

# A-Z80 Quick Start

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Windows setup; download and install the following tools:

**Altera/Intel Quartus II Web Edition:** <https://fpgasoftware.intel.com> OR

**Xilinx ISE Webpack:** <https://xilinx.com/products/design-tools/ise-design-suite.html> OR

**Lattice ICECube** toolchain from Synopsys.

For Altera DE1 board, the latest free version that supported Cyclone II was Quartus 13.0 SP1.

Download *ModelSim* from the same Altera/Intel site.

Python 3.5 (or newer): <https://www.python.org/downloads>

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## *How do I add A-Z80 sources to my Z80-based project?*

Run Python script “cpu/export.py” which will export all core CPU files to a directory of your choice. Then, add those files to your project. Instantiate a CPU using “z80\_top\_direct\_n” module declared in the “z80\_top\_direct\_n.v” file.

Note for the users of Lattice FPGA toolset: instead of “data\_pins.v”, manually copy and use “data\_pins\_lattice.v file” instead.

## *How do I setup my Altera DE1 board to run Sinclair ZX Spectrum?*

Flash the supporting ZX Spectrum combined ROM binary file (“host/zxspectrum\_de1/rom/combined.rom”) into the board’s flash memory starting at the address 0. Use “DE1\_ControlPanel.exe” utility from your DE1 CD disk (which you can also download from the Terasic’s site).

In Quartus: open, compile and flash “host/zxspectrum\_de1/zxspectrum\_de1.qpf” project. Connect VGA, PS/2 keyboard and line-in to load Spectrum programs. Plug in a set of earphones to Line-out.

Select from thousands of ZX Spectrum games and load them by using *Baltazar Studios’ PlayZX* app which can be found on Google Play store.

## *Still stuck?*

Read the full *User’s Guide*.

Visit <https://baltazarstudios.com>, post a question and/or send me an email.

In any case – I would like to hear from you --

Hope you have fun using it as much as I had fun creating it!

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