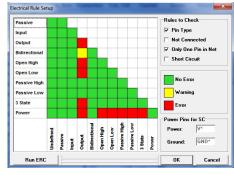
DipTrace environment consists of 4 modules: Schematic Capture, PCB Layout with autorouter and 3D, Component editor and Pattern editor.

# DRC (DESIGN RULES CHECK)

We are convinced, that precise verification of design should be one of the main features of quality PCB Design environment. DipTrace won't give you a chance to make an error, if you will follow all verification procedures. In Schematic Capture module Electric Rule Check (ERC) is



DRC - Error				X
Layer:	All Layers	-		
Pad IC2: Pad IC2: Pad IC2: StaticVia StaticVia Drill - D0 Drill - 3V VIA13 - 1 Drill - D0	13 - D0 (L=0 14 - D0 (L=-1 15 - D0 (L=-0 15 - D0 (L=-0 15 - D0 (L=- 15 - 3V3 (L=- 1 (L=-0,149 m 3 (L=-0,136 00 (L=-0,136 (L=-0,061 m	,152 mm; Rule ,152 mm; Rule ,149 mm; Rule ,173 mm; Rule ,198 mm; Rule 0,403 mm; Rule -0,18 mm; Rule -0,18 mm; Rule -0,21 m; Rule=0,2 m; Rule=0,2 m; Rule=0,2	≥=0,2 mm) e=0,2 mm) ≥=0,2 mm) ≥=0,2 mm) te=0,2 mm) te=0,2 mm) te=0,2 mm) nm) 2 mm) tm)	E
3V3 - D0 3V3 - D0 3V3 - D3 3V3 - D3 3V3 - D0	(L=0,092 m) (L=0,091 m) (L=0,03 mm (L=0,204 m)	mm; Rule=0,2 n; Rule=0,2 m n; Rule=0,2 m ; Rule=0,2 mm; Rule=0,2 m m; Rule=0,2 mm)	m) m) )) nm)	-
Run			Localize	Close

availableand has detailed settings of what will be considered as an error. Hierarchy is checked by special verification. In PCB Layout DRC (Design Rules Check) is conducted. It can use Classto-Class Rules. User can define sizes of holes and clearances between different objects on the different layers. List of errors is convenient and understandable.

### CHECK NET CONNECTIVITY

It's another key verification procedure, checking if all nets are connected and reports all isolated copper pour areas.

# Compare to Schematic

This verification checks if the PCB project corresponds to source schematic. It shows all net structure errors and unknown components.

#### MANUFACTURING OUTPUT

Post processing is quick. DipTrace supports number of professional manufacturing formats. You can produce RS-274X Gerber and N/C Drill files, which are accepted by manufacturers. Dip-Trace supports export of true-type fonts and raster images. DXF output is also available.

# Production with milling method is supported

### **IMPORT/EXPORT**

DipTrace allows you to exchange schematics, layouts and libraries with other EDA and CAD packages (DXF, Eagle, P-CAD, PADS, OrCAD). You can import and export Accel, Allegro, Mentor, PADS, P-CAD, Protel and Tango netlist formats.

# **3D PREVIEW**

DipTrace gives wonderful opportunity to see in 3D, how your board is going to look like after manufacturing, with all the patterns installed. You can rotate, zoom in and out, change colors in real time. 3D Preview module with hardware acceleration supports .vrml and .3ds models. More then 2,500 3D models are included for free in 2.2 version of DipTrace.





# DIPTRACE - ADVANCED PCB DESIGN ENVIRONMENT EASY AND PROFESSIONAL

You need to design a complex multilayer printed circuit board with thousands of pins or just a simple single-sided PCB? You don't want to spend hours, learning new software, or pay sky-high prices for products with functions you won't ever use? All you need is a correct PCB design tool – DipTrace.

### FRIENDLY AND RELIABLE

DipTrace is an advanced, state of the art PCB Design environment, satisfying the most strict requirements of nowadays. It's easy-to-use, reliable, but has lots of features, never seen in mediumlevel products before.

After switching to Dip-Trace you won't need any extensive trainings or reading tons of books. Usually customers become productive within hours and enjoy

simplicity and functionality of DipTrace. PCB tutorial, included in the package, helps to get familiar with basic opportunities of the software and contains detailed instructions to create a simple board. The design process can be speeded up with number of hot keys for all cases.

#### **EXPANDING YOUR OPPORTUNITIES**

Intuitive user interface and simplicity of design environment doesn't mean it lacks functionality. Multi-sheet and Hierarchical schematics, cross-probing between Schematic and PCB, high-speed autorouter, advanced manual routing, blind/ buried vias, multiple verification features. real time 3D PCB preview, wide import/ export possibilities, 100,000+ packages in libraries and others will help both professionals and hobbyists to achive even most complicated tasks in short terms with this software tool. DipTrace is able to offer everything you need to create the PCB from idea to the state of ready manufacturing files. It is packed with features, vou will enjoy. DipTrace delivers wonderfull performance you need, for affordable price.

