IPC-HERMES-9852

Version 1.4

2022 - February

The Global Standard for Machine-to-Machine Communication in SMT Assembly

Supersedes HERMES-9852, Version 1.3
May 2021

Developed by The Hermes Standard Initiative and approved by IPC

IPC-HERMES-9852

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In May 1995 the IPC's Technical Activities Executive Committee (TAEC) adopted Principles of Standardization as a guiding principle of IPC's standardization efforts.

Standards Should:

- Show relationship to Design for Manufacturability (DFM) and Design for the Environment (DFE)
- Minimize time to market
- Contain simple (simplified) language
- Just include spec information
- Focus on end product performance
- Include a feedback system on use and problems for future improvement

Standards Should Not:

- Inhibit innovation
- Increase time-to-market
- Keep people out
- Increase cycle time
- Tell you how to make something
- Contain anything that cannot be defended with data

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Supersedes:
IPC-HERMES-9852, Version 1.3 – May 2021
IPC-HERMES-9852, Version 1.2 – June 2019

Users of this publication are encouraged to participate in the development of future revisions.

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Acknowledgment

Any document involving a complex technology draws material from a vast number of sources across many continents. While the principal members of The Hermes Standard Initiative are shown below, it is not possible to include all of those who assisted in the evolution of this standard. To each of them, the members of IPC extend their gratitude.

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Table of Contents

Figures

The Global Standard for Machine-to-Machine Communication in SMT Assembly

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1 SCOPE

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”.
- “The Hermes Standard” and IPC-HERMES-9852 are synonyms for the standard specified in this document and might be used interchangeably.