a table.

• The fields will always insert where the mouse cursor is blinking on the page, so the first step is to click once where you want to show the value.

If you click **Field** from the FLIR Tab, you can see several commonly used fields that can be quickly inserted by clicking on the desired item.

To select a different item, click **Field...** at the top of the menu.
The information on the Insert Field window is divided up into several groups, or categories, containing fields.

If you find the field that you would like to add to the page, simply double-click on it, or click OK.

In this example I will double-click on File Name to place it on the page.

To delete a field, either click and drag across it to select it, or move the mouse to the left until an arrow icon appears, and then click to select.

Once selected, right-click on the highlighted field and click Cut to remove it from the page.
• **Text Annotations and Notes** provide a convenient way to document image data in a consistent way in the FLIR Tools software, and in some camera models. The text values are saved and embedded in the JPEG image, so these can appear on the reports automatically. Text can also be added to a Summary Table in the report.

Text can be added in FLIR Tools manually, or by selecting from a pre-defined Annotation Template.

• The Table can be used to show all Text Annotations and Notes that are in the image on the page.

• From the **Table** button on the **FLIR Tab**, choose **Table…** and click the **Create** button.
Select **Text Annotations** in the group list, and **double-click Value** to add it to the preview.

Select **Notes** in the group list and **double-click Note** to add it to the preview.

- **Type Text** for the Table name and click **OK** to add it to the page.
• When we first started designing the template we added a second DATA section called “IR Only”.

• In this section we will add just a single IR image placeholder with a table. When the report is made we can choose to use the default DATA section, or the “IR Only” DATA section.

Use the **Thermal Image** button to insert an IR placeholder.

Use the **Table** button to insert a saved or a new custom table.
The Summary Table provides a convenient way to create an automatic summary of the images in your report. The columns are chosen when the table is created in the template. The rows are generated when the report is created. Each image page will have its own row. Image file information, temperature data, text and notes can all be added to the summary.

<table>
<thead>
<tr>
<th>File Name</th>
<th>Equipment</th>
<th>Recommendation</th>
<th>Page number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR_0001.jpg</td>
<td>Fuse</td>
<td>Clean and Tighten Connection</td>
<td>2</td>
</tr>
<tr>
<td>IR_0007.jpg</td>
<td>Substation 1</td>
<td>Requires Further Investigation</td>
<td>3</td>
</tr>
<tr>
<td>IR_0009.jpg</td>
<td>Transformer</td>
<td>Requires Further Investigation</td>
<td>4</td>
</tr>
<tr>
<td>IR_0011.jpg</td>
<td>Substation</td>
<td>Inspect Connection</td>
<td>5</td>
</tr>
<tr>
<td>IR_0017.jpg</td>
<td>Air Compressor Contactor</td>
<td>Replace the Connection and Rescan</td>
<td>6</td>
</tr>
<tr>
<td>IR_0023.jpg</td>
<td>Electrical Box</td>
<td>Check Connections</td>
<td>7</td>
</tr>
<tr>
<td>IR_0025.jpg</td>
<td>Substation</td>
<td>Clean and Inspect Connection</td>
<td>8</td>
</tr>
<tr>
<td>IR_0029.jpg</td>
<td>Air Handler Motor</td>
<td>No Action Required</td>
<td>9</td>
</tr>
<tr>
<td>IR_0031.jpg</td>
<td>Steam Station PRV</td>
<td>No action</td>
<td>10</td>
</tr>
</tbody>
</table>

The Summary Table can be placed in the INTRO or FINAL section, but not in the DATA sections. For this example, let’s place it in the FINAL section. Click FINAL from the FLIR Task Pane, then click near the top of the page.

From the FLIR tab, click Table, then Summary Table.
• The next window is where you can select the fields that you would like to display in the table. A few items may already be showing.

• Click the **Add** button to select additional items.

• All image and temperature information can be selected from this window.

• Similar to the Table and Field, the information is divided up into groups.

