

### Key new features in SmartNetics 2026.2

#### ▶ **Planar magnetics**

- Design your planar inductors and transformers using PCBs.
- Automatically export your model to Ansys, Flux, or FEMM.

#### ▶ **New export option: KiCad**

- Automatically export your planar designs to KiCad to build your magnetics in PCB in just two clicks.

#### ▶ **Improvements on thermal model**

- The thermal model has been improved to more accurately represent vertical heat dissipation in the windings, especially critical in planar designs.

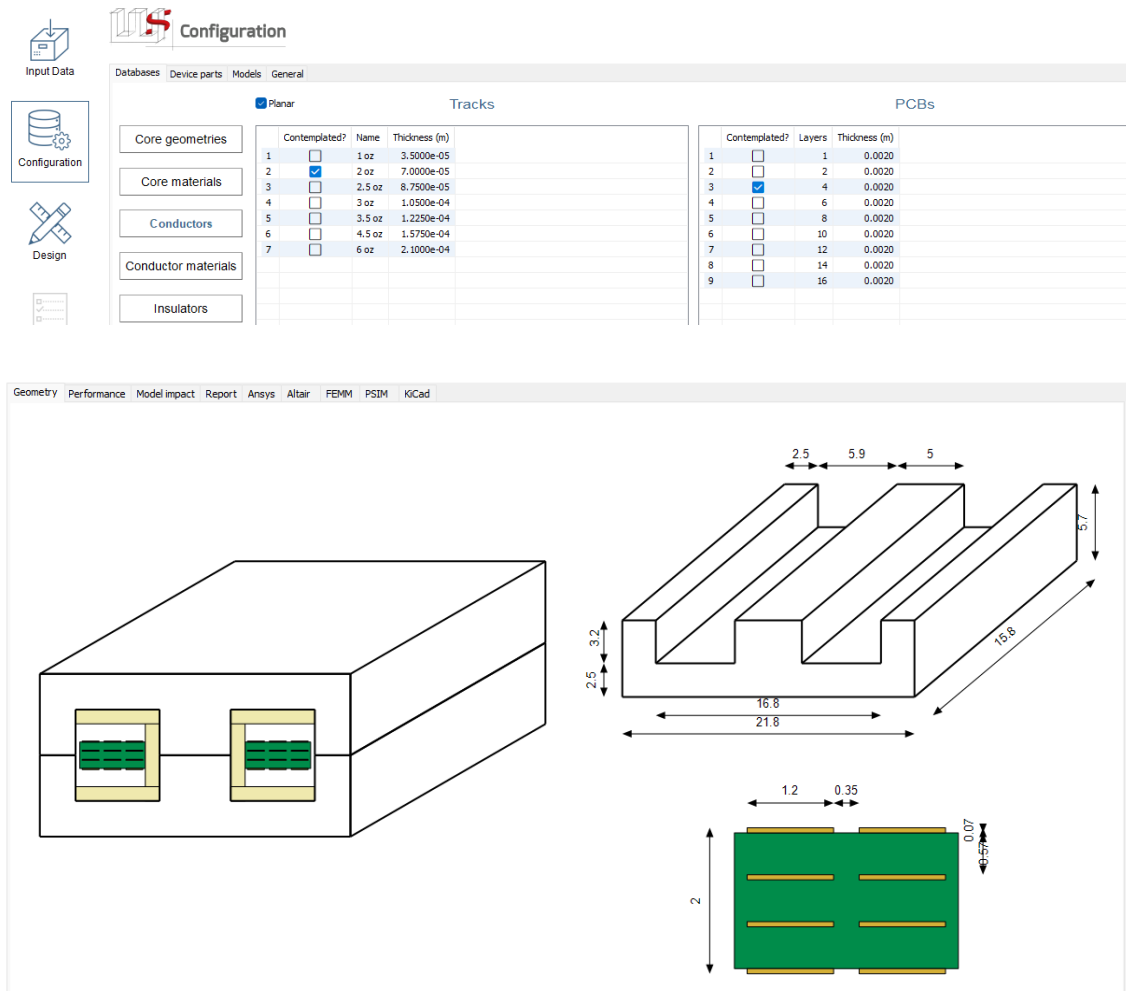
#### ▶ **Improvements on the user experience**

- Now the databases can be edited in the application, without the need to modify Excel or CSV files.
- Now the design results can be exported to a CSV file to be used in third-party tools.



