

# INTERNATIONAL STANDARD



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**Device embedding assembly technology –  
Part 2-5: Guidelines – Implementation of a 3D data format for device embedded  
substrate**



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INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## CONTENTS

FOREWORD.....	5
1 Scope.....	7
2 Normative references .....	7
3 Terms and definitions .....	7
4 Data definition .....	10
4.1 Flow chart design of device embedded substrate .....	10
4.2 Applicable range.....	11
4.2.1 Product.....	11
4.2.2 Process .....	12
4.3 Features .....	13
4.3.1 General .....	13
4.3.2 Device embedded substrate structure .....	13
4.3.3 SiP interposer structure .....	14
4.3.4 Virtual layer description .....	15
4.3.5 Terminal structure and embedded device structure including an SiP.....	15
4.3.6 Total design data of an SiP and device embedded substrate .....	15
4.4 Data description summary.....	16
4.4.1 Type of data and structures .....	16
4.4.2 File structure .....	18
4.5 3D expression.....	19
4.5.1 General .....	19
4.5.2 Coordinates.....	19
4.5.3 Position description .....	20
4.5.4 Relation between coordinate origin and board position .....	20
4.6 Layer concept .....	21
4.7 Substrate data .....	21
4.7.1 General .....	21
4.7.2 Layer map information .....	22
4.7.3 Device arrangement information .....	23
4.7.4 Basic figures.....	25
4.7.5 Net information .....	31
4.7.6 Artwork information.....	32
4.7.7 Package information .....	32
4.7.8 External port information.....	33
4.7.9 Internal port information.....	33
4.7.10 User expansion information .....	33
4.8 Defined data .....	33
4.8.1 General .....	33
4.8.2 Layer definition.....	33
4.8.3 Land definition.....	34
4.8.4 Via definition .....	35
4.8.5 Device definition .....	36
4.8.6 User expansion definition .....	37
5 Data organization and data description based on XML schema.....	38
5.1 General.....	38
5.2 Data organization of Example 1 .....	38
5.3 Data description of layer stack-up .....	39

5.4	Data description of device.....	43
5.5	Data organization of layer .....	47
5.6	Data description of via .....	50
5.7	Data description of land .....	51
	Bibliography.....	53
	Figure 1 – Flow chart of design of device embedded substrate .....	11
	Figure 2 – General structure of device embedded substrate.....	12
	Figure 3 – Example of device embedded substrate structure.....	14
	Figure 4 – Examples of SiPs .....	14
	Figure 5 – Example of virtual layer description.....	15
	Figure 6 – Terminal structure .....	15
	Figure 7 – Structure of SiP on a device embedded substrate .....	16
	Figure 8 – Data structure .....	18
	Figure 9 – One file structure (recommended) .....	19
	Figure 10 – Two file structure .....	19
	Figure 11 – Definition of coordinates.....	20
	Figure 12 – Position definition.....	20
	Figure 13 – Relation between coordinates and board position.....	21
	Figure 14 – Layer concept .....	21
	Figure 15 – Layer construction.....	22
	Figure 16 – Simplified layer construction.....	23
	Figure 17 – Layer definition of pad connection.....	24
	Figure 18 – Layer definition of via connection .....	24
	Figure 19 – Rotation direction on <i>X</i> , <i>Y</i> , and <i>Z</i> axes .....	25
	Figure 20 – Point .....	26
	Figure 21 – Area .....	27
	Figure 22 – Lines .....	27
	Figure 23 – Letters .....	28
	Figure 24 – Letter shape.....	28
	Figure 25 – Bonding wire information.....	29
	Figure 26 – Semi-sphere.....	29
	Figure 27 – Truncated pyramid .....	30
	Figure 28 – Via .....	30
	Figure 29 – Device definition .....	31
	Figure 30 – Group.....	31
	Figure 31 – Data structure of net information .....	32
	Figure 32 – Relation of layer definition data.....	34
	Figure 33 – Land definition .....	35
	Figure 34 – Relation between hole information and land information.....	36
	Figure 35 – Device with internal connection information.....	37
	Figure 36 – Device without internal connection information.....	37
	Figure 37 – Cross sectional view of Example 1 .....	38
	Figure 38 – Data organization of Example 1.....	38

Figure 39 – Data description of Example 1 ..... 39

Figure 40 – Layer structure of Example 1 ..... 40

Figure 41 – Data description of layer stack-up ..... 42

Figure 42 – Configuration of device 1 ..... 43

Figure 43 – Data description of device 1 ..... 44

Figure 44 – Configuration of device 2 ..... 45

Figure 45 – Data description of device 2 ..... 46

Figure 46 – Layer view of Example 1 ..... 48

Figure 47 – Data description of layers ..... 50

Figure 48 – Type of vias ..... 51

Figure 49 – Data description of vias ..... 51

Figure 50 – Type of lands ..... 52

Figure 51 – Data description of lands ..... 52

  

Table 1 – Required information ..... 13

Table 2 – List of data ..... 17

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**DEVICE EMBEDDING ASSEMBLY TECHNOLOGY –****Part 2-5: Guidelines – Implementation of a 3D data format  
for device embedded substrate**

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International Standard IEC 62878-2-5 has been prepared by IEC technical committee 91: Electronics assembly technology.

This first edition cancels and replaces IEC PAS 62878-2-5 published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) the title has been changed to "Implementation of a 3D data format for device embedded substrate" from "Requirements of design data format for device embedded substrate";
- b) the scope of this implementation has changed to not include SiPs.

The text of this International Standard is based on the following documents:

CDV	Report on voting
91/1557/CDV	91/1589/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62878 series, published under the general title *Device embedding assembly technology*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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## DEVICE EMBEDDING ASSEMBLY TECHNOLOGY –

### Part 2-5: Guidelines – Implementation of a 3D data format for device embedded substrate

#### 1 Scope

This part of IEC 62878 specifies requirements based on XML schema that represents a design data format for device embedded substrate, which is a board comprising embedded active and passive devices whose electrical connections are made by means of a via, electroplating, conductive paste or printing of conductive material.

This data format is to be used for simulation (e.g. stress, thermal, EMC), tooling, manufacturing, assembly, and inspection requirements. Furthermore, the data format is used for transferring information among printed board designers, printed board simulation engineer, manufacturers, and assemblers.

This part of IEC 62878 applies to substrates using organic material. It neither applies to the re-distribution layer (RDL) nor to the electronic modules defined as M-type business model in IEC 62421.

#### 2 Normative references

There are no normative references in this document.

#### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

##### 3.1

###### **artwork information**

information that shows a SiP not included in net and figure data in board (symbol mark, inside of SiP, mould, spacer, remarks, etc.)

##### 3.2

###### **board information**

total information of a device-embedded substrate, including embedded devices

##### 3.3

###### **chip stack**

package of semiconductor chips stacked vertically

##### 3.4

###### **clearance**

area around a through-hole where there is no conductor to prevent electrical connection between a large conductor area, such as that of a power supply or a ground and a plated through-hole