

Compare your PADS configuration to PADS Standard Plus - *Many upgrades result in reduced maintenance!*

	PADS Layout Bundles (upgradable)						PADS Standard Plus	Product Description
<i>X = included</i>	PPCB 060	PPCB 065 / 066	Layout 075	Layout 095	PPCB 100	Layout 125	INCLUDED!	
Design Definition								
xDX Designer 040 <i>- includes PADS Logic</i>	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	X	Key schematic capture functionality, including design rule entry, design navigation, logical reuse, automatic part packaging, electrical rule checking, and cross probing with PADS Layout. NOTE: Licenses include xDX Designer, PADS interface, and dual licensing with PADS Logic. xDX Designer 040 was not included in PADS Logic suites prior to PADS 9.x.
PADS SPICEnet	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.		Netlists to standard SPICE simulators, including Pspice. Not included in PADS Logic suites prior to 9.x.
PADS Logic PDF	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.		Create and share intelligent PDFs of your schematics with anyone. Not included in PADS Logic suites prior to 9.x.
xDX PDF	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.		With xDX PDF, you can make intelligent PDFs of your schematics. Design hierarchy is preserved, nets are cross-referenced, and a search can be performed on any text that is visible in the schematic.
xDX Designer 050	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	N/A	xDX Designer 050 adds front-end concurrency to DxDesigner 040.
Analysis								
HyperLynx Analog	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	X	Easy-to-use, cost-effective, solution for full, board-level analog simulation. All configurations <i>except</i> the PADS Standard Plus require separate purchase of 'EZwave for HyperLynx' (even PADS XE-D which includes bundled analog capabilities).
HyperLynx SI <i>- LineSim</i>	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.		Pre-layout signal integrity analysis. Enables modeling and simulation of complex interconnect scenarios including clock topologies, cross sections, board stackups, termination strategies and maximum trace lengths prior to physical layout. No PCB Layout Interface is required.
HyperLynx SI <i>- BoardSim</i>	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.		Provides post-layout signal integrity simulation directly from PADS Layout to verify that your design performs as expected.
HyperLynx SI <i>- Crosstalk</i>	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.		Provides crosstalk spacing requirements and validation
HyperLynx Thermal for PADS	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.		Allows engineers and PCB designers to analyze board-level thermal problems on placed, partially routed, or fully routed PCB designs. Temperature profiles, gradients, and excess temperature maps enable designers to resolve board and component overheating early in the design process.
Layout & CAM								
Core PCB Layout	X	X	X	X	X	X	X	All PADS configurations contain PCB editing capabilities including manual placement, automatic and interactive routing, unlimited database connections (beginning with 9.0), online and batch design rule checking, rules-based copper pour creation and split planes, default and net-level design rule support for widths, clearances, ECL routing, intelligent attributes, and CAM outputs including DXF and ODB++. Also included are robust dimensioning tools that automatically document the PCB, automatic leader break, radius/diameter dimensions, angle dimensions, and support for user-defined tolerances. All library tools necessary to create, edit, and manage PADS decal footprints, device part types, and drafting objects are included. RF design tools for creating chamfered corners, coplanar/channel wave guides, and advanced via matrixing, as well as the ability to import DXF to create a RF component are also included.
Constraint Management	X	X	X	X	X	X		Spreadsheet-based constraint management system. Automatic assignment of differential pairs. Highlight actual trace length constraints that are in violation, or out of tolerance, of the constraint.
Land Pattern Creator	X	X	X	X	X	X		Parametrically create IPC-standard footprints.
Starter Libraries	X	X	X	X	X	X		Proven, IPC-compliant library including xDX Designer symbols with PADS parts and decals.
Analog Tool Kit w/ Array Placement	Opt.	Opt.	X	Opt.	Opt.	X		Enables automatic and interactive jumper capability, and advanced teardrop and pad filleting controls for high-density single- and double-sided designs. Provides the ability to automatically place components in radial or planar arrays. Includes pattern step and repeat, radial placement grids, array pattern wizards, and additional tools for managing rotated parts and components.

