

Produktvergleich Cinema 4D (alle Features)

| Platform | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
|---|------|-------|-----------------|-----------|-----------|--------|
| Cross-platform support for Mac & Windows | x | x | x | x | x | x |
| 64-bit architecture | x | x | x | x | x | x |
| OpenGL 3.0 support | x | x | x | x | x | x |
| Extensive API: C++, Python, C.O.F.F.E.E. | | x | x | x | x | x |
| Interface & Workflow | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
| Context-sensitive, fully-searchable HTML help | x | x | x | x | x | x |
| Commander | x | x | x | x | x | x |
| To Do List | x | x | x | x | x | x |
| Multiple projects open at once | x | x | x | x | x | x |
| Customizable toolbars / layouts / menus | x | x | x | x | x | x |
| Light and dark interface schemes | x | x | x | x | x | x |
| Unlimited view windows | x | x | x | x | x | x |
| Heads-up display | x | x | x | x | x | x |
| Custom pop-up menu | x | x | x | x | x | x |
| Non-modal tools with realtime feedback | x | x | x | x | x | x |
| Collapsible Managers & Palettes | x | x | x | x | x | x |
| Selection / display filters | x | x | x | x | x | x |
| Custom User Data per object | x | x | x | x | x | x |
| Doodle viewport annotation tool | | x | x | x | x | x |
| Layer system for object & material | x | x | x | x | x | x |
| XRef external instancing / referencing system | | x | x | x | x | x |
| Tablet support for Wacom and other pen | x | x | x | x | x | x |
| 3dconnexion 3DMouse support | | x | x | x | x | x |
| Stereo display in Viewport | | x | x | x | x | x |
| OpenGL Viewport | x | x | x | x | x | x |
| Object highlighting | x | x | x | x | x | x |
| Available in 11 languages | x | x | x | x | x | x |
| Arabic interface support | | x | x | x | x | x |
| OS X Lion Fullscreen support | | x | x | x | x | x |
| Retina Icons | | x | x | x | x | x |
| Solo Button | | x | x | x | x | x |
| Annotations Tag | | x | x | x | x | x |
| User Participation | | x | x | x | x | x |
| New Crashhandler | | x | x | x | x | x |
| Misc Workflow Enhancements | | x | x | x | x | x |
| Camera | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
| Camera, Target Camera, Stereo Camera | x | x | x | x | x | x |
| Motion Camera | | | | x | x | x |
| Camera Composition Helpers | x | x | x | x | x | x |
| Camera Focus Picker | x | x | x | x | x | x |
| Camera Calibrator | | | | | x | x |
| Camera Morph | | | | x | x | x |
| Camera Crane | | | | x | x | x |

| Data Exchange / Format Support | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
|---|------|-------|-----------------|-----------|-----------|--------|
| QuickTime support | x | x | x | x | x | x |
| AVI support | Win | Win | Win | Win | Win | Win |
| Image formats - float with layers: PSD, TIFF, | x | x | x | x | x | x |
| Image formats - float: HDR, DPX, RLA, RPF | x | x | x | x | x | x |
| Image formats: BMP, IFF, JPG, PICT, PNG, | x | x | x | x | x | x |
| Quicktime VR object, panorama | x | x | x | x | x | x |
| CINEWARE compatible | x | x | x | x | x | x |
| After Effects compositing exchange with 3D | | x | x | x | x | x |
| Nuke exchange | | x | x | x | x | x |
| Photoshop exchange | x | x | x | x | x | x |
| Apple Motion compositing exchange with 3D | | x | x | x | x | x |
| Apple Final Cut Pro compositing exchange | | Mac | Mac | Mac | Mac | Mac |
| Digital Fusion compositing exchange | | Win | Win | Win | Win | Win |
| Shake compositing exchange | | x | x | x | x | x |
| Support of DXF, DWG, 3DS, DAE, FBX, DEM, LWS, STL, VRML2, OBJ, COLLADA, Alembic | x* | x | x | x | x | x |
| IGES importer | | | | | x | x |
| Okino connection - seamless CAD file import via optional PolyTrans software (Windows only) | | | | | x | x |
| BodyPaint 3D exchange - 3ds Max, Maya, Softimage and Lightwave | | x | x | x | x | x |
| Support of most current FBX and Alembic formats (FBX 2014 & Alembic 1.5) | | x | x | x | x | x |
| * Import only | | | | | | |
| Modeling Tools | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
| Parametric object primitives | x | x | x | x | x | x |
| Scene Objects: Floor, Sky, Environment, Stage, Foreground, Background | x | x | x | x | x | x |
| Parametric spline primitives | x | x | x | x | x | x |
| Extrude, Lathe, Loft, Sweep | x | x | x | x | x | x |
| Polygonal modeling tools with N-gon support | | x | x | x | x | x |
| Subdivision surfaces | x | x | x | x | x | x |
| Modeling Generators: Metaball, Boolean, Symmetry, Array, Atom Array, Instance, Connect, Spline Mask, Python | x* | x | x | x | x | x |
| PolyPen Tool | | x | x | x | x | x |
| Bevel Deformer | | x | x | x | x | x |
| Enhanced Cogwheel | | x | x | x | x | x |
| Improved Symmetry Object | | x | x | x | x | x |
| Deformer Falloff | | x | x | x | x | x |
| Mesh Check | | x | x | x | x | x |

