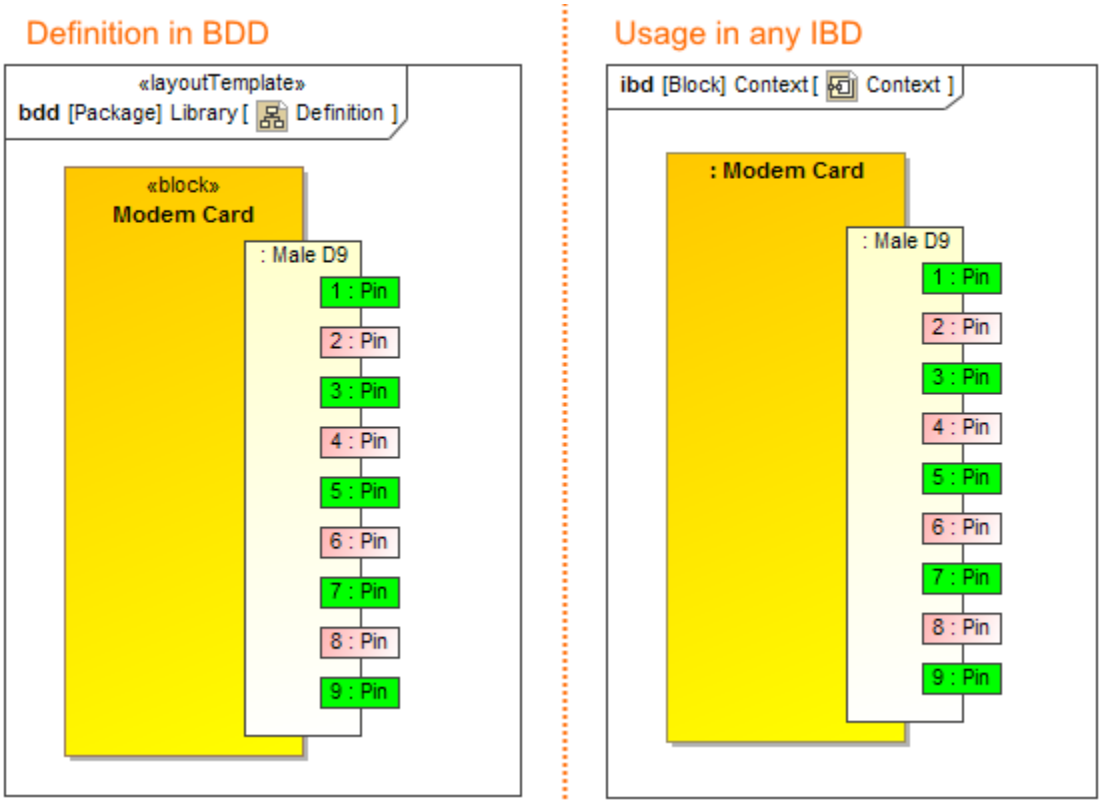
Layout templates

The layout templates functionality, which is driven by <<layoutTemplate>> stereotype, assists you in creating well-formed diagrams. It allows you to define Class appearance once, and reuse it later when creating Parts typed by that Class and Ports in different diagrams. Parts and their Ports are represented identically as part's type Class whose layout and style is defined in the layout template diagram. Often, Port position reflects its physical location in the system, so it is beneficial to maintain the same appearance of Parts, layout, and style of Ports throughout the whole model. In the figure below, the appearance of the *Modem Card* Block is the same in two different diagrams, SysML Block Defiition diagram and SysML Internal Block diagram.

Additional information
You can reuse layout templates in other projects by exporting packages to new projects.



Usage of a layout template. The illustration displays concepts from SysML Plugin.

You can create a layout template in the Class Diagram or derive it from an existing Composite Structure Diagram as described below.

To define a layout template in the Class Diagram and apply it to other diagrams:

1. Define the appearance of Class, layout, and style of its Ports in the Class diagram.
2. Set that Class diagram as the layout template.
3. Apply the layout template to other diagrams.

To derive a layout template for the Composite Structure Diagram and apply it to other diagrams:

1. Specify whether layout templates are created as Class Diagrams or Composite Structure Diagrams.
2. Create a layout template from a Part Property in the Composite Structure Diagram.
3. Apply the layout template to other diagrams.

Important
Only one Class shape with its Ports can be defined in one layout template diagram.

Read the following pages to learn how to manage layout templates:

- Stop using Class diagram as a layout template

- Removing applied layout template from shape
- Multiple layout template
- Setting layout template as default
- Navigation to layout templates
- Using layout templates with diagram aspects

Related pages

- Class diagram
- Composite Structure diagram
- Diagram aspects
- Exporting packages to new projects

Sample model

The sample models used in the figure of this page are **Modem Cable** that comes with SysML Plugin. To open those samples properly you need to install the SysML plugin in the MagicDraw and download *Modem Cable Layout Templates.mdzip*.