

Have you ever felt frustrated with excessive complexity (and price) of current fpga development boards?

Too many peripherals rarely, if ever, used?

Too few free pins available for your custom plug-in?

Not convenient (to say the least) connector where to connect your custom plug-in?

Not flexible on board power supply distribution?

Now SIMPlugIN- 6XL45 development board offers you Xilinx Spartan6 LX45 with...

- Flexible and convenient power supply.
 - o For EACH bank the user can set a choice of either fixed 3.3 volt or a custom VCCIO that the user can set to 3.3 , 2.5 , 1.8 , 1.5 or 1.2 volt or even to a custom voltage (just changing a single resistor)
 - o plug-in boards can get power from SIMPlugIN- 6XL45 base board:
 - up to 2 A of fixed 3.3 volt
 - up to 3 A of custom VCCIO
 - o Note: both 2A and 3A are available SIMULTANEOUSLY.
 - o All supply currents can be monitored using external ammeter(s).
 - o 5 volt DC input with failsafe operation
 - Reverse input protected (down to minus 18 volt)
 - Overvoltage protected (up to 18 volt)
- 180 fpga I/O pins available to the user in convenient connectors
 - o Standard 0.10" (2.54 mm) pitch square pin headers
 - o Nine 2x17 male pin connector with 20 x fpga I/O pins, 6 x GND pins , 6 x Vcc pins plus fixed 3.3 volt (one pin) and 5 volt (one pin).
- On board DDR2 memory: 64Mx16 (128 Mbytes)
- On board configuration memory: 8 Mbytes SPI flash memory with plenty of spare capacity (more than 6 Mbytes) for embedded processor firmware.
- Two on-socket oscillators that can be easily changed by the user.
- Console: on board serial console connected to host PC with just a common USB cable.
- 4 x user led + 4 x micro switch
- Programming: fpga and SPI configuration memory can be programmed using either of two possibilities
 - o Optional low cost SIMPlugIN-program kit specifically designed for SIMPlugIN family.
 - o Standard JTAG or SPI programmer using on board standard connectors.

Also included in the SIMPlugIN- 6XL45 kit:

- Cable for easy connection to laboratory power supply (useful when debugging custom plug-in with possible short circuits where precise, case by case, current limiting is necessary). For recommended optional wall mount power supply see bellow.
- Web page from which to download complete manual and sample files

Recommended accessories (to be purchased separately):

- Power supply: 5 volt, 15 watt, wall mount, international multi plug and multi voltage, output with 2.1mm I.D. x 5.5mm O.D. x 9.5mm female cord plug
- SIMPlugIN-program: that allows programming of both JTAG (FPGA) and SPI (memory).

Other plug-in boards from SIMPlugIN family from Nabla Designs (to be purchased separately):

- SIMPlugIN-DIGIT : with 2 x hex display (7 segment display) + 4 micro switches
- SIMPlugIN-ETHERNET 100 : with 10/100 Ethernet phy chip.
- SIMPlugIN-USB : with USB device transceiver chip
- SIMPlugIN-PROT : prototyping board with perforated 0.10" grid and two sided plated holes
- SIMPlugIN-VIDEO : video DAC to be able to implement VGA video output.
- SIMPlugIN-LED : 20 x test point plus 20 x led (both red and green led for each test point)
- SIMPlugIN- SD : SD card slot
- SIMPlugIN- SERIAL : 1 x RS232 plus 2 x RS485 (the three interfaces can be used simultaneously).