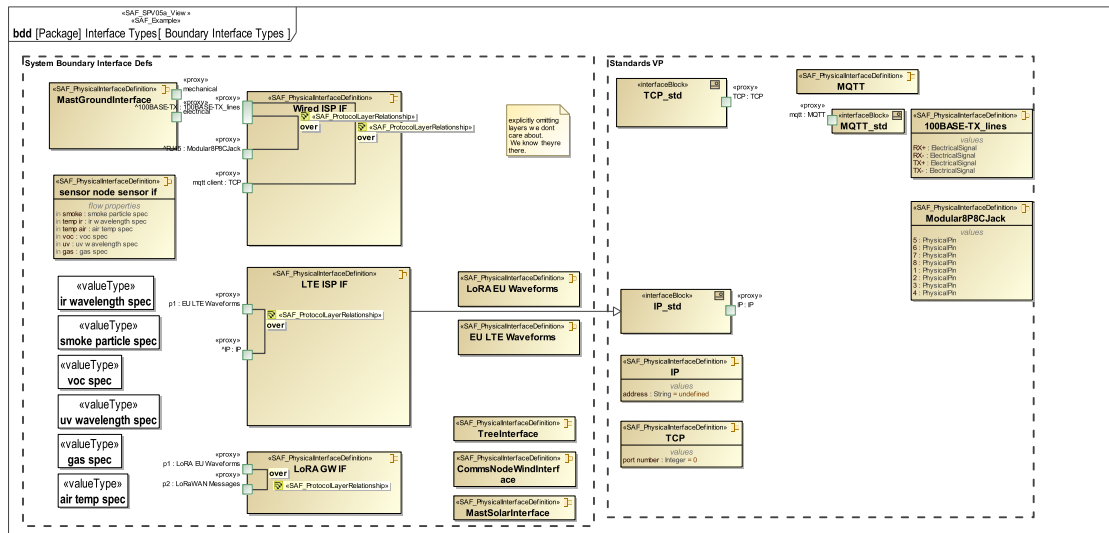


## SAF User Documentation : Physical Interface Definition Viewpoint

Domain	Aspect	Maturity
Physical	Interface	 released

### Example



The diagram illustrates the system architecture for an Arduino MEGA-based system. It includes a pinout diagram, a block diagram of the Arduino MEGA, and a detailed block diagram of the system architecture. The system architecture shows the Arduino MEGA connected to various sensors and actuators, including a camera, a temperature sensor, a humidity sensor, and a motor. The diagram also shows the connection to a network and a power supply. The system is controlled by a central unit, which is connected to a network and a power supply. The diagram is a detailed representation of the system architecture, showing the flow of data and power between the various components.

## Applicability

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The Physical Interface Definition Viewpoint supports the "Create System Design " activity included in "Design Definition Process" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2023 [§ 2.3.5.5] and contributes to the System Interface definition.

It also supports the "Interface Management" method of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2023 [§ 3.2.4].

## Presentation

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A block definition diagram (BDD) featuring Physical Interface blocks with ports and flow properties. Compatibility between Physical Interface blocks is expressed by associations and association blocks. Physical Interface blocks may be specialisations of others (use of Generalisation). Note: When ports are used these shall be proxy ports and be typed by interface blocks.

A tabular format listing Physical Interface blocks, their ports, and flow properties.

## Stakeholder

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- [Hardware Developer](#)
- [Safety Expert](#)
- [Security Expert](#)
- [Software Developer](#)
- [System Architect](#)

## Concern

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- [Which kind of physical items \(energy, material, information, etc.\) are used in the physical architecture of the system?](#)

## Profile Model Reference

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The following Stereotypes / Model Elements are used in the Viewpoint:

- FlowProperty [SysML Profile]
- FlowProperty contained in SAF\_PhysicalInterfaceDefinition
- ProxyPort [SysML Profile]
- ProxyPort typed by SAF\_PhysicalInterfaceDefinition
- SAF\_PhysicalInterfaceDefinition contained in ProxyPort
- [SAF\\_PhysicalExchangeType](#)
- [SAF\\_PhysicalInterfaceDefinition](#)
- [SAF\\_ProtocolLayerRelationship](#)
- [SAF\\_SPV05a\\_View](#)

# Input from other Viewpoints

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## Required Viewpoints

*none*

## Recommended Viewpoints

*none*