# 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”.

# Appendix

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## References

|  |  |
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| [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 |