HLPW6: Test Case 1 (CRM-HLS)

Cadence Design Systems, Inc.

Meshing Software: Fidelity Pointwise 2025.2

Grid Family: HexVoxel (F1)

Grid Characteristics:

Surface Mesh: Quad Dominant

Volume Mesh: Hex Dominant boundary layer mesh followed by HexCore (Voxel) mesh in the off-body region (Farfield).

Wall spacing: Growth profile with two constant layers before growing at 16% (Level B) and targeting a y+ of 1.0 (Level B). All other grids in the family have a similar growth profile while both growth rate and wall normal spacing (target y+) are adjusted based on the "Refinement Factor" (see mesh statistics table below)

Grid Level	Cell Count	Node Count	Refinement Factor	Target y+
A	25,435,031	15,520,444	0.75	4/3
B	43,517,347	28,289,287	1.0	1.0
C	106,410,939	75,726,976	1.5	2/3
D	237,759,230	180,918,004	2.0	0.5
E	568,667,444	457,688,006	3.0	1/3

For all questions regarding these meshes, please contact:

Reza Djeddi (Cadence Design Systems) at rezadj@cadence.com