## Planar magnetics

In addition to conventional magnetics, wound using wire around a core, a new option has been added. Now you can design **planar magnetics** using PCB tracks.



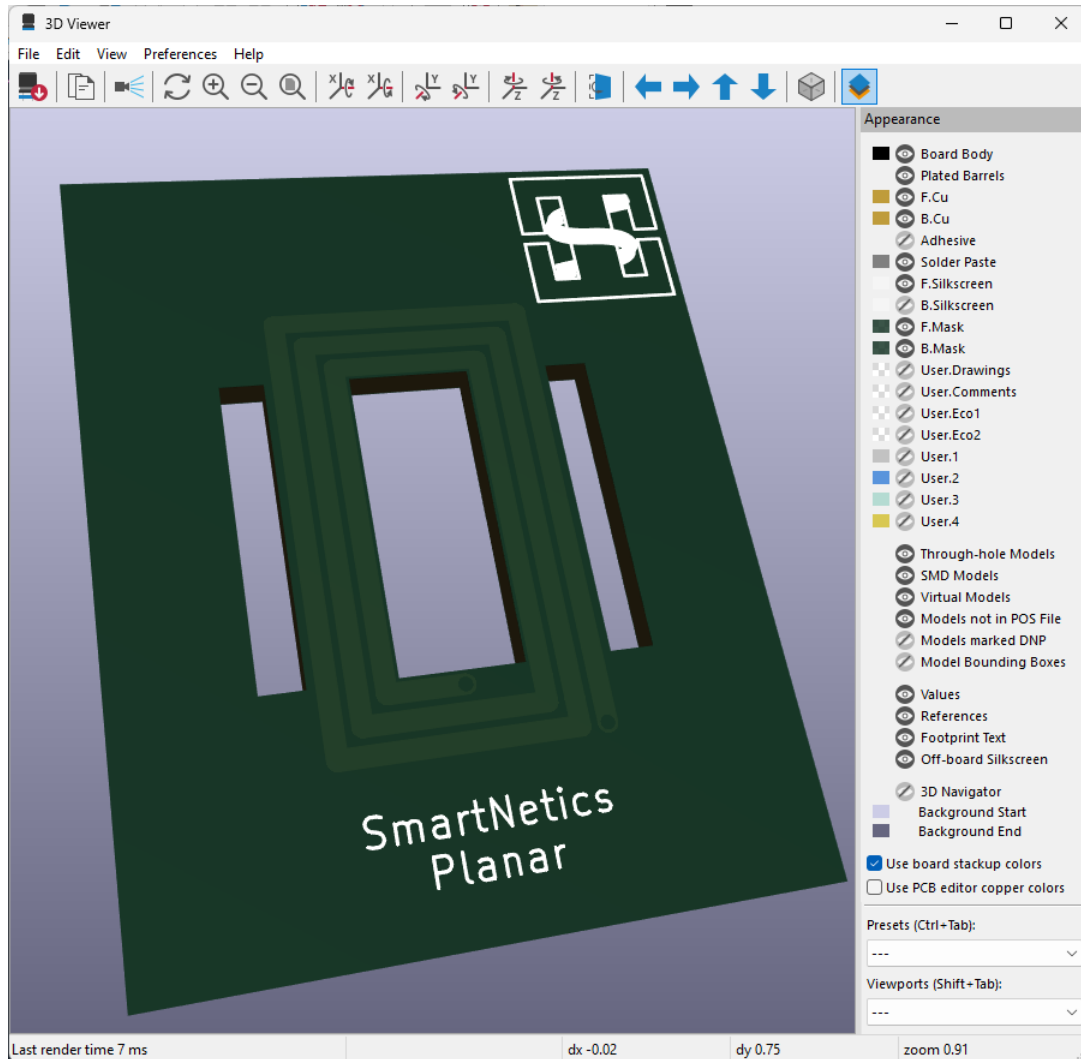
**SmartNetics 2026.2** also allows a direct export of the full model to Ansys, Flux, or FEMM for finite element simulation. Automatically export your models, materials, geometries, fan, and current/voltage/power excitations.

