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STPOWER Studio
Overview

Release 3.0
11/10/2023

Introduction

A powerful simulation software helps developers select the most suitable device to fit complex and extensive application mission profiles

Provides comprehensive power and thermal analysis that eliminates long, complex, and expensive application testing

Returns accurate estimations of power loss and junction and case temperatures, along with data on nontestable parameters and support for heatsink sizing

Now integrated in the eDesignSuite platform and ready to deliver extensive analyses with a single click

Overview

Dynamic electro-thermal simulation software dedicated to STPOWER devices, now online on eDesignSuite

Features:

- Available online on ST eDesignSuite platform
- Supports SLLIMM & ACEPACK families
- Enables DC/AC 3-phase 2-level applications
- Desktop and mobile version

Comprehensive analysis:

- Multistep mission profile
- Several thermal setup options
- Deep analysis of junction temperatures and power loss
- Very fast computational calculation

High versatility:

- Multilingual interface (English, Chinese, Japanese)
- Link with product folder and datasheet
- Project save and export options
- Output report generation

Go to STPOWER Studio

Graphical user interface

Output storage & print

Input data setting

Product section:
- Application
- Topology
- Family
- Device

Thermal section:
- Without heatsink
- Fixed T case
- Fixed heatsink Rth
- Fixed heatsink Zth

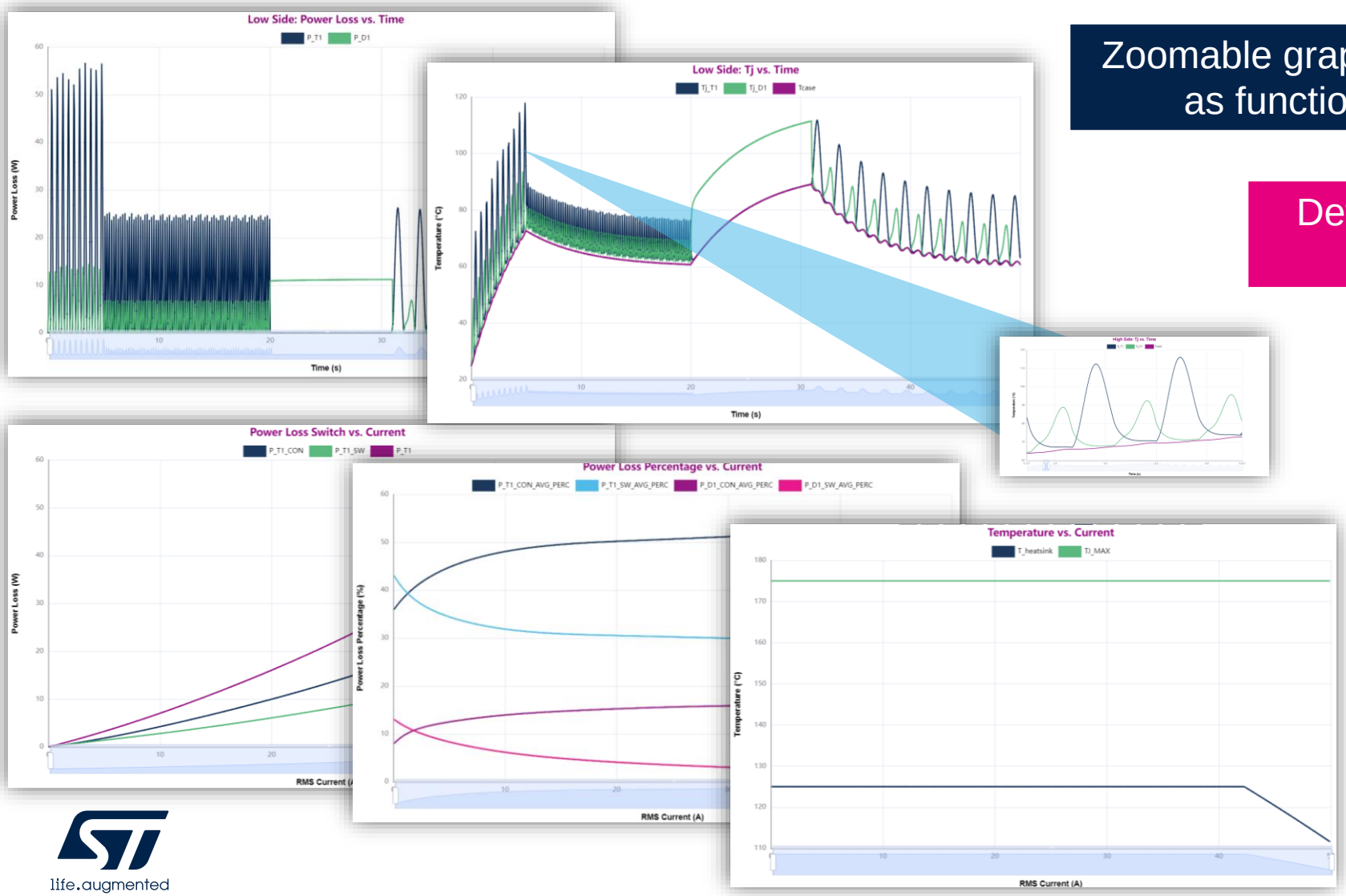
Mission profile section:
- Multistep input
- PWM modulations
- Input conditions