Advanced Rule Set (ARS)	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	X	Required for high-speed routing (HSD). ARS expands the default rule base to include rule settings for layer, class, group, pin pair, and conditional levels. Also enables virtual pins and associated nets and high-speed rules, including differential pairs, min/max length, and matched lengths. Includes PCB layer stack up editor, parasitic verification of capacitance and impedance rules, verification of fast circuit design rules for crosstalk, signal delay, and stub control. Includes the setting of, and adherence to, component entry rules.
Assembly Variants	Opt.	Opt.	X	Opt.	X	X		Create and preview design variants using a simple, table-driven user interface.
Clusterplacement	Opt.	Opt.	X	Opt.	X	X		Includes interactive, semi-automatic, and automatic component grouping and placement. Allows both hard and soft grouping.
Database limitations - # of connections	1500	1500	Unlimited	6250	6250	Unlimited		PADS Standard Plus provides an unlimited connections database for layout. Older, pre-9.0 configuration limitations are shown in the table.
DFF Audit	N/A	X	X	Opt.	X	X		Searches your design for manufacturability problems such as acid traps, soldermask slivers, and silkscreen over pads.
IDF Link	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.		Bi-directional interface to PADS Layout for converting PADS Layout databases to 3D Pro/ENGINEER® (Creo® Parametric) databases, or other mechanical CAD tools that output/input IDF files.
Physical Design Reuse (PDR)	N/A	Opt.	Opt.	Opt.	Opt.	Opt.		PDR enables the designer to capture and store a physical reuse element, including routing, making it ideal for saving and reusing golden circuits and channel-based designs.
CAM Plus	Opt.	X	X	X	X	X		Includes interface filters to pick-and-place and auto-insertion equipment: Dynapert, Universal, Phillips, etc.
New 3D Design with DRC	N/A	N/A	N/A	N/A	N/A	N/A		New 3D design capabilities with DRC, STEP import of component models, mechanical components, and enclosures, and STEP export of the full PCB assembly
Design Archive	N/A	N/A	N/A	N/A	N/A	N/A		Create and manage design archives. View schematic and layout in same UI, with cross-probing. Generate reports to HTML files. Data and graphical comparisons between archives.
Routing								
PADS AutoRouter - layer limitations	2	2	Unlimited	4	4	Unlimited	X	PADS Standard Plus includes a shape-based autorouter with simultaneous, true diagonal routing on unlimited layers. Also included are component fanout, pattern routing, and via optimization. Layer limitations for older configurations are shown in the table.
PADS Router - database limitations	Opt.	Opt.	Unlimited	6250	6250	Unlimited		PADS Standard Plus includes a fast, interactive route editor that is shaped-based and gridless, with unmatched push, shove, and plow features, multiple DRC modes, and trace-editing features.
PADS Router HSD	N/A	Opt.	Opt.	Opt.	Opt.	Opt.		PADS Standard Plus includes interactive high-speed routing aids for differential pairs, min/max lengths, and matched lengths. Also includes any-angle route editor, route length monitor, and visual clearance indicators. Provides unlimited database for PADS Layout.
Other PADS Tools & Options								
PADS AutoRouter HSD	N/A	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Includes 'PADS Router HSD.' Enables batch routing of min/max length, matched length, differential pairs, and tune pass; interactive routing of differential pairs; and the addition of accordions. NOTE: Requires purchase of the ARS option (included in PADS Std Plus).
Advanced Packaging Toolkit	N/A	Opt.	Opt.	Opt.	Opt.	Opt.		Enables automated, any-angle BGA package routing, including automatic connection generation and substrate array pad fanout with plating tail capability. Includes a Die and Die Flag Wizard. Imports GDSII files for die part construction, with GDSII file preview capability. Supports laminate-based multi-chip modules and chip on board. NOTE: Requires purchase of the PADS Router (included in PADS Std Plus).
Chip on Board Toolkit	N/A	Opt.	Opt.	Opt.	Opt.	Opt.		This subset of the Advanced Packaging Toolkit offers scalable functionality for bare-die design needs, including a die wizard, wire bond wizard, and report generation. NOTE: Requires purchase of the PADS Router (included in PADS Std Plus).
Enhanced DFT Audit	N/A	Opt.	Opt.	Opt.	Opt.	Opt.		Audit PCB testability during the design process with DFT Audit, a set of embedded tools developed for programming in-circuit test equipment. DFT Audit provides automated database updates for test point insertion and preservation, enabling the test engineer to evaluate and optimize PCB testability based on user-defined test strategies. DFT Audit also includes testpoint autorouting for optimal testpoint insertion.
DFM Analysis	N/A	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Based on Valor® NPI, DFMA enables PCB design teams to validate manufacturability directly from within the PADS environment. DFM Analysis incorporates more than 100 of the most valuable fabrication- and assembly-related analyses.
ECAD-MCAD Collaborator	N/A	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Tightly integrated with PADS, Mentor Graphics' ECAD-MCAD Collaborator communicates with MCAD systems via the ProSTEP standard and protocol for EDMD (electrical design - mechanical design).