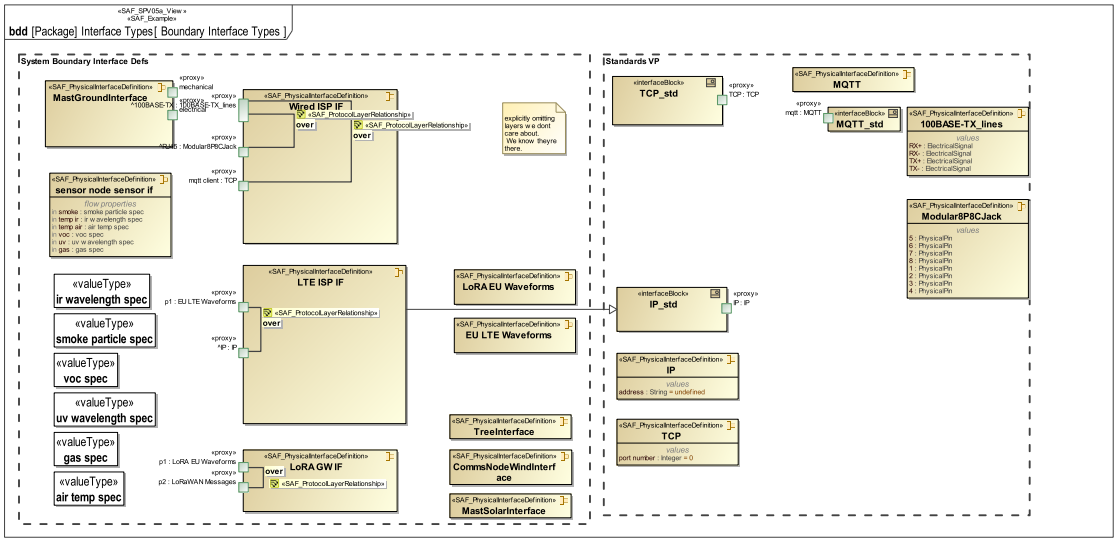
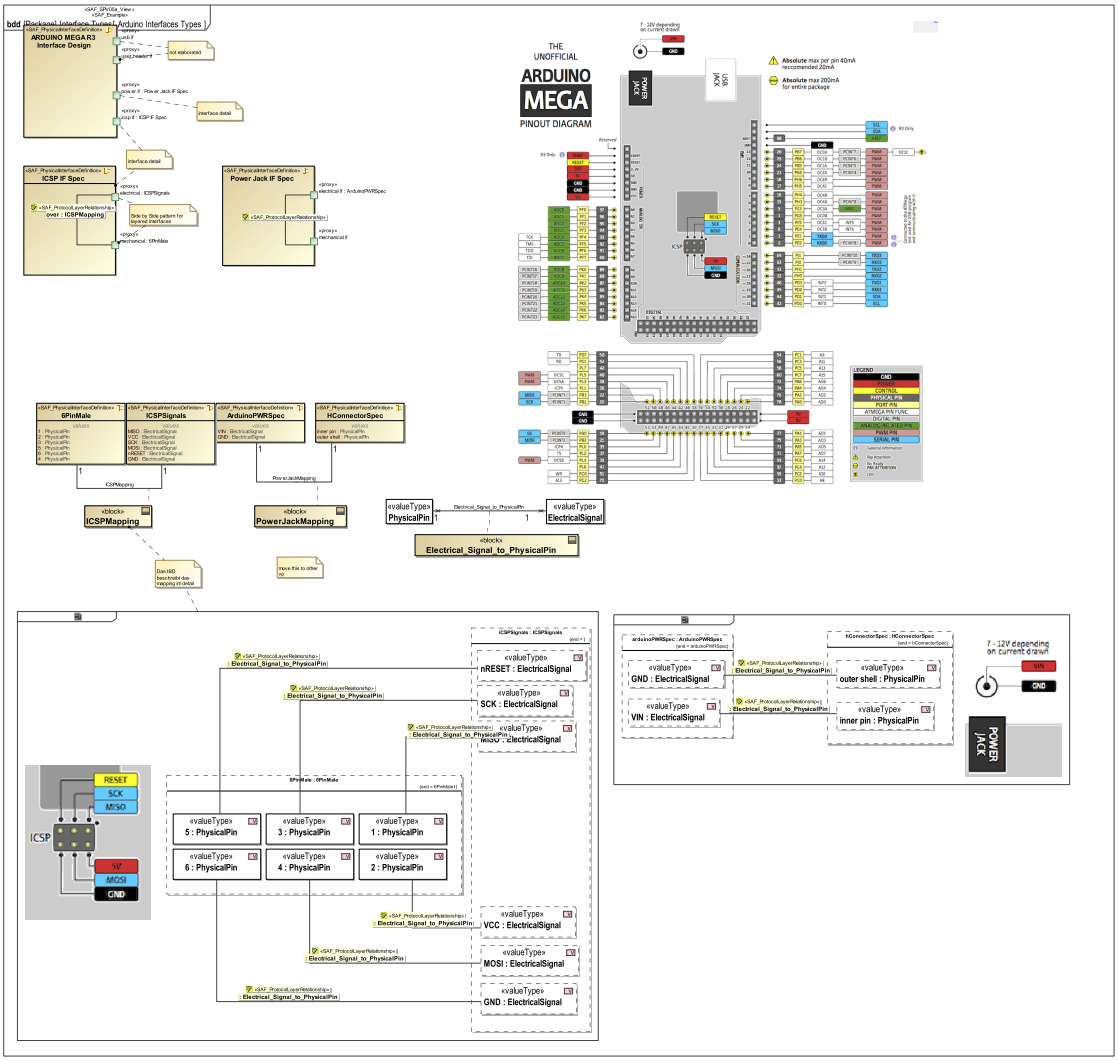
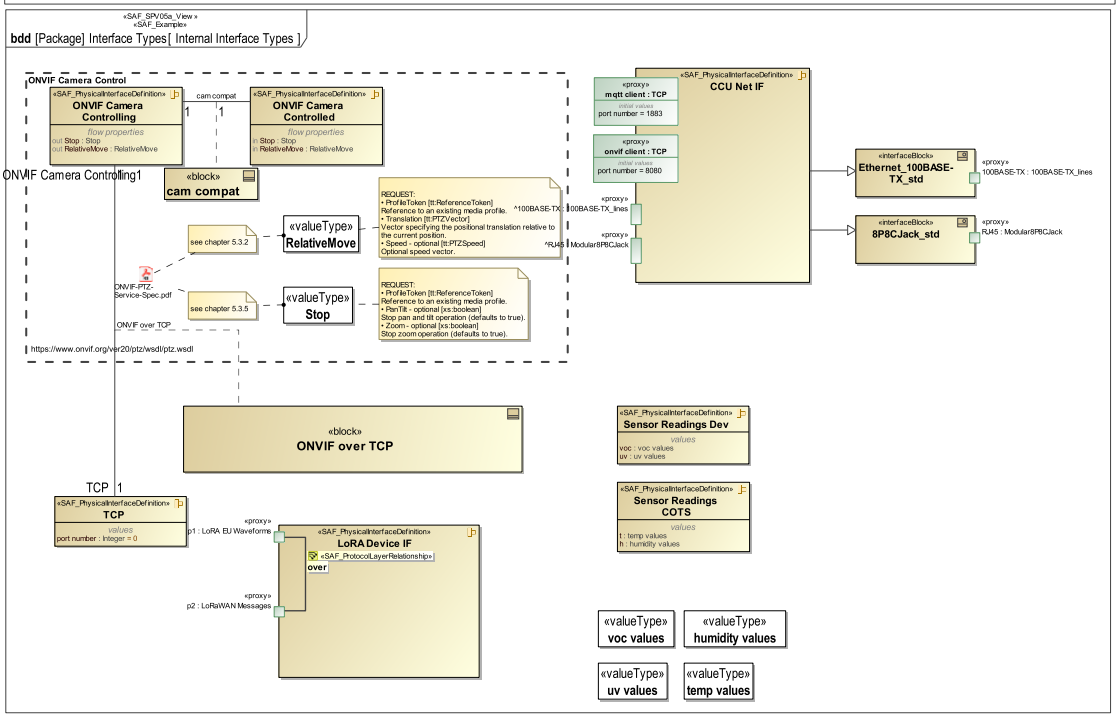
SAF User Documentation : Physical Interface Definition Viewpoint

Domain	Aspect	Maturity
Physical	Interface	released

Example







Purpose

The Physical Interface Definition Viewpoint provides definitions for physical interfaces. These definitions are may be reused on different interfaces.

Applicability

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

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

- Hardware Developer
- Mechanic Developer
- Safety Expert
- Security Expert
- Software Developer
- System Architect

Concern

- What are the protocols used for exchanging information?
- Which kind of physical items (energy, material, information, etc.) are used in the physical architecture of the systeml?
- what are the interface definitions for the physical architecture

Profile Model Reference

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

Required Viewpoints

none

Recommended Viewpoints

none