| Sculpting | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
|---|------|-------|-----------------|-----------|-----------|--------|
| Sculpt functionality | | | x | | | x |
| Sculpt Brushes | | | x | | | x |
| Baking | | | x | | | x |
| C++ Sculpt Brush API | | | x | | | x |
| Python Support for lib_sculpt | | | x | | | x |
| R16 Sculpting | | | x | | | x |
| UV Editing | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
| UV Editor | | x | x | x | x | x |
| Interactive UV mapping by projection types | | x | x | x | x | x |
| Optimal UV mapping to automatically remove | | x | x | x | x | x |
| LSCM unwrapping and relaxing | | x | x | x | x | x |
| ABF unwrapping and relaxing | | x | x | x | x | x |
| UV Peeler | | x | x | x | x | x |
| UVs for Caps | | x | x | x | x | x |
| UV Enhancements | | x | x | x | x | x |
| Materials & Texturing | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
| 12 standard material channels: Color, Diffusion, Luminance, Transparency, Reflection, Environment, Fog, Bump, Normal, Alpha, Glow, Transparency with absorption, total internal reflections, exit reflections | x | x | x | x | x | x |
| Blurry reflections and transparencies | x | x | x | x | x | x |
| Normal maps: tangent, object or world | x | x | x | x | x | x |
| Displacement: intensity (centered), red/green | x | x | x | x | x | x |
| Choose Photoshop PSD layers per usage | x | x | x | x | x | x |
| Animated textures (MOV, AVI, sequence) with viewport preview | x | x | x | x | x | x |
| Selectable viewport resolution and channel display per material | x | x | x | x | x | x |
| Shading models: Lambertian, Oren-Nayar | x | x | x | x | x | x |
| Fresnel Shader incl. physically correct IOR | x | x | x | x | x | x |
| Noise Procedural shader with 32 different noise algorithms | x | x | x | x | x | x |
| Layer shader | x | x | x | x | x | x |
| Proximity-based Proximal shader | x | x | x | x | x | x |
| Procedural surface shaders | x | x | x | x | x | x |
| Texture baking: surface color, illumination, Ambient Occlusion, Normals, displacement and Sub-polygon displacement | x | x | x | x | x | x |
| Sub-Surface Scattering | | | | x | x | x |
| Terrain Mask shader | | | | | x | x |
| Brick, Wood, Weathering, Pavement and Normalizer Shaders | | x | x | x | x | x |
| Sketch & Toon Art, Hatch, Spot (halftone) | | | | | x | x |
| 3D Painting with layers, all blend modes and Photoshop file compatibility | x | x | x | x | x | x |