  **Double-click** on the desired field value to add it to the list of Summary Table selections.
• **Text Annotations** can be added to the table by entering the label that you wish to link to.

  **Select Text Annotations.**

  Click the + to add a new item to the list.

• This process can be repeated for each label that you would like to add to the table.

  **Type the label here.**

  **Double-click on Value to add it to the list of Summary Table selections.**
• The Page Number is often shown in the Summary Table.

Select File Info.

Double-click on Page number to add it to the list of Summary Table selections.

• Now my Summary Table selection list shows all of the values that I would like to summarize on.

• Place a check mark next to the desired items to select them.
• Select a row and use the **up/down arrows** to rearrange the columns. The first item in the list will be the first column in the table.

• When you are satisfied with the order click **OK** to add it to the page.

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• Here is what the Summary Table will look like in the template. It is always two rows, with the number of columns being defined in the previous steps. When the report is created, a row will be added for each image page.
• The **Header and Footer** is a Word feature that allows you to insert information and pictures at the top and bottom of the page.

• For the FLIR reports, the company logo and page number are often shown in the Header and Footer respectively.

Let’s start by adding the page number to the Footer.

To edit the Footer, **double-click on the bottom of the page** until the word “Footer” shows.
• From the **Design tab**, click the **Page Number button**.

• Select **Bottom of Page**, and then choose the desired format. For this example, let’s use something from the **Page X of Y** section.

• Because of the “Page X of Y” format, the text in the footer will always show the page number and the total number of pages in the report.

• The page number can be easily referenced in the Summary Table.
• The Header can be edited in a similar fashion. **Double-click on the top of the page** until the word “Header” shows.

• The company logo is often shown in the header. You can copy and paste or insert any picture into the header area.

• **Report Properties** provide a way to display general information about the report, such as company name, address, etc. Typically this is shown on a cover page.

• The field labels and values can be created in the template.

• The person creating the report can enter the values and they will automatically populate the fields on the report page.
• Click **INTRO** from the **FLIR Task Pane** and click somewhere on the first page of the template. From the **FLIR tab**, click **Report Properties**.

• From the **Insert Report Properties** window, click the **Add** button.

• In the first field type the label you wish to use. The value field is optional, this will be populated when the report is made.

• Click the **Add button** to add new rows.
• By default, all new rows will be checked. If you click OK it will place a table on the page containing all Report Properties.

• If you would like to insert the data at a later time, uncheck all items and click OK.

• If you would like to insert only a single row, check the desired row and click OK.

• In this example, I inserted all Report Properties at one time, into a single table.
• Now we have created a fairly comprehensive four page template.

• You might consider creating a category for your custom templates. This allows you to categorize templates by industry, for example, and it keeps them separate from the sample templates when imported into Report Studio.

• To create a category for this template click **Settings, Template categories** from the **FLIR tab**.
• For this example, I will create a new category titled “My Templates”.

• Click the **Add** button and then type the name for your category.

• **Click OK** when finished.

• To use the template with Report Studio and Tools+ it must be saved as a **Word template (.DOTX format)**. Word documents cannot be used to create reports.

• To save the template click the **File tab, Save As**, and then click **Browse**.
• First, choose **Word Template (*.dotx)** for the file type.

• Next, select the folder where you would like to save the template. I created a folder in My Documents called Report Studio Templates.

• Type the file name and click **Save**.

Select **Word Template** for the file type.

• Now we are ready to create a new report!

• There are three different methods you can use to create a new report:
  • Use the Report Studio Wizard.
  • Use FLIR Tools.
  • Use the Rapid Report Shortcut.

• Let’s start by using the Wizard.
• To start the Wizard, double-click on the FLIR Report Studio shortcut on your Desktop.

• To use a custom template you will either need to **Browse for template**, or **Import template**.

• When you import a template it will add it to the Wizard with the other templates, and if you use categories it will show the category on the left.

• Click **Import Template** and select the template we just saved.