After simulating, you get an automated report with inductance, losses, or temperature distribution. The user does not need to learn Ansys, Flux, or FEMM; everything is automatically created, including the reports, for minimal user interaction.



### New export option: KiCad

Drastically reduce your design time by **automatically exporting your PCB to KiCad**. Everything is reproduced as you selected in SmartNetics: traces, vias, core holes, and stack-up.

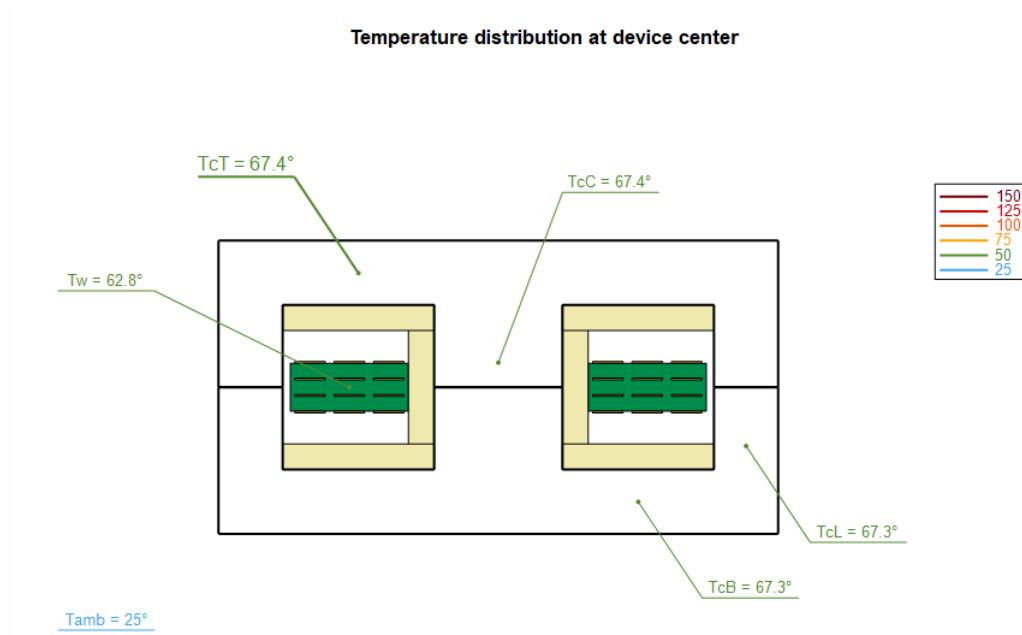


With the new option to export your PCB to KiCad you can avoid the learning curve of a new software and get your complete magnetic design in just a couple of clicks.

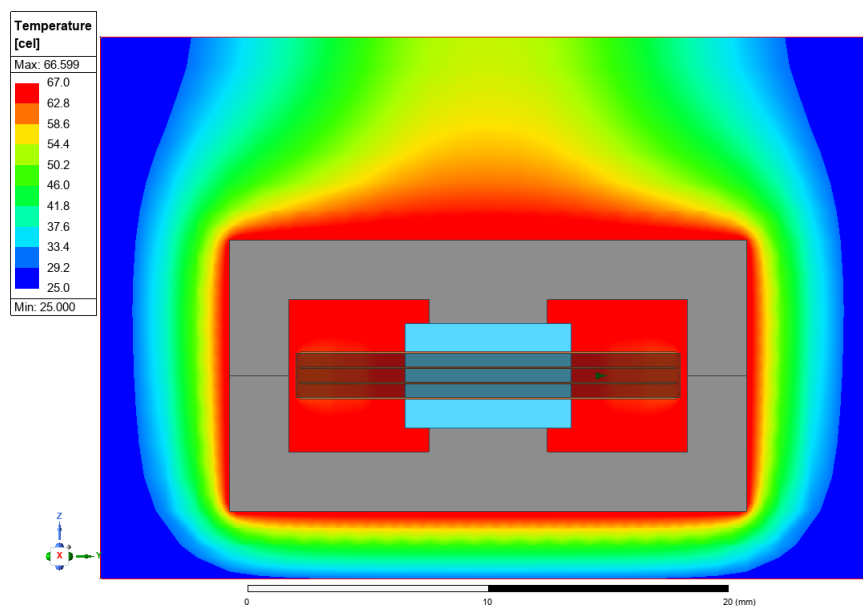


## Enhanced thermal model

The **thermal model** has been improved to more accurately represent the vertical heat dissipation in the windings, especially critical in planar designs.