Documentation minisite

Graph selection & results

Output graphs:
- Tj, Tcase vs time
- Power loss vs time
- Power loss vs current
- Power loss vs frequency
- Temperature vs current
- Temperature vs frequency

Output data



Zoomable graphs for temperatures and power loss, as function of time, frequency and current

Detailed table with power loss splitting, temperatures, and heatsink data

Simulation Results

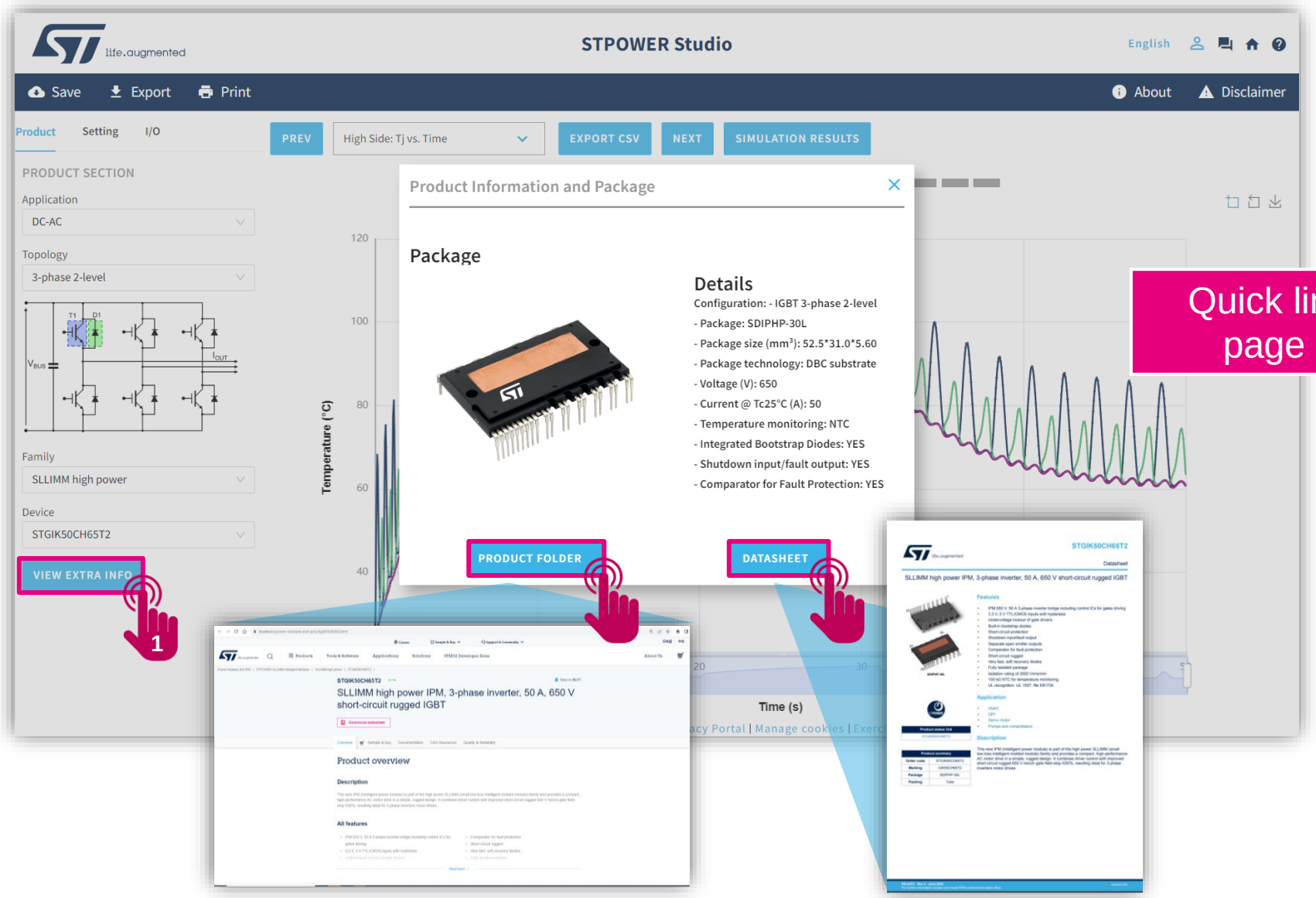
	T	D
Conduction Loss (avg)	328.07 mW	94.84 mW
Switching EON/Err Loss (avg)	381.95 mW	405.51 mW
Switching EOFF Loss (avg)	445.61 mW	-
Total Loss (avg)	1.16 W	500.35 mW
T+D Total Loss (avg) (W)	1.66 W	-
Junction temp (max)	91.87 °C	91.62 °C
Junction temp (avg)	91.09 °C	90.93 °C