• Since we saved this template with a category name it shows this on the left. Any other templates saved with this category name will be added to this group.

• Click **Next** to add some images to the report.
• Now we can select some images to add to this report. The Wizard gives you access to all folders and drives on your PC.

• If you have a folder that you typically use for your inspections, you can right-click and add it as a Favorite, so it always shows at the top of the list in the Favorites group.

Right-click on the folder and Add to favorites.

• In the DATA SECTION pull-down we have three choices, because the template has two data sections:

• (Auto) will automatically decide which data section to use (“IR and Photo” or “IR Only”).

• Default will force it to use only the “IR and Photo” data section for all images.

• IR Only will force it to use only the “IR Only” data section for all images.
• For this example, I will select (Auto) for the DATA SECTION.

• Click the Add all Images to the report button at the bottom of the window, or drag and drop the images to the panel on the right.

• Click the Generate button to create the report.

• If your template has Report Properties it will immediately show this window, so you have the opportunity to enter them before the report is made. This is the default behavior of the Wizard.

• Type the appropriate values and click OK to complete the report creation process.
• The report will automatically open in Word and contain all selected images.

The *Report Properties* entered in the Wizard will automatically populate the fields in the report.

• Because of the (Auto) selection, most pages used the “IR and Photo” format, because the IR image contained a matching visual image.

IR data, measurements, and text annotations will automatically populate the tables and fields.
• This image does not contain a matching visual so the Wizard picked the “IR Only” format.

This IR has no matching visual image.

<table>
<thead>
<tr>
<th>My Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Date/Time</td>
</tr>
<tr>
<td>Max. Temperature</td>
</tr>
<tr>
<td>Object Emittance</td>
</tr>
<tr>
<td>Spots</td>
</tr>
<tr>
<td>Area</td>
</tr>
</tbody>
</table>

• The Summary Table creates a row for each image in the report, and populates the field if the data is found.

Some of the images in this report do not containing text annotations and spot meters, so the fields are blank.

<table>
<thead>
<tr>
<th>File Name</th>
<th>Page number</th>
<th>Equipment</th>
<th>Location</th>
<th>Sp1</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLIR0008.jpg</td>
<td>2</td>
<td>Transformer</td>
<td>Sub Station</td>
<td></td>
</tr>
<tr>
<td>FLIR0073.jpg</td>
<td>3</td>
<td>Panel</td>
<td>Electrical Closet</td>
<td></td>
</tr>
<tr>
<td>FLIR0223.jpg</td>
<td>4</td>
<td>Plug Strip</td>
<td>Office</td>
<td></td>
</tr>
<tr>
<td>image23.jpg</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>image23.jpg</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
• You can always edit an image in the report by **double-clicking** on it. This will open a “FLIR Tools-style” editor.

  ![Image Editor](image)

  Edit text, measurements, image parameters, etc.

• Saved changes are automatically reflected on the report page and in the Summary Table.

  ![Summary Table](image)
• You can also create a report from the FLIR Tools Library.

• First, you must add the custom template folder, so FLIR Tools knows where to find them.

• Click Options, then Report from the menus in FLIR Tools.

• Click Browse next to “User Report Studio templates path” and select the folder containing the Report Studio templates. Click OK to close the Options window.

• Select the images in the library and then click the arrow next to Generate Report.

• Once the template folder has been added, the custom templates should appear in the “Word Templates” list.

• Click on the template to create a Word Report.
• You can also right-click on the template in FLIR Tools to create a **Rapid Report Shortcut**.

• This creates a new shortcut for the template on your Desktop.

• This allows you to **drag-and-drop images** from a folder onto the shortcut to create the new report.

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**Training and Support Resources**

- **FLIR Support Center:** [http://support.flir.com](http://support.flir.com)
- **Infrared Training Center:** [http://www.infraredtraining.com](http://www.infraredtraining.com)
- **YouTube:** [http://www.youtube.com/infraredtraining](http://www.youtube.com/infraredtraining)