Accurately predict the temperature of your planar magnetic, including core and PCB. On top of the improved calculation, you can automatically export your full model to Ansys-Icepak for validation



## Improved user experience

The overall **user experience has been improved** including several major improvements:

- Now the databases can be edited in the application, without the need to modify Excel or CSV files. With the new controls, the user can load, export, add, remove, copy, or edit database entries.

| Contemplated?            | Name              | l (m)  | h (m)  | w (m)  | c (m)  | s (m)  | p (m)  | Ae (m2)    | Ve (m3)    | lm (m) | o (m)  | e (m)      | y (m)      | Predefined gaps (m) |
|--------------------------|-------------------|--------|--------|--------|--------|--------|--------|------------|------------|--------|--------|------------|------------|---------------------|
| <input type="checkbox"/> | E5                | 0.0053 | 0.0027 | 0.0020 | 0.0014 | 0.0039 | 0.0019 | 2.6600e-06 | 3.3300e-08 | 0.0125 | 0.0013 | 6.7500e-04 | 7.2000e-04 |                     |
| <input type="checkbox"/> | E6.3              | 0.0063 | 0.0029 | 0.0020 | 0.0014 | 0.0036 | 0.0019 | 3.3000e-06 | 4.0600e-08 | 0.0122 | 0.0011 | 0.0014     | 0.0010     |                     |
| <input type="checkbox"/> | E8.8              | 0.0090 | 0.0041 | 0.0020 | 0.0019 | 0.0052 | 0.0020 | 0.0050     | 7.8000e-08 | 0.0156 | 0.0016 | 0.0019     | 0.0021     |                     |
| <input type="checkbox"/> | E10/5.5/5         | 0.0102 | 0.0055 | 0.0048 | 0.0024 | 0.0080 | 0.0043 | 1.0900e-05 | 2.8700e-07 | 0.0263 | 0.0028 | 0.0011     | 0.0013     |                     |
| <input type="checkbox"/> | E13/6/6 (E14E250) | 0.0127 | 0.0057 | 0.0064 | 0.0032 | 0.0095 | 0.0041 | 2.0200e-05 | 5.5900e-07 | 0.0277 | 0.0032 | 0.0016     | 0.0016     |                     |
| <input type="checkbox"/> | E13/7/4 (EF 12.6) | 0.0126 | 0.0065 | 0.0037 | 0.0037 | 0.0089 | 0.0045 | 1.2400e-05 | 3.6900e-07 | 0.0297 | 0.0026 | 0.0019     | 0.0020     |                     |
| <input type="checkbox"/> | E16/8/5 (EF 16)   | 0.0160 | 0.0082 | 0.0047 | 0.0047 | 0.0113 | 0.0057 | 2.0100e-05 | 7.5600e-07 | 0.0376 | 0.0033 | 0.0024     | 0.0025     |                     |
| <input type="checkbox"/> | E16/12/5 (EL 16)  | 0.0160 | 0.0123 | 0.0049 | 0.0040 | 0.0120 | 0.0103 | 1.9400e-05 | 1.0700e-06 | 0.0553 | 0.0040 | 0.0020     | 0.0020     |                     |
| <input type="checkbox"/> | E19/8/9 (E13E187) | 0.0190 | 0.0080 | 0.0048 | 0.0048 | 0.0143 | 0.0057 | 2.2600e-05 | 9.0000e-07 | 0.0399 | 0.0047 | 0.0024     | 0.0023     |                     |
| <input type="checkbox"/> | E19/8/9 (E13E343) | 0.0191 | 0.0080 | 0.0087 | 0.0047 | 0.0143 | 0.0057 | 4.1300e-05 | 1.6500e-06 | 0.0399 | 0.0048 | 0.0024     | 0.0024     |                     |
| <input type="checkbox"/> | E20/10/5          | 0.0207 | 0.0100 | 0.0053 | 0.0052 | 0.0128 | 0.0063 | 3.1200e-05 | 1.3400e-06 | 0.0428 | 0.0038 | 0.0040     | 0.0037     |                     |
| <input type="checkbox"/> | E20/10/6          | 0.0200 | 0.0102 | 0.0059 | 0.0059 | 0.0141 | 0.0070 | 3.2000e-05 | 1.4900e-06 | 0.0460 | 0.0041 | 0.0029     | 0.0032     |                     |