Additional information

Parameter	STEP_0
System Total Loss (avg) (W)	9.94 W
Case Temperature (max) (°C)	90 °C
Heatsink Rth (°C/W)	4.03 °C/W

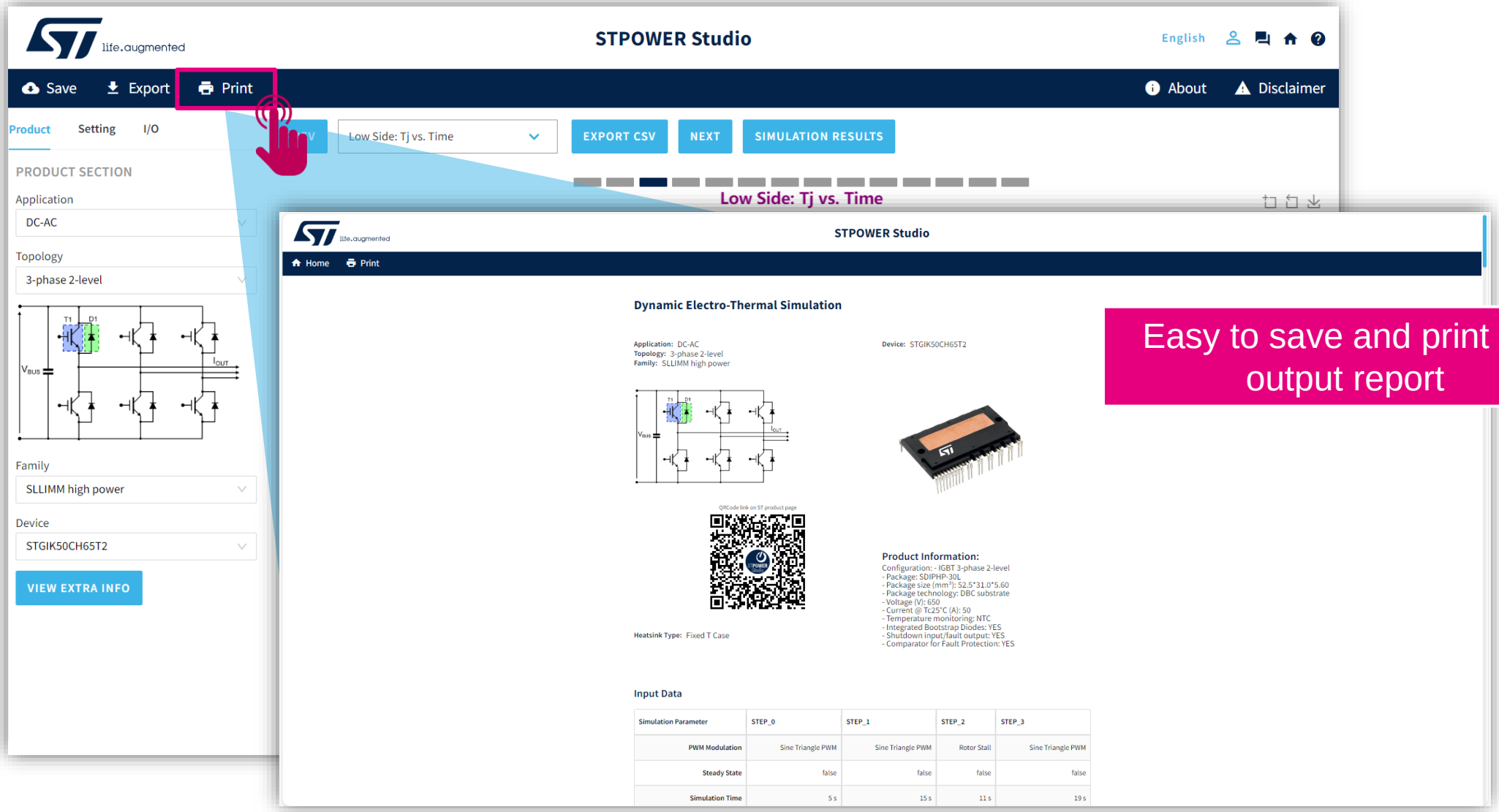
Exportable output data in cvs format

Connectivity



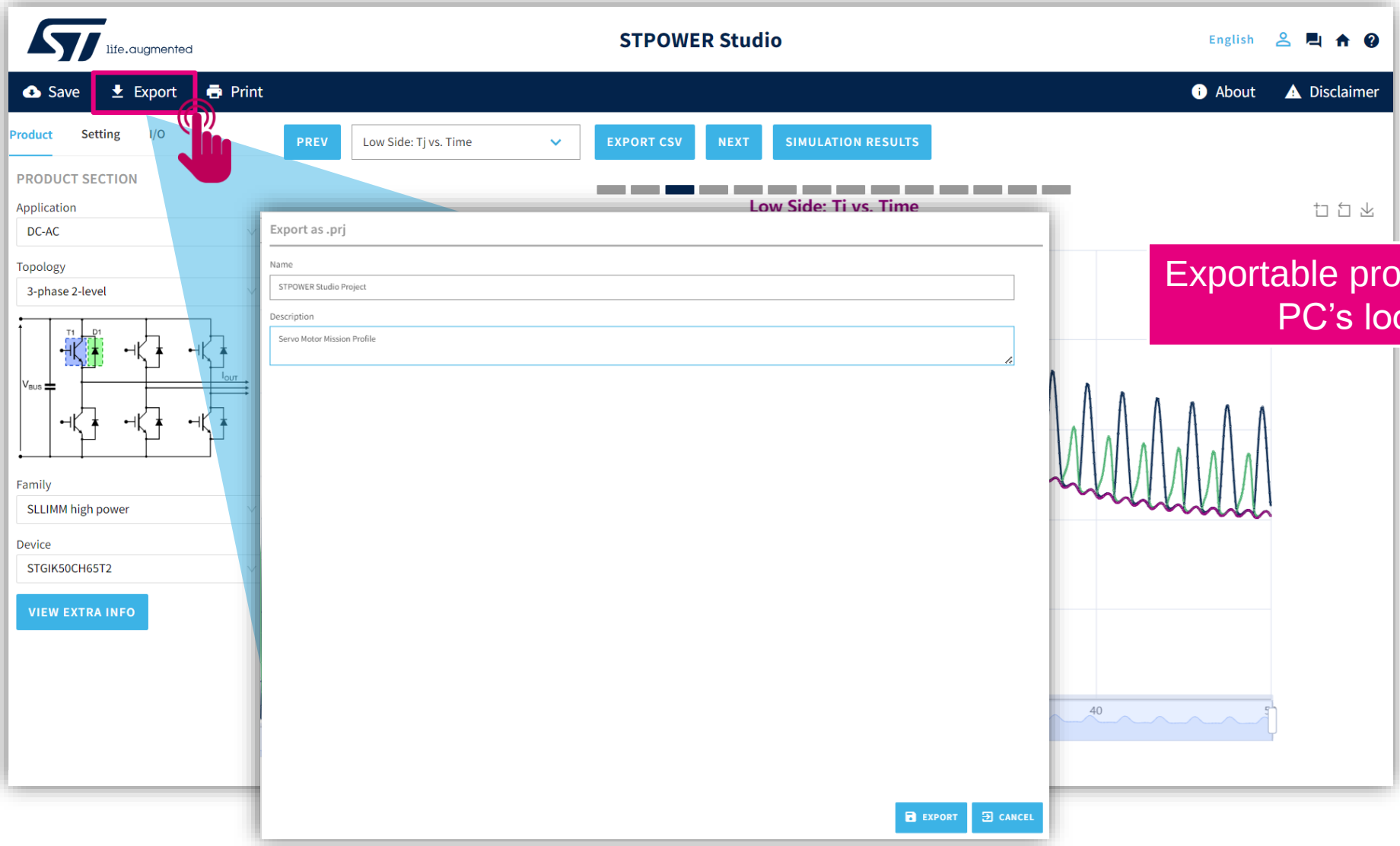
Quick link to the product page and datasheet

