

# Empyrean Aether™

DATASHEET

## Full Custom Design Platform for Analog, Mixed-Signal and Memory designs

### Benefits

#### Platform

- FinFET processes supported
- Flexible Python interface
- 3nm support

#### Empyrean Aether™ SE

- Supports import/export of mainstream netlists: CDL/SPICRE/Verilog

#### Empyrean Aether™ MDE

- Robust interface to easily set up the simulation environment
- Auto waveform displayed by Empyrean iWave™ and interactive annotation between schematic and iWave

#### Empyrean Aether™ LE

- Hierarchical layout design
- Parameterized cells, Vcell and Pycell

#### Empyrean Aether™ LE ADV

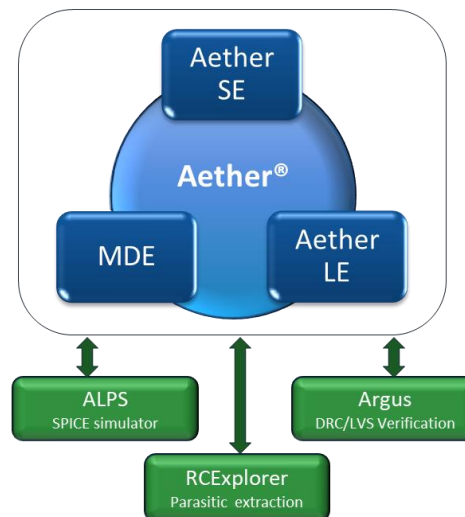
- Supports advanced process design flow
- Fin/WSP/Track/ Display & Snapping
- MPT(Multi Pattern)

#### Empyrean Aether™ pyAether

- Python support for developing, running, and customizing scripts

Empyrean Aether™ is a comprehensive full-custom IC design environment for Analog, Mixed-Signal, RF, and Memory designs. The product suite includes schematic editing, simulation and analysis, and a layout editing platform with tight integration to Empyrean ALPS®, Empyrean RCExplorer™, and Empyrean Argus™.

- Empyrean Aether™ SE: Schematic Editor
- Empyrean Aether™ MDE: Mixed Design Environment
- Empyrean Aether™ LE: Layout Editor
- Empyrean Aether™ LE ADV - FinFET layout
- Empyrean Aether™ pyAether – python scripting



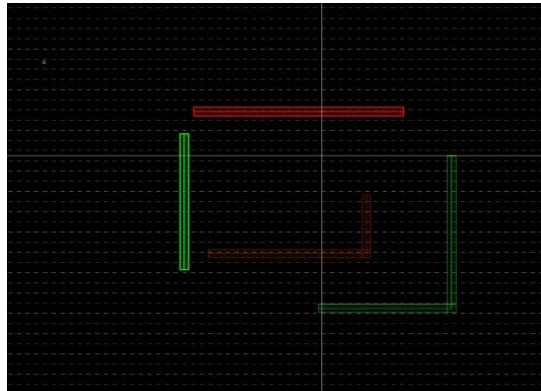
Empyrean Aether™ SE provides a high-productivity environment for design entry and design creation. Aether SE is suitable for all types of design including PMIC, analog to mixed-signal, and RF applications, and has tight integration with Empyrean Aether™ MDE, Empyrean ALPS®, and Empyrean iWave™ to enable simulation and cross-probing capability. Aether SE also supports hierarchical ERC checks to increase productivity.

Empyrean Aether™ LE is a powerful layout editor for planning, placement, and routing to increase productivity. Aether LE supports schematic-driven layout capability to reduce layout time, tight integration with Empyrean Argus™ and Empyrean RCExplorer™ to perform DRC/LVS verification and parasitic extraction on the fly, and an OA-based environment allowing customization with TCL and Python scripting.

Empyrean Aether™ MDE provides a flexible GUI to simulate, analyze, and verify the design throughout the design cycle. Aether MDE allows Monte-Carlo and multi-corner simulation and reporting, specification-driven simulation and analysis, and allows co-simulation with 3<sup>rd</sup> party digital simulator.

Empyrean Aether™ LE ADV, designed for advanced processes (<16nm), supports efficient Fin grid-based layout design. It offers advanced multi-patterning features and customizable GuardRing to adhere to POLY layer orientation restrictions in manufacturing processes. Aether LE ADV ensures device Fin alignment with Global Fin settings, automatically aligning and snapping Fins to Global Fin at all layout hierarchy levels top-to-down using create and edit capabilities.

Aether LE ADV employs Multiple Pattern Technology (MPT) to differentiate mask layers of the same metal using distinct colors.



Empyrean Aether™ pyAether is a Python-based intelligent platform that adheres to object-oriented programming principles, including encapsulation, inheritance, and polymorphism, ensuring code modularity and reusability. pyAether seamlessly integrates with an extensive collection of third-party Python libraries, enabling rapid development and leveraging the language's vast ecosystem.

#### Key Features:

**Aether Environment Integration:** Develop, run, and customize scripts natively within the Empyrean Aether™ environment

**3rd Party Libraries:** Access to rich 3rd party libraries

**Tool ecosystem:** Support the development of Empyrean Aether™-based tools.

**Design Automation Flow Customization:** Customize the design environment to meet your unique and differentiated design environment



#### ❖ Platform Support

- X86 64-bit:  
Red Hat Enterprise V6, and V7; Centos V6, and V7