**GETECH CFX v1.5 Additions- DEPANELING EQUIPMENT**

**ToolParameters Class**

Tool parameters are equipment set values and real time values which will captured during production and push to server for data analysis. For each PCB panel what is the spindle RPM, axis speed, air pressure alarm, PCB process time (Start time and end time) and machine power.

**Pull Request**

None

**Updates to the Standard**

**A.5 IPC-2591, Version 1.5 Changes**

**Messages: CFX.Production.ToolParameters**  
A new CFX.Production.ToolParameters message allows equipment set and real time values send from one endpoint to another end point.

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| --- | --- | --- |
| **ToolParameters** | **Type** | **Description** |
| nodeTool Data Version | string |  |
| nodeTool Diameter | string | Machine set point Value- tool bit diameter |
| nodeFeed | string | Machine set point - feed rate routing program |
| nodeSpeed | string | Machine set point - axis speed |
| nodeSlow Speed | string |  |
| nodeSlew Speed | string | Machine set point - Tool Skip up speed that is the speed of the tool when it is at down position but no cutting position. |
| nodeStart Time | string | Tool bit start used time |
| nodeEnd Time | String | Last tool bit stop used time |
| nodeNumber of boards | string | Panel count for batch/period |
| nodeDistance Routed | string | Distance of ALL tabs cut since last Bit Change |
| nodeDistance Alarm | string | Alarm set to optimal distance for bit change |
| nodeVacuum Distance Routed | string | Distance of ALL tabs cut since last bag/filter change |
| nodeVacuum Filter Alarm | string | Alarm set to optimal distance for filter change |
| nodeIncoming pressure | string |  |
| nodeSpindle rpm | string | Machine set point – Spindle RPM |
| nodeAxis speed Acceleration | string |  |
| nodeActual peak velocity | string |  |
| nodeActual peak Acceleration | string |  |
| nodeAlarm type/on | string |  |
| nodeAlarm type/off | string |  |
| nodeVacuum level | string |  |
| nodeMachine power | string |  |
| nodeGripper force location | string |  |
| nodeGripper force placement | string |  |

**PCBPanelBarcodeRequest/Response :**

Process Qualification/Verification is to ensure that the PCB Panel is following the right path of operations or eligible for an operation. Which consist of Panel status Pass / Fail with Cartesian map. Panel Cartesian result will tell us individual PCB’s status whether good or bad and X,Y coordination .

**Pull Request**

None

**Updates to the Standard**

**A.5 IPC-2591, Version 1.5 Changes**

**Messages: CFX.Production.PCBPanelBarcodeRequest/PCBPanelBarcodeResponse**

A new CFX.Production.PCBPanelBarcodeRequest/Response message allows an endpoint to query Panel and PCB’s status from another endpoint.

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| --- | --- | --- |
| **PCBPanelBarcodeRequest** | **Type** | **Description** |
| nodePanelSerialNumber | string | Unique ID of Production Unit, Panel |
| nodePanelEntryTime | DateTime | PanelEntryTime |

|  |  |  |
| --- | --- | --- |
| **PCBPanelBarcodeResponse** | **Type** | **Description** |
| folderResult |  | The Result of the Request |
| node Message | string | In the case of a failure, a human readable message indicating the nature of the failure |
| node Result | enum | An enumeration indication whether the request was successfully or not. |
| node ResultCode | int | In the case of a failure, an integer-based, endpoint-specific error code indicating the nature of the failure |
| folderPanelResult |  | The PannelResult of the Request |
| nodePanelSerialNumber | String | Unique ID of Production Unit, Panel |
| nodeTestResult | enum | An enumeration indication whether the request was Passed or Failed . |
| nodeFailureCode | Int | In the case of a failure, an integer-based, endpoint-specific error code indicating the nature of the failure |
| nodeMessage | String | In the case of a failure, a human readable message indicating the nature of the failure |
| folderCartesianPannelMapping Result |  |  |
| nodePCBNumber | String | Unique ID of the Production Unit |
| node PanelValidationResult | enum | An enumeration indication whether the Validation request was GOOD or BAD. |
| node X | String | X Coordinate of Production Unit |
| node Y | String | Y Coordinate of Production Unit |