Printable output report



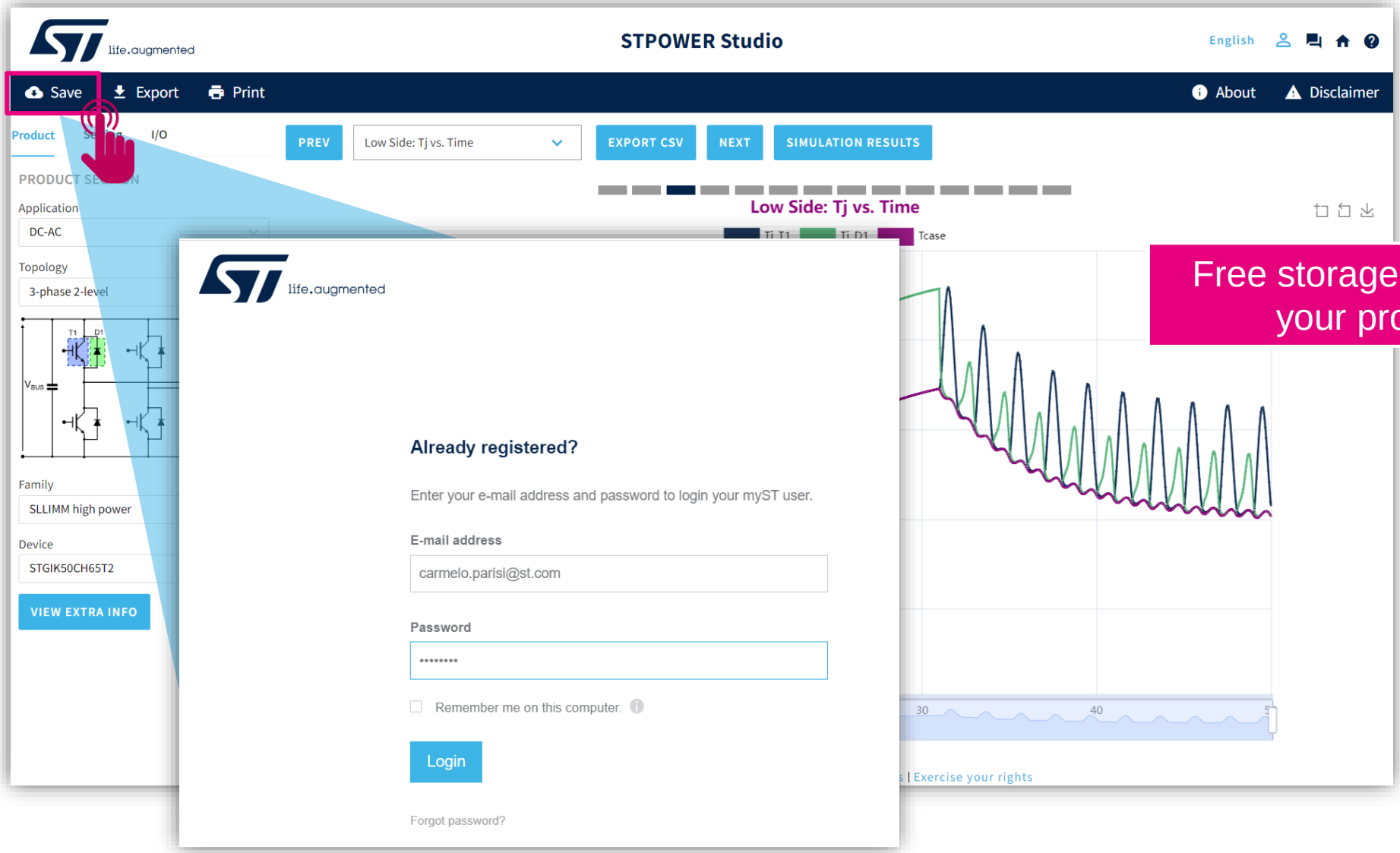
Easy to save and print the output report

