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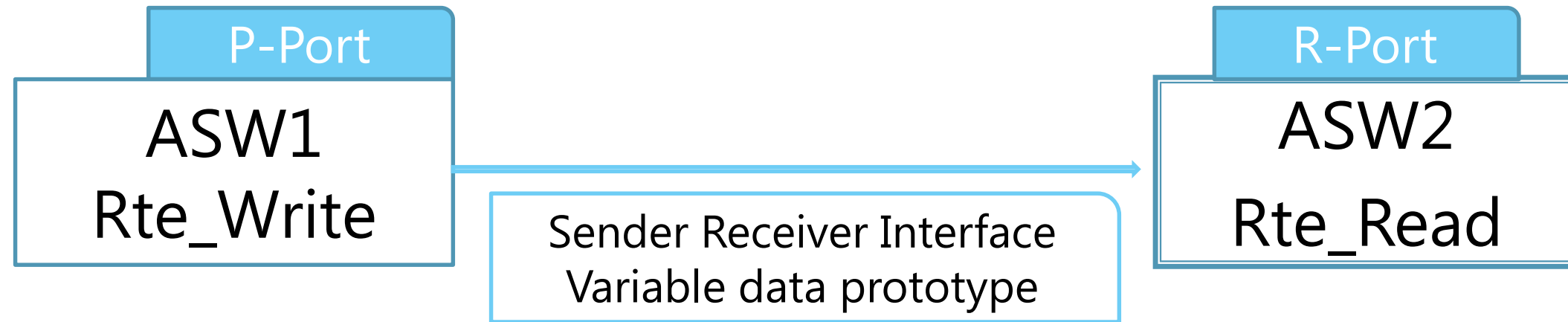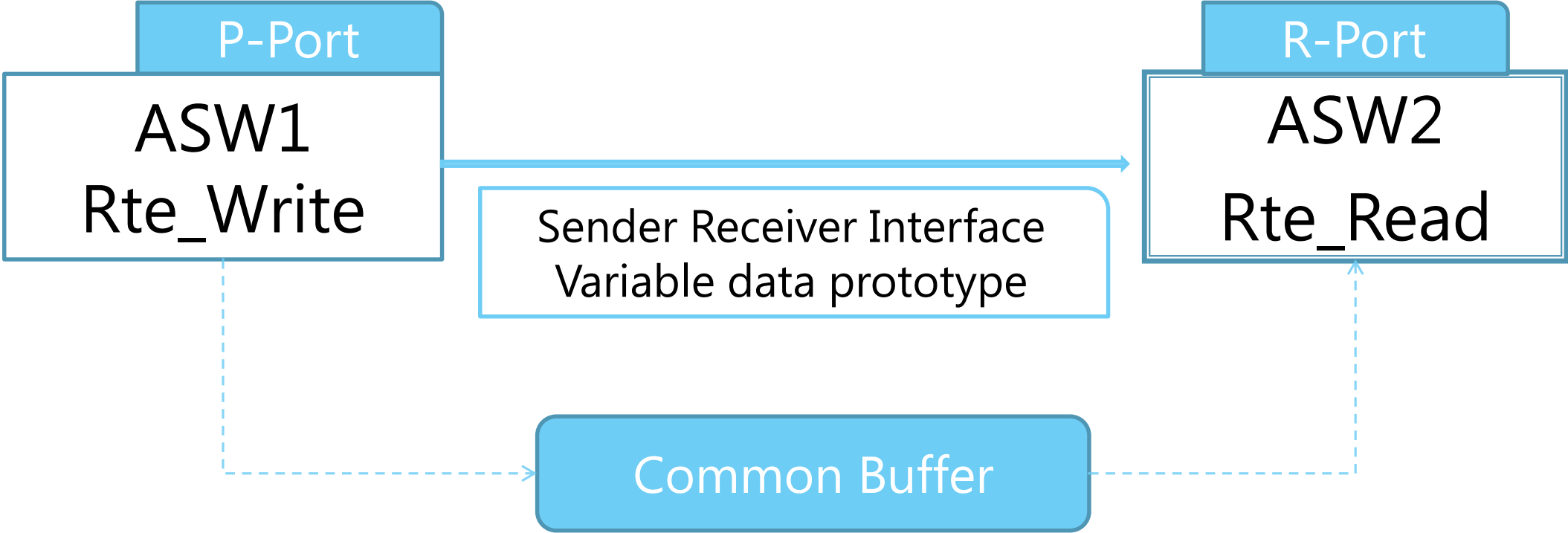# Sender Receiver Communication Configuration

