



CADSTAR P.R.Editor XR

D A T A S H E E T

Refined Technology

Zuken has been at the forefront of routing technology for over two decades. From this expertise, and by listening to our customers, we have been able to create the best place and routing products on the market today.

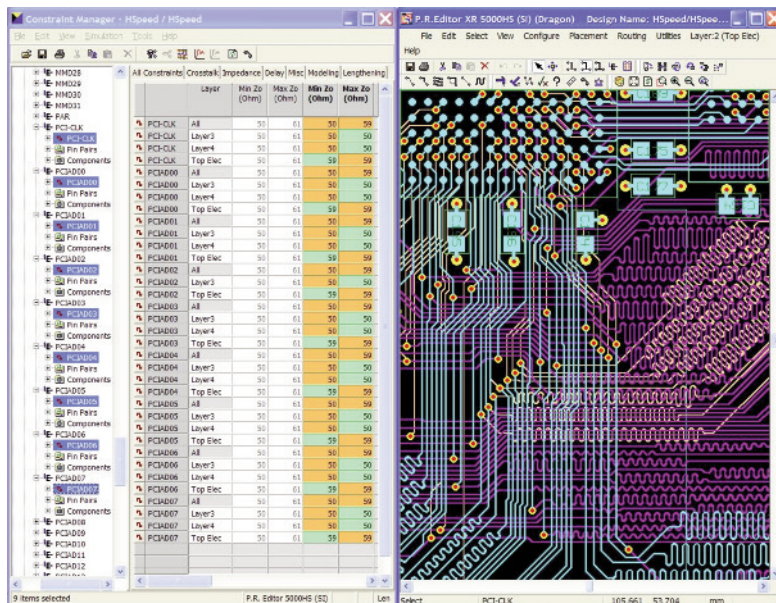
A combination of the world's first graphical grid-free routing algorithm technology refined and optimized to deliver 100% routing completion, CADSTAR Place & Route Editor XR will significantly reduce your design cycle time and increase your productivity.

CADSTAR P.R.Editor XR

The manual, interactive and automatic component placement and routing capabilities of P.R.Editor XR have led the world for many years. With outstanding performance, completion and most importantly manufacturability of the final design, P.R.Editor XR is unparalleled in the market.

BENEFITS

- produces high-speed designs right first time
- copes with the highest density designs currently manufactured
- components can be placed in their optimal, error-free locations using advanced placement indicators
- routing tasks on the most complex designs are significantly reduced, saving time and eliminating errors
- allows complete constraints management to be obtained with definition from either the schematic and/or PCB design stage



Angle-free, Grid-free

With a spacial, angle-free, grid-free architecture and a 1/100th Micron resolution database combined with a 255 layer capability, CADSTAR P.R.Editor XR is able to cope with the highest density designs currently manufactured.

Interactive and Manual Placement

Components can be placed in their optimal, error-free locations using advanced placement indicators. On dense designs, components can automatically be pushed aside.

Routing Combination with Power and Control

Critical areas of a design can be partially or fully manually routed. Allowing Pin Swap on the fly to optimize the routing pattern, you can view automatic routing in progress and easily make interactive changes by interrupting the program at any time, then allow the automatic routines to complete the task.

Manufacturing Considerations

Smoothing routines, which include via minimization and staircase removal, optimize routing for high-yield manufacturing. Track necking and fattening combine to automatically produce the maximum possible copper widths on specified nets, teardrop on pads and vias, while acid trap removal and corner mitring functions further improve manufacturability.

A Toolset for All Jobs

A range of special innovative algorithms, such as river routing, data bus pattern routing, memory routing and minimum impact routing, have been created to reduce the routing task on the most complex designs.

Breakout Patterns

Using the Footprint option, fan-out and fan-in footprint patterns can be created and stored for use on the finest pitch devices, saving space and allowing higher completion rates for the automatic router.