Exportable project



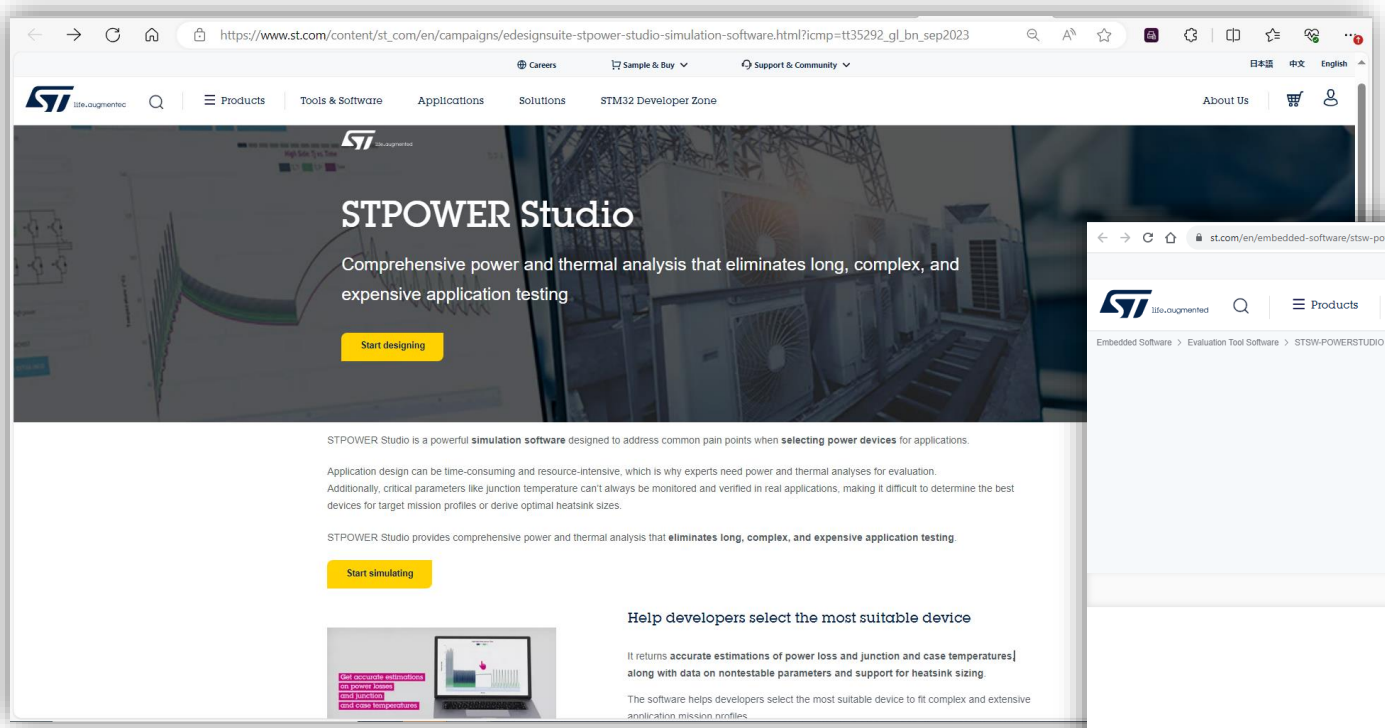
Exportable project file in your PC's local area