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# Agenda

- Introduction to Sender Receiver Communication

- Sender Receiver Communication - Explicit

- Sender Receiver Communication - Implicit

- Basic Entities required for Sender Receiver Communication

- How to configure Intra ECU communication for SR Communication

- How to configure Inter ECU communication for SR Communication

- How to configure Ecu Extract for the configured System Description
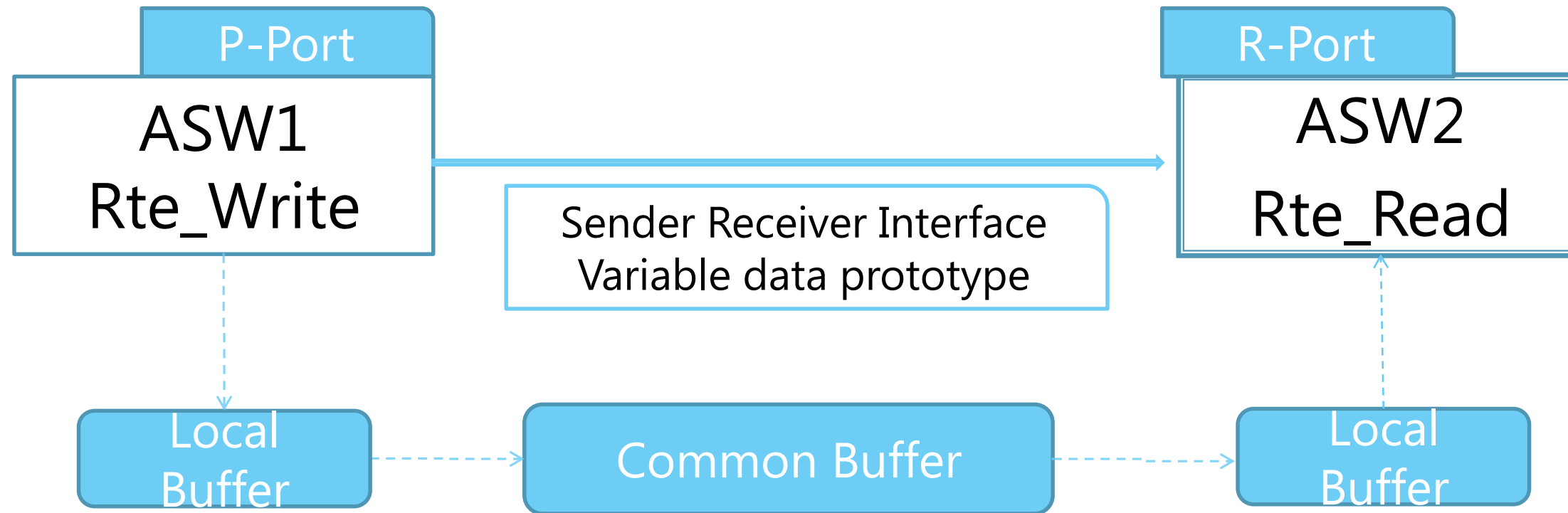
- Practice on Sender Receiver communication

# Introduction to Sender Receiver Communication

# Explicit Communication

# Implicit Communication



ASW1 Rte_Write — P-Port → R-Port — ASW2 Rte_Read

Sender Receiver Interface
Variable data prototype

Local Buffer → Common Buffer → Local Buffer

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# Additional properties of Sender Receiver

- Multiple Receivers and Senders (1:1,1:n,n:1)
- Update Flag
- Handle Never Received Flag
- Initialization Value
- Invalid Value
- Alive Timeout
- Inter Runnable variable [Implicit/Explicit]
- Queued and Non Queued Communication.

# Basic Entities required for Sender Receiver [Intra]

## Application SW Component (Receiver) [R-port] [1..*]

- Events [Timing Event, Data Received Event, Data Received Error Event]
- Receiver Runnable [Runnable entity]
- Variable access
- R-Port

## Application SW Component (Sender) [P-port][1..1]

- Events [Timing Event, Data send completed Event, Data Write completed Event]
- Receiver Runnable [Runnable entity]
- Variable access
- P-Port

## Sender Receiver Interface

- Variable Data Prototype
- Init Value [Optional]

## Data type

## Connector

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# Basic entities required for Sender Receiver [Inter]

## Application SW Component (Receiver) [R-port] [1..*]

- Events [Data Received Event, Data Received Error Event]
- Receiver Runnable [Runnable entity]
- Variable access
- R-Port

## Application SW Component (Sender) [P-port][1..1]

- Events [Data Send Completed Event]
- Receiver Runnable [Runnable entity]
- Variable access
- P-Port