| <input type="checkbox"/> | E-2425 (00_2510E) | 0.0254 | 0.0095 | 0.0063 | 0.0063 | 0.0188 | 0.0062 | 3.8500e-05 | 1.8700e-06 | 0.0485 | 0.0062 | 0.0033     | 0.0033     |                     |
| <input type="checkbox"/> | E25/10/6          | 0.0254 | 0.0097 | 0.0063 | 0.0063 | 0.0188 | 0.0064 | 3.9500e-05 | 1.9300e-06 | 0.0490 | 0.0062 | 0.0033     | 0.0032     |                     |
| <input type="checkbox"/> | E25/13/7 (EF25)   | 0.0250 | 0.0128 | 0.0075 | 0.0075 | 0.0175 | 0.0087 | 5.2000e-05 | 2.9900e-06 | 0.0580 | 0.0050 | 0.0037     | 0.0041     |                     |
| <input type="checkbox"/> | E25/13/11         | 0.0250 | 0.0128 | 0.0110 | 0.0075 | 0.0175 | 0.0087 | 7.8400e-05 | 4.5000e-06 | 0.0575 | 0.0050 | 0.0037     | 0.0041     |                     |
| <input type="checkbox"/> | E30/15/7          | 0.0300 | 0.0150 | 0.0073 | 0.0072 | 0.0195 | 0.0097 | 6.0000e-05 | 4.0000e-06 | 0.0670 | 0.0062 | 0.0053     | 0.0053     |                     |
| <input type="checkbox"/> | E31/13/9          | 0.0309 | 0.0134 | 0.0094 | 0.0094 | 0.0219 | 0.0086 | 8.3200e-05 | 5.1500e-06 | 0.0670 | 0.0063 | 0.0045     | 0.0048     |                     |
| <input type="checkbox"/> | E32/16/9          | 0.0320 | 0.0164 | 0.0095 | 0.0095 | 0.0227 | 0.0112 | 8.3000e-05 | 6.1800e-06 | 0.0740 | 0.0066 | 0.0046     | 0.0052     |                     |
| <input type="checkbox"/> | E34/14/9 (E375)   | 0.0343 | 0.0141 | 0.0093 | 0.0093 | 0.0255 | 0.0098 | 8.0700e-05 | 5.5900e-06 | 0.0693 | 0.0081 | 0.0044     | 0.0043     |                     |
| <input type="checkbox"/> | E35/18/10         | 0.0350 | 0.0175 | 0.0100 | 0.0100 | 0.0245 | 0.0125 | 1.0000e-04 | 8.0700e-06 | 0.0807 | 0.0073 | 0.0053     | 0.0050     |                     |
| <input type="checkbox"/> | E36/18/11         | 0.0360 | 0.0180 | 0.0115 | 0.0102 | 0.0245 | 0.0120 | 1.2000e-04 | 9.7200e-06 | 0.0810 | 0.0072 | 0.0057     | 0.0060     |                     |
| <input type="checkbox"/> | E36/21/12         | 0.0360 | 0.0217 | 0.0120 | 0.0102 | 0.0245 | 0.0158 | 1.2600e-04 | 1.2160e-05 | 0.0960 | 0.0072 | 0.0057     | 0.0060     |                     |
| <input type="checkbox"/> | E41/17/12         | 0.0406 | 0.0166 | 0.0124 | 0.0124 | 0.0286 | 0.0104 | 1.4900e-04 | 1.1500e-05 | 0.0770 | 0.0081 | 0.0060     | 0.0062     |                     |
| <input type="checkbox"/> | E42/11 (00_4017E) | 0.0428 | 0.0211 | 0.0108 | 0.0119 | 0.0303 | 0.0149 | 1.2800e-04 | 1.2600e-05 | 0.0984 | 0.0092 | 0.0063     | 0.0062     |                     |
| <input type="checkbox"/> | E42/21/15         | 0.0420 | 0.0210 | 0.0152 | 0.0122 | 0.0295 | 0.0148 | 1.7800e-04 | 1.7300e-05 | 0.0970 | 0.0086 | 0.0063     | 0.0062     |                     |
| <input type="checkbox"/> | E42/21/20         | 0.0420 | 0.0210 | 0.0200 | 0.0122 | 0.0295 | 0.0148 | 2.3300e-04 | 2.2700e-05 | 0.0970 | 0.0086 | 0.0063     | 0.0062     |                     |
| <input type="checkbox"/> | E42/23/20         | 0.0420 | 0.0238 | 0.0200 | 0.0122 | 0.0295 | 0.0148 | 2.9600e-04 | 3.4200e-05 | 0.1450 | 0.0086 | 0.0063     | 0.0062     |                     |

