

# FEATURE COMPARISON CHART ALTIUM DESIGNER 19 VS ALTIUM DESIGNER 18



Feature	Description	AD16	AD17	AD18	AD19
<b>Unified Platform</b>					
DXP (32-bit Design Explorer)	EDA Client / Server platform founded in Protel® 98	✓	✓		
X2 (Enhanced 64-Bit Platform)	64-bit refactored platform founded in 2018			✓	✓
Multithreading	Some areas of the software where multiple software threads are spawned to utilize multiple CPU cores for faster execution.		~	✓	✓
Optimized Renderer	New Native3D™ 2D and 3D PCB engine for high-speed switching between modes and loading and rendering of large, complex designs.			✓	✓
<b>Multi-Board &amp; Rigid-Flex PCB Design</b>					
3D Rigid-Flex Design	Specify multiple layer stacks with flex substrates and bikini coverlay, model the bends/folds in 3D to ensure correct fit.	✓	✓	✓	✓
Multi-Board PCB Design	Combine multiple PCB projects into a high-level assembly, manage electrical interconnects and pin-swaps between them, and model the whole physical assembly in 3D.			✓	✓
Multi-Board Mates	Mate boards and items such as enclosure parts within the multiboard assembly, for accurate linkage, orientation, and alignment.				✓
Optimized Multi-Board clearance and collision checks	Solid model engine allows high-speed collision detection between mechanical and PCBs in the MultiBoard Assembly.			Slow	✓
Multi-Board Any-Angle Sectional Views	Create a cross-section plane that cuts the entire assembly, and rotate on 3-axes for any angled views within the assembly.				✓

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Multi-Board STEP/Parasolid Export	Export your multi-board assembly as a complete STEP assembly or solid model assembly in Parasolid® format, ready to bring into MCAD for efficient collaboration.				✓
Multi-Board Folded Flex support	Folded rigid-flex boards can be added to Multiboard Assemblies in the final folded state for accurate mating, clearance and fit checking.				✓
<b>Advanced PCB Routing</b>					
Optimized ActiveRoute®	Advanced auto-interactive routing engine that speeds the routing task while producing human results.			✓	✓
Advanced Route Glossing	Better trace spreading and cleaner routes enabling easy user editing afterward.				✓
ActiveRoute Length Tune	Single and differential pairs length tuning enabled during ActiveRoute invocation and as a post-process, for faster, more accurate and more artistic high-speed designs.			✓	✓
Glossed Push-and-Shove	Pushing mode now prevents acute angles and messy adjustments to existing routes while generating neat new ones.				✓
Glossed Corner Routing	The interactive router creates “neat” and loop-less optimized routes by default with no rework required.				✓
<b>Advanced Layer Stack Manager</b>					
Primitive Layer Stack Planner	Dialog-based basic stackup planning with no materials library and no via visualization.	✓	✓	✓	
Layer Stack and High Speed Planning	New Layer Stack Planner supporting multiple planning views for Rigid and Flexible stacks, Printed Electronics, Fearless HDI™ and stack symmetries in a sleek user interface.				✓

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2D/3D Layer Stack Visualizer	Display the designed layer stacks in accurately scaled, realistic views in 2 and 3 dimensions, including all through-hole, blind/buried/ back-drilled and $\mu$ Via structures, to get it right the first time.				✓
Advanced Materials Support	Create, import, export, and edit any dielectric, conductor, conductive ink, printed dielectric, films and plating materials for use in any layer stacks.				✓
Impedance Profiles	Field-solver based impedance from width, width from impedance, tolerance rules checking and profile accessible in design rules and routing.				✓
FearlessHDI™	$\mu$ Via, SkipVia, Back-Drills and stacked vias designed in the Layer Stack Manager means you can do full or mixed HDI (High Density Interconnect) with absolute confidence. Via stacks are visualized in Properties.				✓
<b>Components and Supply Chain</b>					
Fast Manufacturer Part Search and Placement	Highly optimized, Octopart®-powered search for components and data. Whenever the symbol and footprint are available you can even place straight into the design or acquire to your own library directly. A unified cockpit for all aspects of component research and selection - All directly within the designer's context, where it is most relevant and actionable with CAD models and supply chain data.			Basic	✓
Unified Components Panel	No matter what libraries or types of libraries, or how many libraries you use, this is a single place where all components can be searched, filtered, and placed into your designs easily.				✓
ActiveBOM®	BOM editing, scrubbing, and supply chain solution ranking tools from which to generate BOM outputs for production.	✓	✓	✓	✓
ActiveBOM® Component Rules and Supply Checking	Interactive supply chain and component rules checking within ActiveBOM ensures every component in the design has a production solution.			✓	✓

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Drive design changes from BOM	ActiveBOM part choices for alternative parts can generate an ECO to drive change back to schematic and PCB.				✓
<b>Output Generation</b>					
Draftsman® Engineering Drawing toolset	Drawing tools for creating comprehensive custom fabrication, assembly and service drawings from the PCB design.	✓	✓	✓	✓
Draftsman Rigid-Flex	Complex layer stack regions can be called out and diagrammed directly.			Partial	✓
Draftsman “realistic view”	Enables photolike rendering in color, alternative camera angles, isometric, and fold states for rigid-flex views.				✓
High speed CAMtastic!® renderer	The CAM editor (gerber, N.C. Drill, ODB++ etc.) editor high-speed render of fabrication outputs for rapid visualization and checking of board manufacturing files.	Slow	Slow	✓	✓
Parallel Processing Output Jobs	Batch output jobs executed in parallel for multi-process and multi-file output package generation.			✓	✓
BOM Report Generator	A new BOM report generator generates to CSV, Tab, XML, Excel (without the need for Excel to be installed).				✓

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