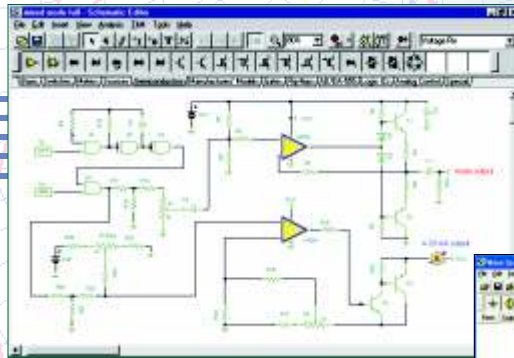


# TINA

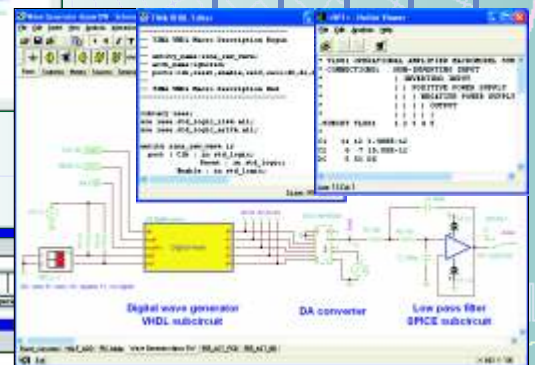
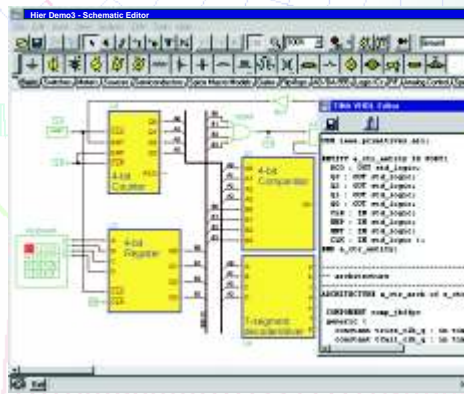
The Complete Electronics Lab

Design Suite

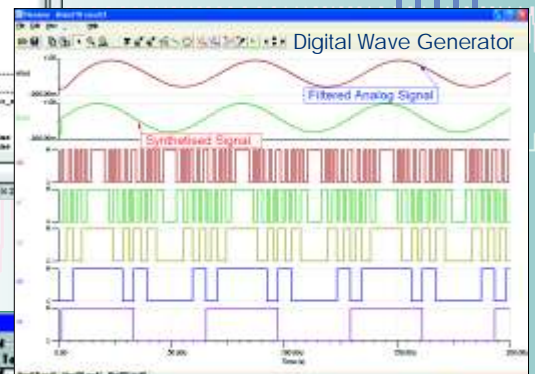
Analog, RF, Digital  
VHDL, Symbolic  
and Mixed Mode  
Circuit Analysis



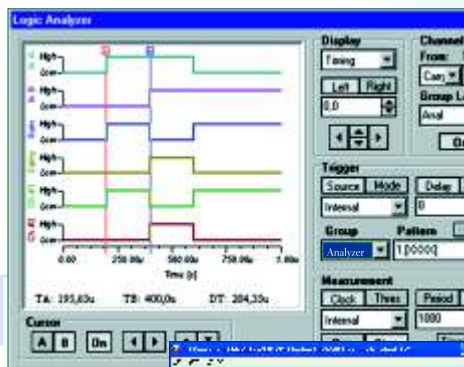
Spice  
S-parameter  
VHDL and MCU  
Components



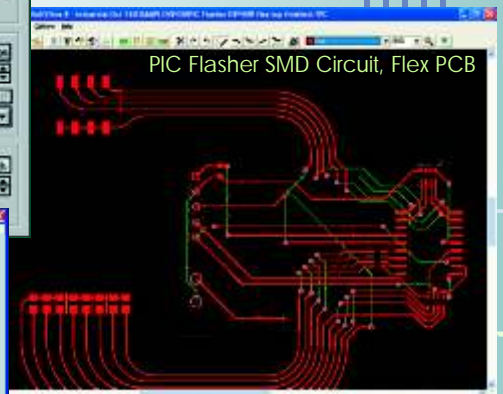
Live Presentation  
Multimedia Parts  
Advanced Diagrams  
Virtual Instruments



