



The Hermes Standard
for "M-to-M" in SMT Assembly

The Hermes Standard

The Hermes Standard Change Proposal

Application of Semantic Versioning

Voting meeting:

23th of April 2018 (NEPCON / Shanghai)

Requesting company:

The Hermes Standard Initiative



The Hermes Standard for vendor independent machine-to-machine communication in SMT Assembly.

Version change:

Revision

Service description tag:

-

Description:

To make it easier for users of The Hermes Standard to check compatibility between different versions it would be good to adhere to the rules of [Semantic Versioning](#) when making changes to the standard. This requires that the version number is changed to the format 1.0.0. This means for Version 1.0, Revision 1 that the version number is changed to 1.0.1.

Use cases:

-

Functionality / communication sequences:

-

New / changed XML messages:

-



Proposed changes to standard:

1 Scope of The Hermes Standard Specification

The aim of this specification is to create a state-of-the-art communication protocol for surface-mount technology (SMT) production lines. Therefore, this new communication protocol has to cope with the following:

- Replace the electrical SMEMA interface as specified in [IPC_SMEMA_9851]
- Extend the interface to communicate:
 - Unique identifiers for the handled printed circuit boards (PCBs)
 - Equipment identifiers of the first machine noticing a PCB
 - Barcodes
 - Conveyor speed
 - Product type specific information:
 - Product type identifier
 - Length
 - Width
 - Thickness
 - ...
 - ...

With respect to version numbers The Hermes Standard adheres to the rules of Semantic Versioning 2.0.0 [SemVer_2.0.0].

Hints on naming:

- Wherever a feature is described by the word „shall“, it is mandatory.
- The word “machine” is used for any equipment which can be found in a SMT production line (e.g. printers, placement machines, ovens, AOIs, transport modules, shuttles, stackers ...).
- The term “PCB” may also refer to carriers transporting PCBs.
- The word “Hermes” is used as abbreviation for “The Hermes Standard”.



4 Appendix

...

4.3 References

- [IPC_SMEMA_9851] IPC-SMEMA-9851 Mechanical Equipment Interface Standard
- [ISO_7498-1] ISO/IEC IS 7498-1: Information technology – Open Systems Interconnection – Basic Reference Model: The Basic Model. 1996
- [IETF_RFC_791] Internet Engineering Task Force: RFC791: Internet Protocol. September 1981
- [IETF_RFC_2460] Internet Engineering Task Force: RFC791: Internet Protocol, Version 6 (IPv6). September 1998
- [IETF_RFC_793] Internet Engineering Task Force: RFC793: Transmission Control Protocol. September 1981
- [ITU-T_REC_X.667] International Standard "Generation and registration of Universally Unique Identifiers (UUIDs) and their use as ASN.1 Object Identifier components
- [SemVer_2.0.0] Tom Preston-Werner: Semantic Versioning 2.0.0. (Internet: <https://semver.org/spec/v2.0.0.html>, last access: 23. April 2018)
- [W3C_XML_1.1] Extensible Markup Language (XML) 1.1 (Second Edition) - W3C Recommendation 16. August 2006, edited in place 29. September 2006
- [W3C_DATE_TIME] Date and Time Formats - W3C Recommendation 15. September 1997
- [W3C_XML_Schema] XML Schema Part 2: Datatypes Second Edition - W3C Recommendation 28. October 2004

