



# Synopsys FPGA Express Information

## Guide Overview

### Device Architecture Support

<b>FPGA</b>	XC3000(A, L) XC4000(EX, XL, XV, XLA) Virtex Spartan Spartan-XL	XC4000(E, L) XC5000 XC9000 XC9000XL
<b>CPLD</b>	XC9500 and XC9500XL	

### Recommended Settings

Please refer to your A1.5 software installation and the examples:

`.synopsys_dc.setup`  
`.synopsys_vss.setup`  
and the runscript files in  
`$XILINX/synopsys/examples`

### Xilinx Contacts and Technical Support

World Wide Web:  
<http://www.xilinx.com>

North America 1-800-255-7778 hotline@xilinx.com	France 33 1-3463-0100 frhelp@xilinx.com
United Kingdom 44 1932-820821 ukhelp@xilinx.com	Japan 81 3-3297-9163 jhotline@xilinx.com

### Synopsys Contacts and Technical Support

World Wide Web:  
<http://www.synopsys.com>  
United States  
1-800-245-8005  
support\_center@synopsys.com

#### 1 Create a project

Go to menu **File**→**New** and define a new project. All HDL files processed by FPGA Express must be done through a project.

#### 2 Add HDL files to project and analyze HDL files

After creating project, HDL design files can be added to the project. After adding the HDL design files, FPGA *Express* will automatically analyze the HDL files.

#### 3 Implement the design

Select the top-level module/entity in the **Design Sources** window and the **implement** button will be highlighted. Click on the **implement** button and specify the target **die**, **speed grade** and **package**. Strategies for synthesis can be specified during implementation.

#### 4 Enter constraints

In the **Chips** window, select the **implementation**. Right-click on the selected implementation and select **Edit Constraints**. A window will appear where various constraints can be edited. After entering constraints, save constraints by closing the constraints window.

#### 5 Optimize the design

Click on the **optimize** button located next to the **implement** button to synthesize the design OR select the menu **Synthesis**→**Optimize Chip**

#### 6 Place&Route an XNF file with A1.5

After optimization, write out the XNF file by clicking on the **Export Netlist** button next to the **implement** button. **Place and Route** the XNF file using A1.5 implementation tools with the Design Manager GUI or DOS shell based commands.