Real-time  
Measurements  
LabVIEW Interface  
Upload to FPGAs



Integrated  
PCB Layout Design  
with 3D view

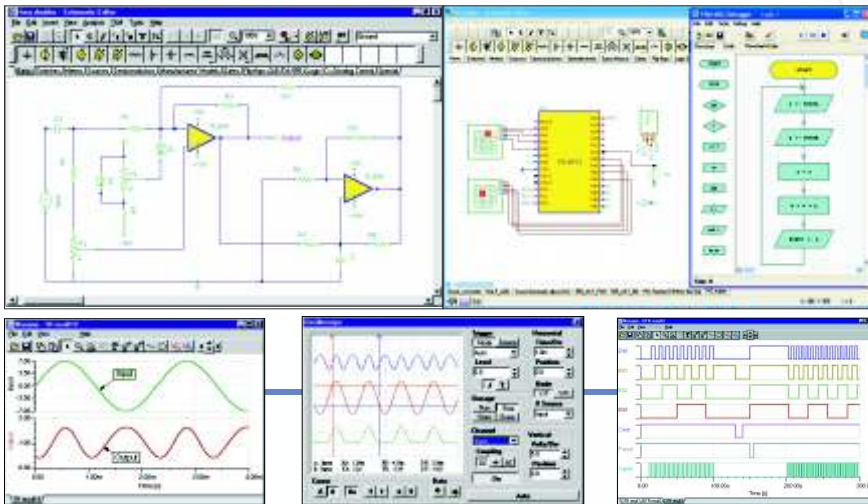


# TINA

## The Complete Electronics Lab

## Design Suite

TINA Design Suite is a powerful yet affordable software package for analyzing, designing, and real time testing of analog, digital, VHDL, MCU, and mixed electronic circuits and their PCB layouts. You can also analyze SMPS, RF, communication, and optoelectronic circuits; generate and debug MCU code using the integrated flowchart tool; and test microcontroller applications in a mixed circuit environment. A unique feature of TINA is that you can bring your circuit to life with the optional USB controlled TINALab II hardware, which turns your computer into a powerful, multifunction T&M instrument. Electrical engineers will find TINA an easy to use, high performance tool, while educators will welcome its unique features for the training environment.

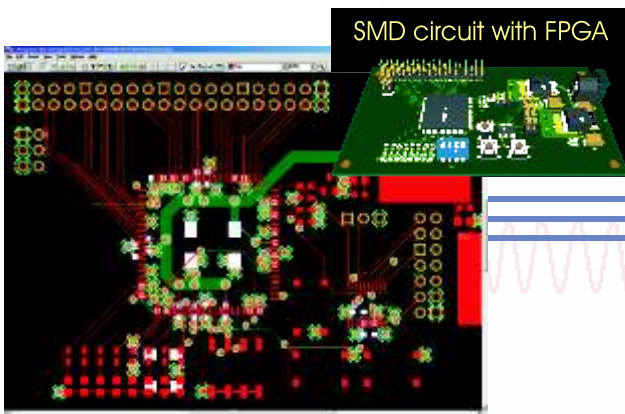
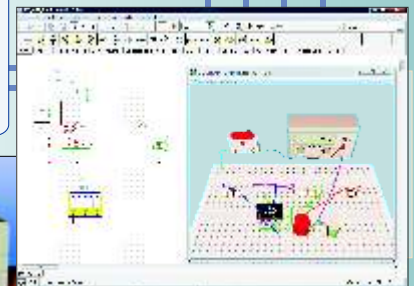


Enter circuits within minutes with TINA's easy to use schematic editor, or use the integrated logic, filter design, and finite state machine tools to create the schematic or generate VHDL code. Using the Live 3D Breadboard tool in TINA, you can automatically build and test your circuit on a life-like animated 3D virtual bread-board. Choose components from the large extendable library containing more than 20,000 manufacturer models, or create new TINA components from any Spice, VHDL or S-parameter models. Analyze your circuit using more than 20 different analysis modes or with 10 high tech virtual instruments. Present your results with sophisticated diagrams, on virtual instruments, or in TINA live interactive mode, where you can even run, test and debug microprocessor & microcontroller applications.

Plug the USB controlled TINALab II hardware instrument into your laptop or desktop and use simulation and real time testing simultaneously in the same environment throughout the whole lab project or development process. Make stand-out reports and presentations of schematic diagrams, annotations, formulas provided by symbolic analysis, Bode plots, Nyquist diagrams, polar- and Smith-diagrams, poles and zeros, transient responses, digital waveforms, and other data, whether they come from simulation or from real time measurements. Customize presentations using TINA's advanced drawing tools to control text, fonts, axes, line width, and color. Analyze circuit performance using the powerful post-processor to apply mathematical functions to TINA's results, or build your own virtual instruments using TINA's LabVIEW™ interface.

### TINALab II Multifunction PC Instrument

### TINALab II



Create multilayer PCB layouts of your circuits by a single mouse click with automatically placed and routed components. All components in TINA are "PCB-ready" and have associated footprints which you can review and change on a component spreadsheet. You can also use TINA's unique 3D capability to view the physical parts already on the schematic diagram. TINA's fully integrated layout module has all the features you need for advanced PCB design, including powerful autoplacement & autorouting, manual and "follow-me" trace placement, tools for flexible PCB design, DRC, forward/back annotation, pin/gate swapping, keep-in/out areas, thermal relief, fanout, plane layers, Gerber file output, 3D view and much more.

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