# Message definition

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## BoardAvailable

The BoardAvailable message is sent to the downstream machine to indicate the readiness of the upstream machine to handover a PCB. When an optional attribute is received from an upstream machine, then it must be passed on (possibly altered) to the next downstream machine.

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| --- | --- | --- | --- | --- |
| **BoardAvailable** | **Type** | **Range** | **Optional** | **Description** |
| nodeBoardId | string | GUID | no | Indicating the ID of the available board |
| nodeBoardIdCreatedBy | string | non-empty string | no | MachineId of the machine which created the BoardId (the first machine in a consecutive row of machines implementing this protocol). The MachineId is part of the Hermes configuration. |
| nodeFailedBoard | int | 0 .. 2 | no | A value of the list below |
| nodeProductTypeId | string | any string | yes | Identifies a collection of PCBs sharing common properties |
| nodeFlippedBoard | int | 0 .. 2 | no | A value of the list below |
| nodeTopBarcode | string | any string | yes | The barcode of the top side of the PCB |
| nodeBottomBarcode | string | any string | yes | The barcode of the bottom side of the PCB |
| nodeLength | float | positive numbers | yes | The length of the PCB in millimeter. |
| nodeWidth | float | positive numbers | yes | The width of the PCB in millimeter. |
| nodeThickness | float | positive numbers | yes | The thickness of the PCB in millimeter. |
| nodeConveyorSpeed | float | positive numbers | yes | The conveyor speed preferred by the upstream machine in millimeter per second |
| nodeTopClearanceHeight | float | positive numbers | yes | The clearance height for the top side of the PCB in millimeter. |
| nodeBottomClearanceHeight | float | positive numbers | yes | The clearance height for the bottom side of the PCB in millimeter. |
| nodeWeight | float | positive numbers | yes | The weight of the PCB in grams. |

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