## Sender Receiver Interface
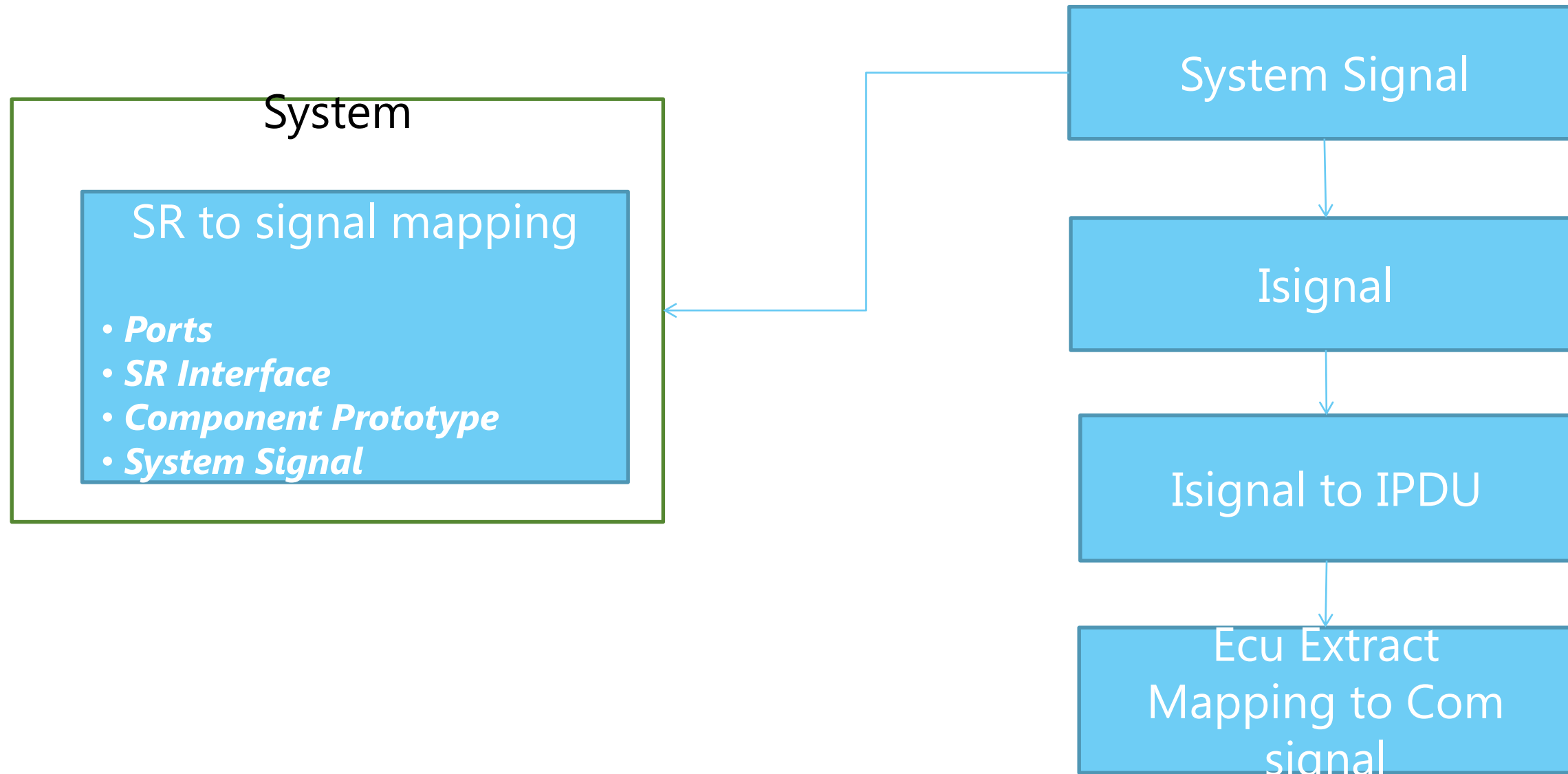
- Variable Data Prototype
- Init Value [Optional]

## Data type

## Com signal Mapping

# Basic entities for Ecu description
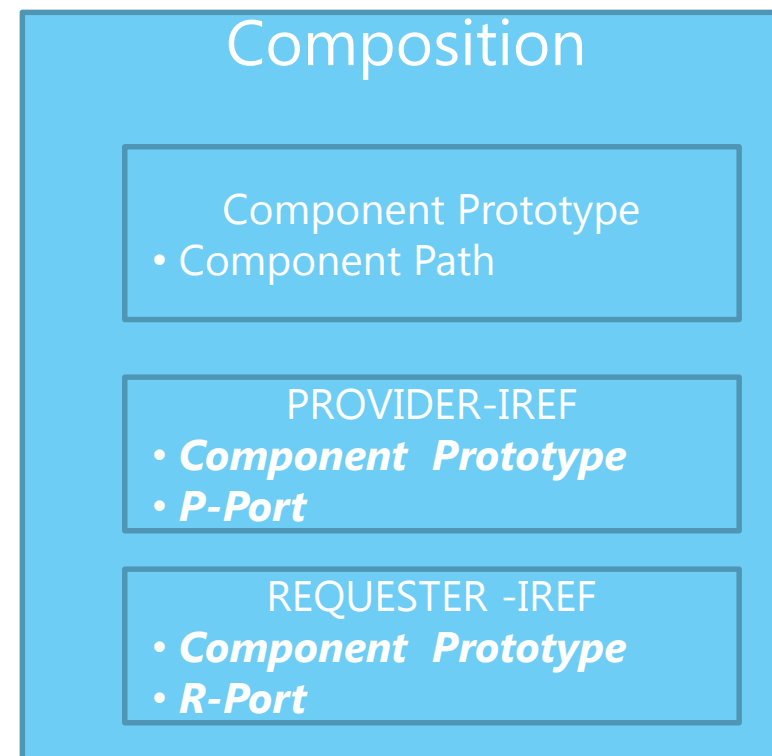
- Rte
  - Rte Event To Task Mapping
    - Position in Task
    - Task Reference
    - Event reference
- Os
  - Alarm
    - Task Reference
    - Event Reference
    - Counter reference
  - Counter
    - Os Second per tick
  - Task
    - Task Priority
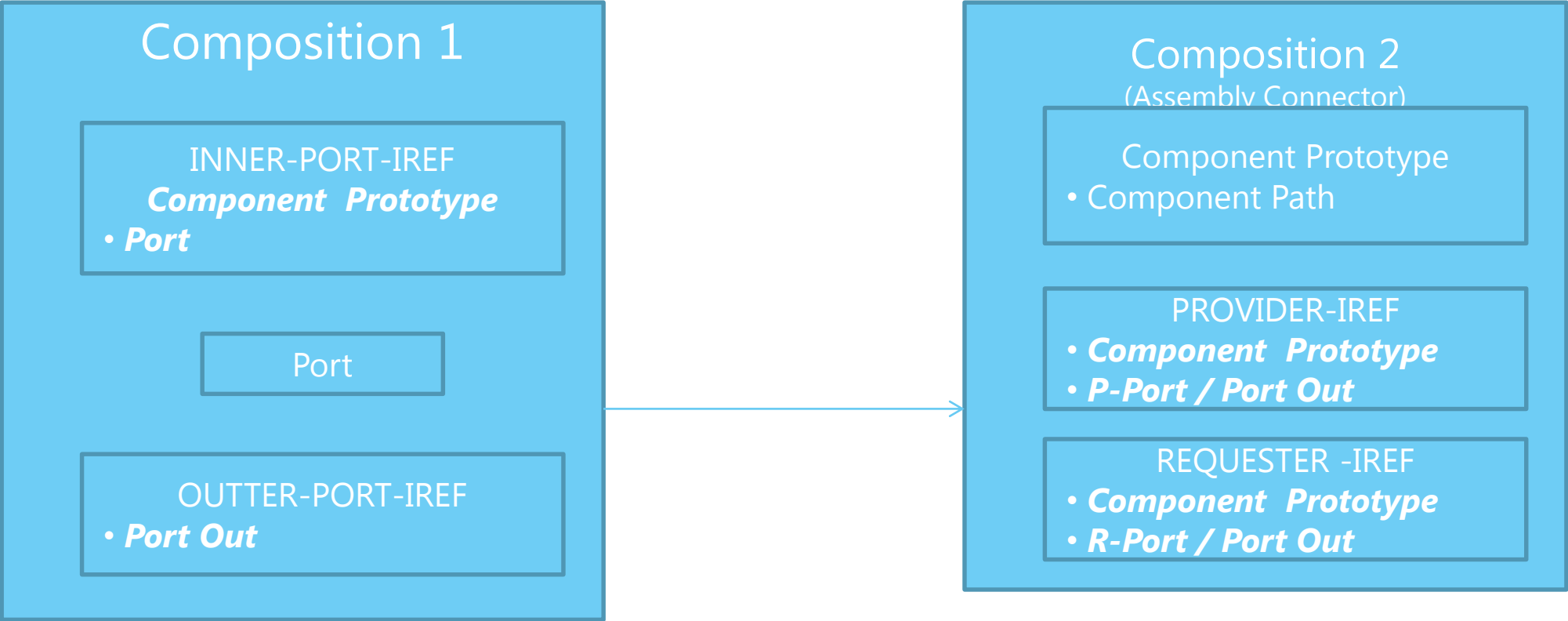- Com
  - Com Signals

# Com Signal Mapping

System

SR to signal mapping

- *Ports*
- *SR Interface*
- *Component Prototype*
- *System Signal*

System Signal

Isignal

Isignal to IPDU

Ecu Extract Mapping to Com signal

# Assembly Connector

- Assembly Connector



Composition

Component Prototype
• Component Path

PROVIDER-IREF
• *Component Prototype*
• *P-Port*

REQUESTER -IREF
• *Component Prototype*
• *R-Port*

# Delegation Connector

- Delegation Connector

# Questions

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# Thank You

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