RELEASE NOTES

Altair® PSIM™ 2023.0

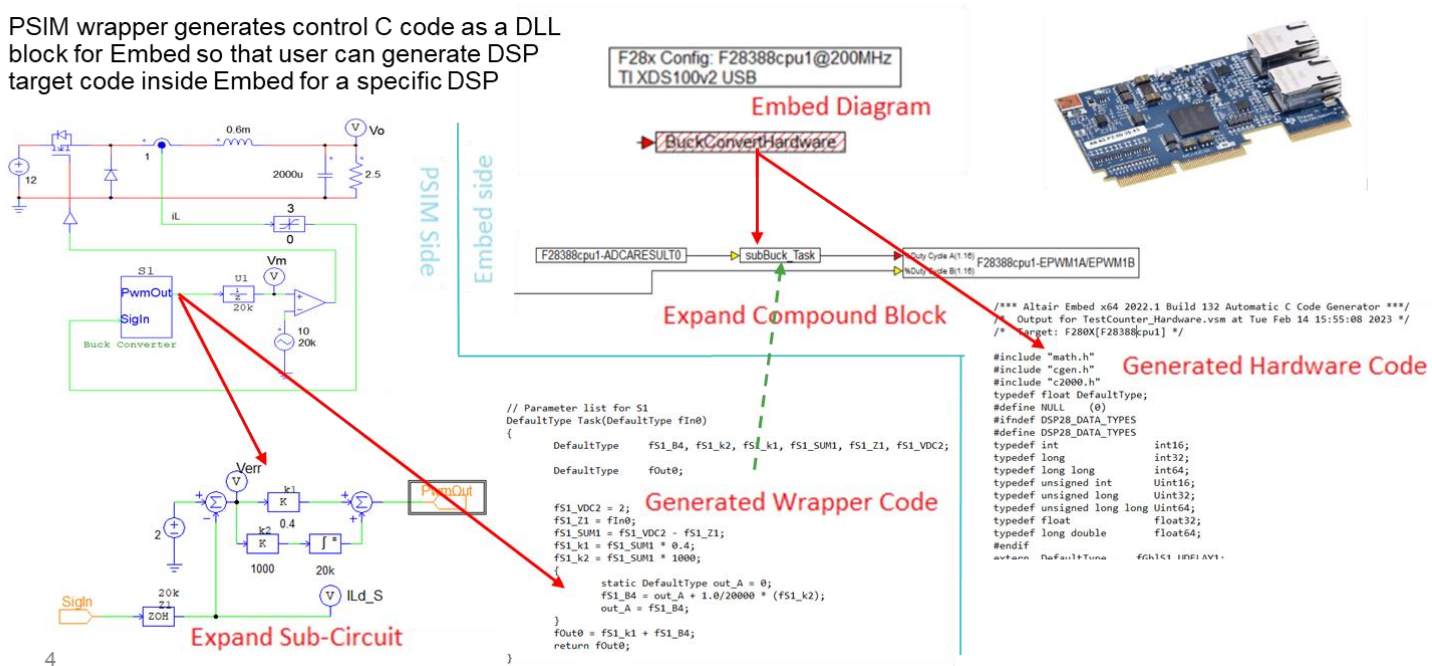# New Features and Enhancements 2023.0

Release Highlights

PSIM-Embed Wrapper for DSP Code Generation (Fixed-Point)

PSIM-Embed Wrapper generates a DLL block for controller implementations inside PSIM and exports it to Embed so that the user can generate target code for any DSP/Microdevices that Embed supports.

What's new in v2023.0?

- Support Fixed-point calculations.
- Support All TI DMC blocks.
- Support math function blocks and simplified c blocks with the expressions or c code that has been written in Fixed-point format.
- New fixed point PSIM-Embed wrapper examples.

- PSIM wrapper generates control C code as a DLL block for Embed so that user can generate DSP target code inside Embed for a specific DSP

New Level 2 Power Device Library

The following Level-2 device models are calibrated and added in Level-2 Device Library:

- C3M0060065K
- C3M0032120K
- C3M0025065J1
- C3M0040120J1
- C3M0045065K
- C3M0075120K

New and Updated Tutorials and Manuals:

- "How to Generate LuTs for PMSM (Flux and FluxMotor) Models."
- "How to Use PSIM-HyperSpice Link."
- "How to Use PSIM-Embed Wrapper."
- "PSIM User Manual."
- "Simcoder User Manual."

New Examples and Case Studies:

- Examples: PSIM-Compose Demos
- Examples: Code Generation – Embed Wrapper (Fixed-Point)
- Examples: More PSIM-HyperSpice link Test Cases.
- Examples: Level 2 and 3 Device Library
- Examples: New OML Scripts

Resolved Issues:

- unable to open examples when first installing PSIM trial with Altair units
- loss issue with CLLC bi-directional topology
- Spikes in Level-2 MOSFET models
- Re-test SimCoupler with PSIM2022.2 and Matlab2022a
- AC sweep (multisine) has no result
- DLL block browsing button
- activate co-sim causes c interpreter to no longer work
- oscilloscope "delays"
- thermal model database with multi-select
- EMI filter design - refresh schematic display after flag changes
- Thermal database missing data
- thermal model part of "switch" cannot accept a string variable with the part
- A digital control example has stopped invoking/working in latest build
- PSIM Crash when running the attached .CIR with HyperSpice
- Button for "Find Error Element" Doesn't Work
- interrupt timing does not work on F28069 target
- Thermal Device Model of MOSFET in schematic
- Thermal MOSFET_Eon example won't run
- Spike in "P_inst" signal in SiC & GaN devices\Cree Schematics
- Same potential for the unused terminals in EMI DS
- Regarding coupled simulations with Simulink
- PSIM legacy license server issue
- solve order of operations is giving different outputs depending on multiplication method
- editing and saving in thermal database does not change the .dev file
- please check operation of interrupt timer element over SCI
- Addition of Missing Tutorials or Tutorials To Be Updated in v2023
- HIgh resolution display (simmview).
- User Guide version issues
- PSIM user manual errors found by users
- Simview display issues
- Problem to run examples with efficiency maps
- The license remains in use even after the PSIM is terminated
- save flag prevents simulation from completing stuck at 99%
- Code error when F2837x ADC use timer trigger
- PSIMcmd is not working properly.
- PsimWriteGraphFile input and output errors
- PsimSimview output error and unclear documentation