Testpoint Analysis

Either during routing or on the completed design, testpoints can be inserted using SMT or through-hole testpoints. You have fine control over the type of testpoint to be used, the side or sides it occupies and whether it is inserted automatically during routing or as a post-routing task. Testpoint insertions are performed by using the push-aside technology, together with intelligence, so if a pad or via is designated 'no probe' points the automatic routines will insert a new test point site.

Activ-45 Routing

Using the latest true 45 degree routing algorithm, Activ-45 is a single click, error free 45 degree auto completing interactive routing tool. With a single click, the route is effortlessly guided by the user, through the densest areas of a design, creating true error-free 45 degree routing patterns.

High-speed Routing

High-speed designs place a new set of demands on the PCB CAD systems. With CADSTAR P.R.Editor XR high-speed options, you have the capability to construct right-first-time designs using constraints imposed under your total control.

Fast-circuit Rules

The CADSTAR P.R.Editor XR HS obeys a wide range of fast-circuit rules, including net and branch ordering, zero or controlled stub-lengths, matched, minimum and maximum length/delay constraints, and maximum multilayer crosstalk limits.

CADSTAR P.R.Editor XR provides special algorithms to manage the requirements of differential pairs and automatic signal shielding tools. Automatic shields may be created across single or multiple layers using nominated signals. Routing constraints specified up front, are inherited by CADSTAR P.R.Editor XR, or rules may be added and modified within the integrated Constraint Manager.

Route Shielding

Differential pairs definition, critical route shielding, daisy chain routes, pin branch and pin length/delay routing are all available in these high-speed options, allowing complete constraints management to be obtained with definition from either the schematic and/or PCB design stage. All constraints are passed through each process automatically, even when ECOs are specified.

More

CADSTAR is a fully featured PCB Design System renown for its excellent price-performance ratio. From simple single-sided through-hole designs to multi-layer, surface mount, high-speed digital and analogue designs, CADSTAR is capable of designing today's most demanding Printed Circuit Boards. From schematics, board- and FPGA level system design, PCB layout, high-speed and signal integrity, analysis, 3D, creation of manufacturing output, to complete data management capabilities and extensive internet-accessible libraries containing over 200,000 components, CADSTAR provides you with all technologies necessary for a complete electronic development process in one environment.

For more information on all the tools and solutions available with CADSTAR, please visit www.zuken.com/CADSTAR

Feature	Standalone 5000 Series		Standalone 2000 Series					Embedded	
	XR-5000HS Standalone	XR-5000 Standalone	XR-2000HS Standalone	XR-2000S Standalone	XR-2000 Standalone	XR-2000 L4/L6 Standalone	Interactive Standalone	XR-2000 Embedded	Interactive Embedded
General Routing									
Via stack inside SMD Pad	✓	✓							
Interactive change width tool (fattening/necking)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Memory router	✓	✓	✓	✓	✓	✓	✓	✓	✓
River router	✓	✓	✓	✓	✓	✓		✓	
Bus routing (automatic & manual)	✓	✓	✓	✓	✓	✓		✓	
On-line DRC	✓	✓	✓	✓	✓	✓	✓	✓	✓
Copper pour	✓	✓	✓	✓	✓	✓	✓	✓	✓
Teardrops	✓	✓	✓	✓	✓	✓	✓		
Variants	✓	✓	✓	✓	✓	✓	✓		
Routability analyzer	✓	✓	✓	✓	✓	✓	✓		
Scripting	✓	✓	✓	✓	✓	✓	✓		
General Placement									
Component move & rotate	✓	✓	✓	✓	✓	✓	✓		
Component swap	✓	✓	✓	✓	✓	✓	✓		
Align components	✓	✓	✓	✓	✓	✓	✓		
Minimum force indicators	✓	✓	✓	✓	✓	✓			
On-line DRC	✓	✓	✓	✓	✓	✓	✓		
Gridded placement	✓	✓	✓	✓	✓	✓	✓		
Advance Placement									
Interactive component push-aside	✓	✓	✓	✓	✓	✓	✓		
Componet spring-back	✓	✓	✓	✓	✓	✓			