Annex no. 1

for the inquiry no 5/eCAUSIS/2023

Technical parameters

Order subject:
Electronic circuit design software - one license of HyperLynx SI/PI Bundle or equivalent.

CPV code: 48000000 - Software packages and information systems

Brief description of the device:
The subject of the order is the supply of electronic circuit testing software - HyperLynx SI/PI Bundle SW or equivalent.

General requirements:
A software package designed for electronics engineers and PCB package designers, allowing for electromagnetic compatibility (EMC), signal integrity (SI), PCB thermal modeling (Thermal Analysis), current analysis (PI - AC/DC), among others.

Detailed features of the software:
Configurations
- Bundle product

Environment
- Pre-layout
- Post-layout
- Interface to 3rd-party PCB flow / PCB translators
- Integrated with CES

Signal Integrity
- Basic IBIS simulation, Stackup Editing, EMC, Multiboard, Loss and Crosstalk
- Import/use S-parameter models in simulations
- DDRx wizard: integrated SI / timing verification
    - DDR,2,3 and LPDDR, 2, 3
    - DDR4 and LPDDR 4
    - NV-DDR2, 3
    - DDR5 and LPDDR5 with IBIS-AMI models
    - Advanced DDRx AMI (support for asymmetric single-ended I/O)
- Pulse response simulation (model-free)
- Stacked die/MCM Electrical Module Description (EMD) support
- EZWave waveform display
- Supports SPICE / ADMS simulation engines
- SerDes analysis

    - SerDes Compliance Wizard with support for 210 standard protocols
    - Post-layout SerDes extraction (requires HLAS P/N 266125 or 268014)
    - Automated identification / modeling of 3D areas (requires FWS or HPC license)
    - IBIS-AMI simulation support
    - FastEye simulation (SerDes channel simulation without IBIS-AMI models)
- Support for via backdrilling, surface roughness trace modeling
- S-parameter generation, Touchstone Viewer, metrics
- Integrated 3D EM via modeling for simple via configurations

<u>Power Integrity</u>

- Touchstone file viewer/checker/transformer
- 3D power viewer
- Stackup editor / field solver
- DC Drop Analysis - complete modeling an reporting, multiboard support
- DC Drop Analysis - Remote sense line and Multi-phase VRM support
- Thermal / DC drop co-simulation
- Decoupling analysis - complete modeling and reporting
- Decoupling acceleration (multi-core simulation)
- Plane noise analysis
    - Dyn. current demand modeling (core, I/O, power up, etc)
    - 3D plane noise osciloscope
- PDN Decoupling Optimizer

<u>Thermal</u>

- Enclosure modeling
- 3D component modeling
- Board / layer copper modeling
- Cooling components - heat sink, heat pipe, chassis screw

License requirements:

- license:
    - Perpetual
    - NodeLocked (single user execute one software product on ONE adequately configured workstation)
- protection: USB key