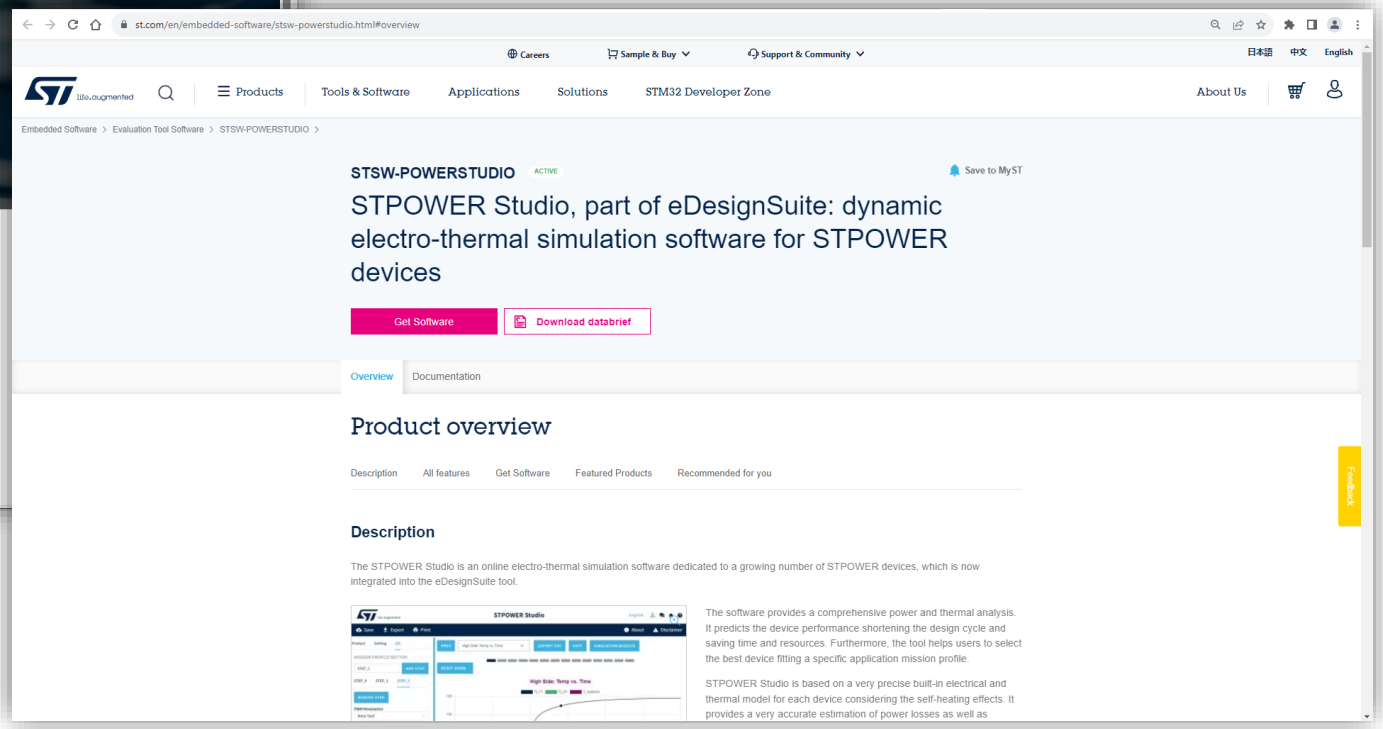
Free storage on myST



Free storage on myST for your project file

Dedicated web pages

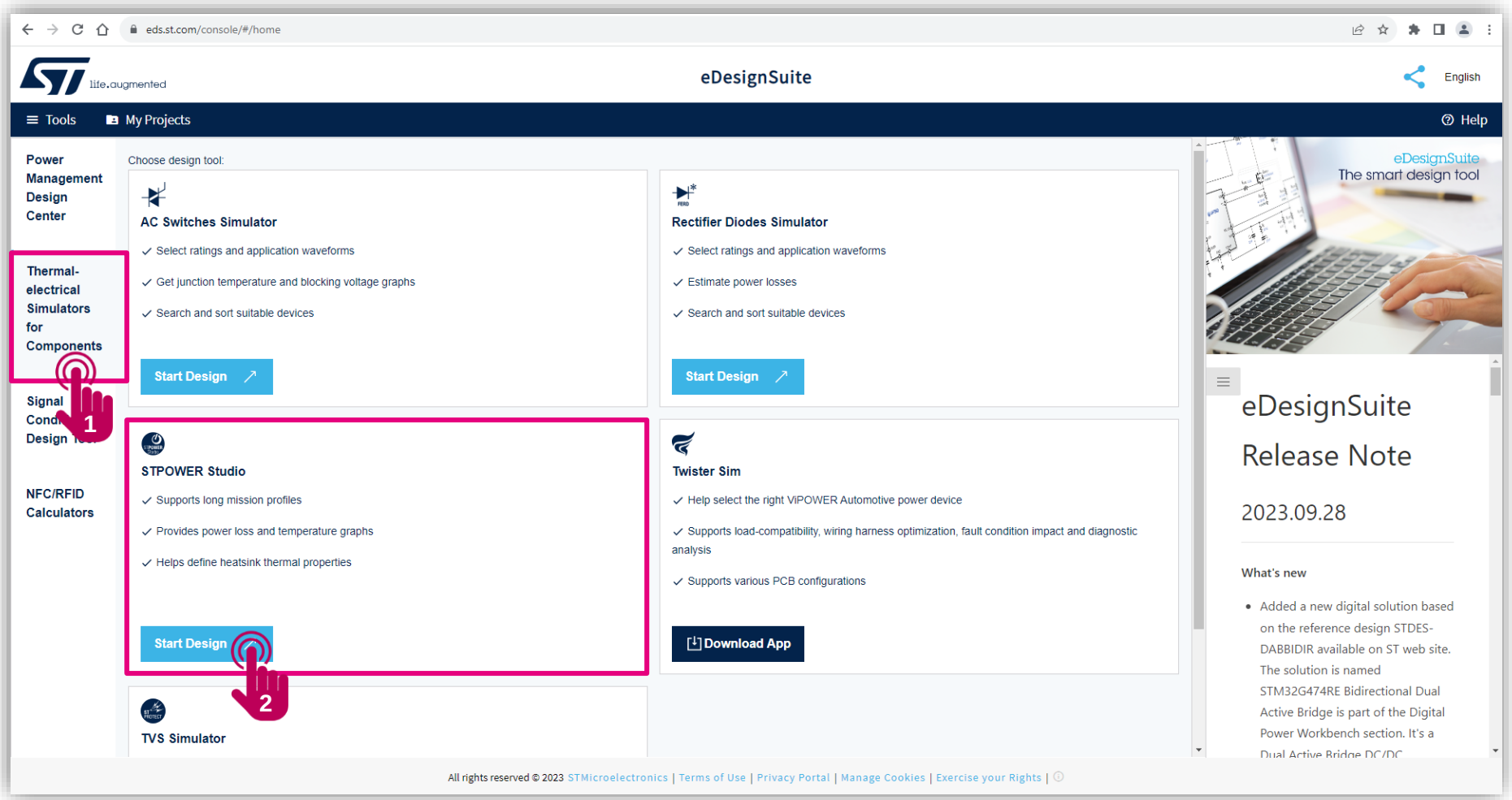




Click on the images to go to the website

eDesignSuite

Part of eDesignSuite



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Our technology starts with You

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