- Now the design results can be exported to a CSV file to be used in third-party tools.

|    | Cores    | Material | Stacked | L_g (m)    | Gaps in legs with winding | Gaps in legs without winding | Stacked cores distance (m) | Insulator | N  | Window usage | Vertical wires | Horizontal wires | Conductor width (m) | Conductor height |
|----|----------|----------|---------|------------|---------------------------|------------------------------|----------------------------|-----------|----|--------------|----------------|------------------|---------------------|------------------|
| 1  | E22/6/16 | 3C94     | 1       | 1.8074e-05 | 1                         | 1                            | 0                          | NOMEX     | 5  | 0.5575       | 2              | 1                | 0.0012              | 7.0000e          |
| 2  | E22/6/16 | 3C94     | 1       | 2.8743e-05 | 1                         | 1                            | 0                          | NOMEX     | 6  | 0.5571       | 2              | 1                | 0.0012              | 7.0000e          |
| 3  | E22/6/16 | 3C94     | 1       | 5.7095e-05 | 1                         | 1                            | 0                          | NOMEX     | 8  | 0.5559       | 2              | 1                | 8.0125e-04          | 7.0000e          |
| 4  | E22/6/16 | 3C94     | 1       | 9.5877e-05 | 1                         | 1                            | 0                          | NOMEX     | 10 | 0.4544       | 1              | 1                | 8.0125e-04          | 7.0000e          |
| 5  | E22/6/16 | 3C94     | 1       | 1.4492e-04 | 1                         | 1                            | 0                          | NOMEX     | 12 | 0.4527       | 1              | 1                | 8.0125e-04          | 7.0000e          |
| 6  | E22/6/16 | 3C94     | 1       | 2.8375e-04 | 1                         | 1                            | 0                          | NOMEX     | 16 | 0.5462       | 1              | 1                | 8.0125e-04          | 7.0000e          |
| 7  | E22/6/16 | 3C94     | 2       | 2.3413e-05 | 1                         | 1                            | 0                          | NOMEX     | 4  | 0.5573       | 2              | 1                | 0.0012              | 7.0000e          |
| 8  | E22/6/16 | 3C94     | 2       | 4.1691e-05 | 1                         | 1                            | 0                          | NOMEX     | 5  | 0.5565       | 2              | 1                | 0.0012              | 7.0000e          |
| 9  | E22/6/16 | 3C94     | 2       | 9.1407e-05 | 1                         | 1                            | 0                          | NOMEX     | 7  | 0.5544       | 2              | 1                | 8.0125e-04          | 7.0000e          |
| 10 | E22/6/16 | 3C94     | 2       | 1.6461e-04 | 1                         | 1                            | 0                          | NOMEX     | 9  | 0.4520       | 1              | 1                | 8.0125e-04          | 7.0000e          |
| 11 | E22/6/16 | 3C94     | 2       | 2.5773e-04 | 1                         | 1                            | 0                          | NOMEX     | 11 | 0.4488       | 1              | 1                | 8.0125e-04          | 7.0000e          |
| 12 | E22/6/16 | 3C94     | 2       | 4.5433e-04 | 1                         | 1                            | 0                          | NOMEX     | 14 | 0.5392       | 1              | 1                | 8.0125e-04          | 7.0000e          |