Since 2004, when the first version of DipTrace was released, developers are following key principles: DipTrace Soft-

ware package consists of Schematic capture module, PCB Layout, Component editor, Pattern editor, Shapebased autorouter, 3D PCB Preview. Developers continue to expand capabilities of the

product and continuously work to make the environment even more friendly to you.

DipTrace is always up-to-date and changes with the improvements in production technologies. Hence, you can be sure, that your investment in the product will work on you.

DIPTRACE - PCB DESIGN WITH PLEASURE

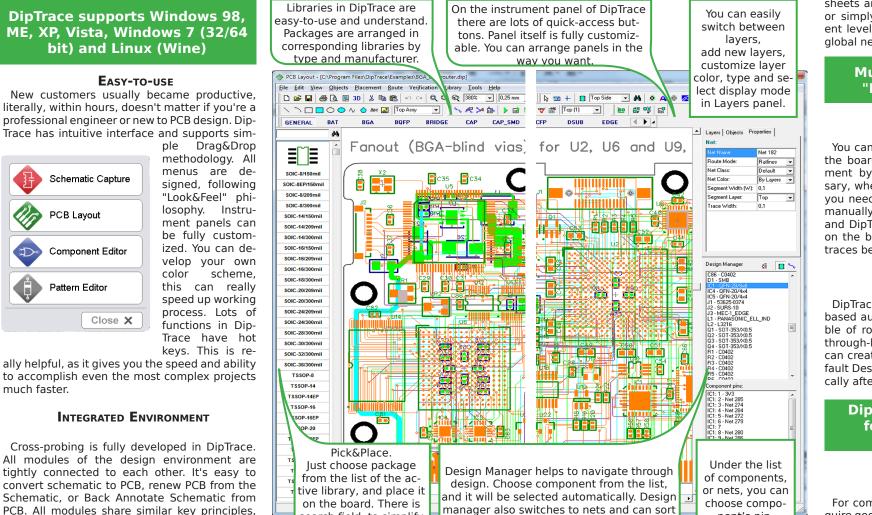
- User friendly, intuitive interface

PROFESSIONALS AND CASUAL USERS

- WIDE RANGE OF CAPABILITIES

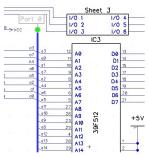
COMMITMENT TO THE FUTURE

**P**RODUCT IS FOR BOTH,



## **SMART PROJECT STRUCTURE**

DipTrace is convenient not only for design-



so you won't be confused.

ing simple, but also very complex projects. Nets in DipTrace can be divided by net classes. User can specify different parameters for different net classes: trace width. clearance, trace length limits e.t.c. You can set Classto-class rules, which have priority over other class clearances. Net classes from Schematic are automatically transferred to PCB Layout. "Via Styles" is the feature, organizing work with vias. Change in the parameters of via style automatically changes all vias of this style.

search field, to simplify

this process.

In DipTrace you can save design rules from one project, to use it with another. So you don't have to create all the Layers, Net Classes, Via Styles again. Design rules can be loaded from any PCB project, or from separate \*.rul file.

#### MULTI-LEVEL HIERARCHY

DipTrace features multi-sheet, multi-level hierarchy in the schematic capture module. This allows you to draw even most complicated boards easily. Hierarchy in DipTrace is simple and logical, but gives wonderful abilities to user. Sheets

Making PCB from Schematic Use Schematic Rules Use Rules and Settings from Previous Layout Browse ΠK Cancel

in the Schematic are converted to hierarchy blocks and can be inserted into the main sheet, or into each other as much needed. times, as Nets on different

nent's pin.

sheets are connected with bus ports, net ports, or simply by name. To connect nets on different levels of hierarchy in DipTrace you can use global nets.

# Multi-level Undo/Redo and "Recover Board" feature

## **PLACEMENT FEATURES**

You can arrange components inside or outside the board outline for convenience, use "Placement by list" feature, which becomes necessary, when you have hundreds of packages, but you need to find one and place it on the board manually. However, you can use Auto-placement and DipTrace will automatically place packages on the board with optimized distance of future traces between them.

#### **HIGH-SPEED AUTOROUTER**

DipTrace has a high-speed built-in Shapebased autorouter with advanced settings, capable of routing complex multi-layer boards with through-hole and Blind/Buried vias. Autorouter can create fanouts for SMD components. By default Design Rules Check is conducted automatically after autorouting.

**DipTrace supports true-type** fonts and raster images for PCB silkscreen

# MANUAL ROUTING

For complex projects lots of PCB designers require good manual routing tools, which are avail-

able in DipTrace PCB Lavout. Routing nets manually is fast and convenient with 45, 90 degrees angles, arcs and curves modes. DipTrace can highlight only the current net, this makes manual routina

much more easier. Hot keys for each action helps to work very fast.

anual Routing:		
Net Class (C):	Default 🚽	
Route Mode (M):	All Segment 👻	
Current Segment (S):	••••	
Segment Width (W):	By Class	
Segment Layer (L):	Тор (1) 💌	
Via Style (V):	Auto 👻	
Angle Step (A):	30 degree 🖵	
Highlight Net (H):	Current Net 👻	
l Inda (	TD I	

Layers Objects Properties

components, if changes have been made.

SAVE/LOAD DESIGN RULES