| Materials & Texturing | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
|---|------|-------|-----------------|-----------|-----------|--------|
| Multi-brush painting of multiple material channels in single stroke | x | x | x | x | x | x |
| Raybrush painting directly onto rendered result | x | x | x | x | x | x |
| Projection painting | x | x | x | x | x | x |
| Exchange projections with Photoshop | x | x | x | x | x | x |
| Camera Mapping | x | x | x | x | x | x |
| ProjectionMan camera mapping workflow tool | x | x | x | x | x | x |
| Texture Manager | | x | x | x | x | x |
| Grass Material Shader | | | | | x | x |
| Brick Shader Enhancements | | x | x | x | x | x |
| Reflectance Channel | | x | x | x | x | x |
| Lighting | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
| Light Types: Omni, Spot, Infinite, Area, Square Spot, Parallel Spot, Square Parallel Spot | x | x | x | x | x | x |
| Hard, Soft, Area shadows | x | x | x | x | x | x |
| Visible, Volumetric and Inverse Volumetric | x | x | x | x | x | x |
| Noise within light illumination and/or visibility | x | x | x | x | x | x |
| Include/exclude light diffusion, specular, shadow per object | x | x | x | x | x | x |
| Custom lens flares | x | x | x | x | x | x |
| Caustics | | | | | x | x |
| Color temperature in Kelvin | x | x | x | x | x | x |
| Photometric brightness setting in Candela and | x | x | x | x | x | x |
| Support of IES light data | | | | | x | x |
| Rendering | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
| Render up to 128,000 pixels square / 32 bits per 800 x 600 | | x | x | x | x | x |
| Bucket rendering | x | x | x | x | x | x |
| Render instances | x | x | x | x | x | x |
| Color profile support | x | x | x | x | x | x |
| Camera white balance | x | x | x | x | x | x |
| Linear workflow | x | x | x | x | x | x |
| Adaptive antialiasing | x | x | x | x | x | x |
| Multi-Pass output | x* | x | x | x | x | x |
| Object buffers - specify unique alpha channels | x* | x | x | x | x | x |
| Ambient Occlusion | x | x | x | x | x | x |
| Global Illumination (IR 2.0, QMC, mixed) | | x | x | x | x | x |
| Physical Renderer with physical camera, high-quality depth of field, high-quality motion blur | | | | x | x | x |
| Stereo rendering | | x | x | x | x | x |
| Depth of Field post effect | Pass | | | | x | x |
| Vector Motion Blur post effect | Pass | | | | x | x |
| Position Pass | x | x | x | x | x | x |
| CineMan Renderman-compliant bridge | | | | | x | x |
| Sketch and Toon non-photorealistic rendering | | | | | x | x |
| Pyrocluster volumetric particle rendering | | | | | x | x |
| Physical Sky | | | | | x | x |
| 3D Sound Rendering | x | x | x | x | x | x |

| Rendering | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
|---|------|-------|-----------------|-----------|-----------|------------------|
| Picture Viewer : RAM player, color correction, image merge, anaglyph preview and more | x | x | x | x | x | x |
| Watermark post effect | | x | x | x | x | x |
| Render Queue batch rendering system | | x | x | x | x | x |
| Universal Sampler (GI-QMC) | | x | x | x | x | x |
| Radiosity maps | | x | x | x | x | x |
| Subsurface-Scattering | | | | x | x | x |
| Embree Integration | | | | x | x | x |
| Light Mapping | | x | x | x | x | x |
| Normal Pass | | x | x | x | x | x |
| Team Render (Number of Nodes) | | | | x (3) | x (3) | x (unlimited) |
| Team Render Server (Number of Nodes) | | | | x (3) | x (3) | x (unlimited) |
| BiRender - Non-Photorealistic Rendering (Sketch and Toon & Hair) | | | | | x | x |
| * Only available thru AE CINEMA 4D Layer | | | | | | |
| Animation | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
| Easy one-click record button to keyframe Position, Scale, Rotation, Point Level animation and user-defined parameters | x | x | x | x | x | x |
| Record dot animation of all animatable | x | x | x | x | x | x |
| Automatic keyframing | x | x | x | x | x | x |
| Cappucino - realtime keyframing | | | | | | x |
| PowerSlider animation toolbar for playback and keyframe manipulation | x | x | x | x | x | x |
| Timeline - up to four timeline windows with customizable track display and dopesheet or F-Curve view modes | x* | x | x | x | x | x |
| F-Curve Snapshot and Reduced Modification | | x | x | x | x | x |
| Constant Velocity option per track | x | x | x | x | x | x |
| Keyframe reduction | | x | x | x | x | x |
| Keyframe baking | | x | x | x | x | x |
| ASCII animation import | | x | x | x | x | x |
| Non-linear animation / motion mixing system | | x | x | x | x | x |
| Constraints: PSR, Up-Vector, Clamp, Mirror, Parent, Aim, Spring | | x | x | x | x | x |
| Driver tag | | | | | | x |
| XPresso - node-based Expression Editor | x** | x | x | x | x | x |
| Virtual Walkthrough tool - first-person scene navigation and animation | | | | | x | x |
| Interaction Tag | | x | x | x | x | x |
| Animation Dots | | x | x | x | x | x |
| Motion Tracker | | | | | | x |
| * One Timeline window only | | | | | | |
| ** Does not include the Python Node | | | | | | |

