

# Some Proposed Guidelines for Normative Clauses in P3335

Doug Arnold

2023-11-07

# Contents

1. Absolute requirements and options
2. Host interface mappings
3. Performance metrics

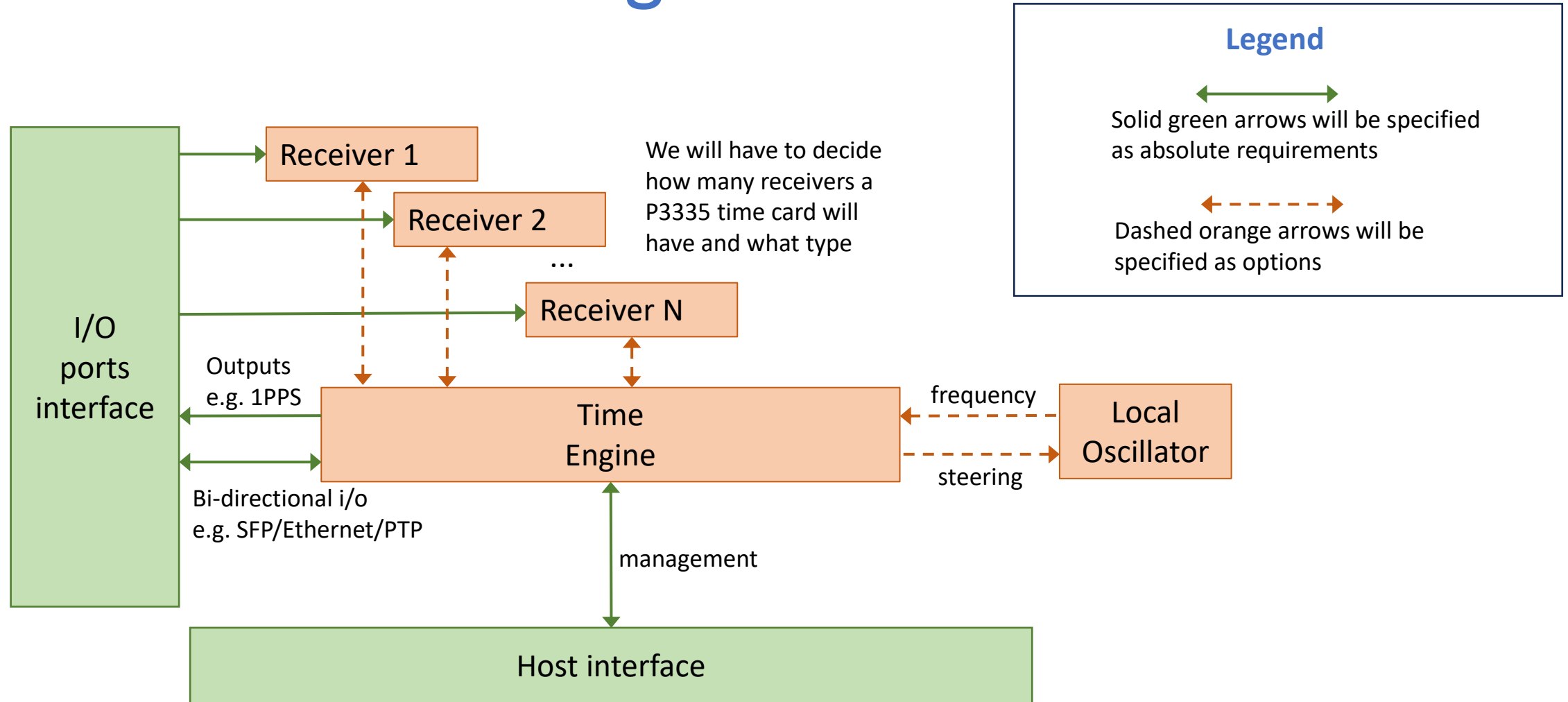
# Absolute requirements and options

- A time card is not compliant to P3335 unless all absolute requirements are met
- A time card can be compliant to P3335 without implementing options
- Options might have requirements (shall statements)
  - To claim that a time card implements a P3335 option, it must implement all requirements that we define for that option
- A compliant time card implementation may include some options, and not others
- A statement of compliance to P3335 should list included options. Not mentioning an option should be interpreted as the option is not included

# Users of P3335 standard

1. Operators of systems that need precise timing
  2. System architects/integrators designing systems that need precise timing
  3. Open source projects that develop drivers for P3335 time cards
  4. Time card designers
  5. Component designers (i.e. time card subsystem designers)
- Users 1-3 care only about properties of the time card observable at the host interface and i/o port interfaces
  - Users 4 and 5 also care about internal interfaces
  - Time card designers might want to implement a proprietary internal time card architecture
  - Proposal:
    - host and i/o ports interface requirements are absolute
    - Internal interfaces are options

# Time card block diagram



# Host interface mappings

- A P3335 time card can use different host interface mappings
- We define a PCIe mapping
- We define what has to be specified for a new host interface mapping
  - Deviations from the PCIe mapping will be the minimum change that is needed to work with the host interface protocol and hardware
  - So that a driver can be ported to a new host technology easily

# Performance requirements

- We do not specify performance requirements for compliance
  - This is needed to allow cards to work in different use cases
- But we specify performance metrics
  - So that performance claims by manufacturers are clear and unambiguous
    - Reduce marketing weasel wording
  - Our ability to enforce this might be limited to educating the end users and system integrators