| Dynamic Animation | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
|--|------|-------|-----------------|-----------|-----------|--------|
| Basic particle system | | x | x | x | x | x |
| Thinking Particles node-based particle system | | | | | | x |
| Rigid Body dynamics for MoGraph objects | | | | x | | x |
| Rigid Body dynamics | | | | | | x |
| Joints, Springs, Motors | | | | | | x |
| Soft Body dynamics | | | | | | x |
| Aerodynamics forces | | | | | | x |
| Plastic & Breaking Springs | | | | | | x |
| Breaking Connectors | | | | | | x |
| Cloth dynamics & dressing functions | | | | | | x |
| Hair dynamics | | | | | | x |
| Spline dynamics | | | | | | x |
| MoGraph Tools | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
| Cloner object | | | | x | | x |
| Fracture object | x* | | | x | | x |
| Matrix object | | | | x | | x |
| MoInstance object | | | | x | | x |
| MoText object | | | | x | | x |
| Tracer object | | | | x | | x |
| Spline Mask object | | | | x | x | x |
| MoSpline parametric spline generator with L-system functionality | | | | x | | x |
| Effectors for Position, Scale, Rotation, Color, Time using Falloff, Shader, Random, Formula, Delay, C.O.F.F.E.E., Python, Inheritance, Sound, Spline, Step, Target, Time or Volume effectors | x* | | | x | | x |
| PolyFX polygon fracture deformer | | | | x | | x |
| MoGraph Selection tag | | | | x | | x |
| Beat Shader | | | | x | | x |
| MoGraph Multi-shader | | | | x | | x |
| MoExtrude | | | | x | | x |
| * Fracture Object, Plain and Random Effectors only after registration | | | | | | |
| Character Animation Tools | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
| Character object / autorigger | | | | | | x |
| CMotion - parametric walk system | | | | | | x |
| Joints with full dynamic IK | | x | x | x | x | x |
| Skin Deformer supports linear, spherical and blended deformation based on joints | | x | x | x | x | x |
| Weight Manager and tools | | x | x | x | x | x |
| Auto weighting | | x | x | x | x | x |
| PoseMorph morphing and hierarchical mixing | | | | | | x |
| Mirror, Naming and Paint Tools | | x | x | x | x | x |
| Weight effector | | x | x | x | x | x |
| VAMP tool for translating weights, morphs, selection, textures, Uvs and vertex maps between different geometry | | | | | | x |

| Character Animation Tools | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
|--|------|-------|-----------------|-----------|-----------|--------|
| Tension tag | | | | | | x |
| Quaternion tag | | | | | | x |
| Point Cache tag | | x | x | x | x | x |
| Muscle deformer | | | | | | x |
| Visual Selector | | | | | | x |
| Hair Simulation and Rendering | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
| Guide-based Hair system | | | | | | x |
| Hair instancing | | | | | | x |
| Feather object | | | | | | x |
| Fur system | | | | | | x |
| Hair styling tools: Move, Scale, Rotate, Brush, Comb, Clump, Curl, Cut, Push, Straighten, Add Guides, Mirror, Set Roots | | | | | | x |
| Hair dynamics | | | | | | x |
| Hair shading system with multiple speculars, texture-defined root and tip colors, and variable transparency, thickness, length, scale, frizz, kink, density, clump, tighten, displace, bend, curl, twist, wave, straighten | | | | | | x |
| Content | Lite | Prime | BodyPaint 3D | Broadcast | Visualize | Studio |
| Essential presets and demo scenes | x | x | x | x | x | x |
| Advanced presets and demo scenes | | | | | | x |
| Broadcast Library, incl. materials, cameras and | | | | x | | x |
| Visualization Library, incl. materials, presets and architectural objects* | | | | | x | x |
| Lite Library, incl. materials, cameras and objects | x | | | | | x |
| Completely reworked Content Library | | x | x | x | x | x |