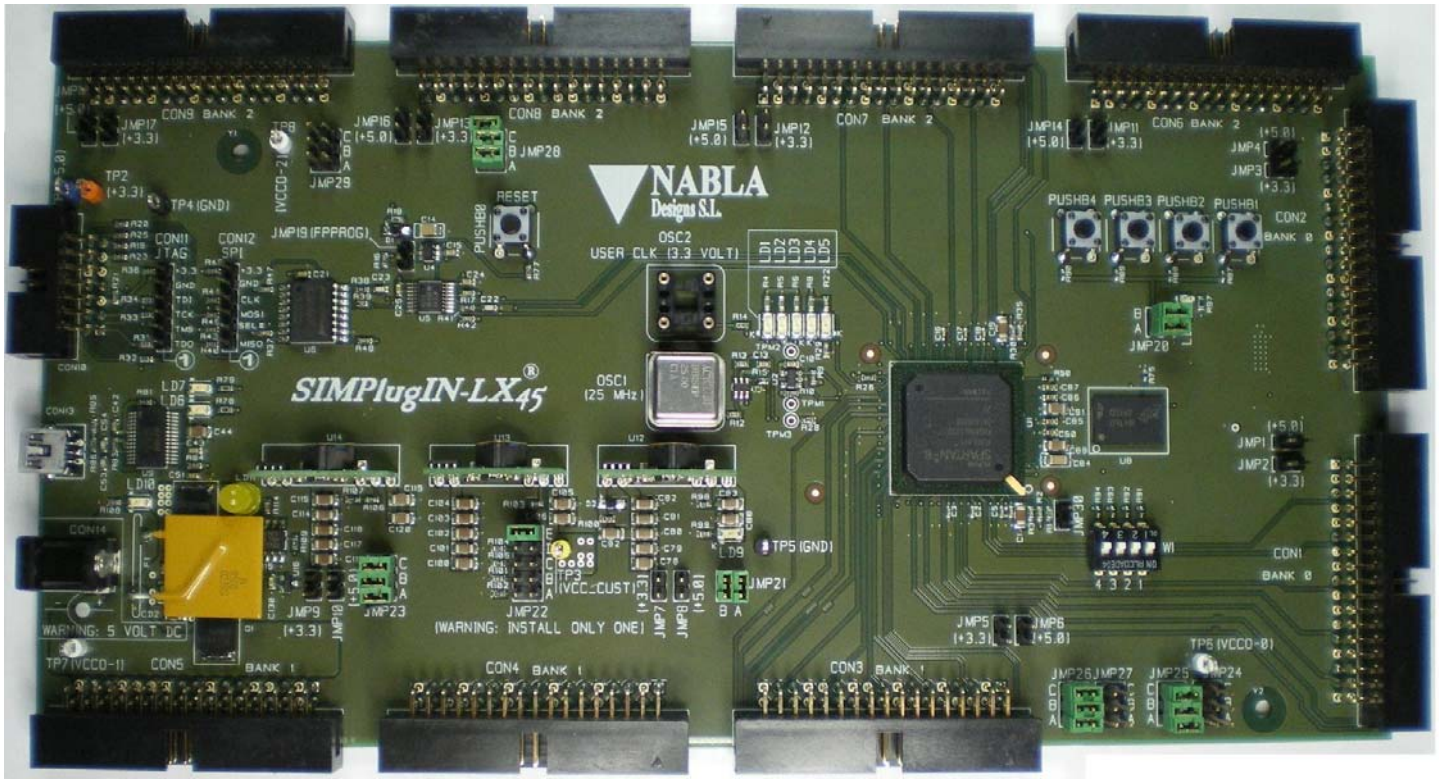
SIMPlugIN family overview



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?

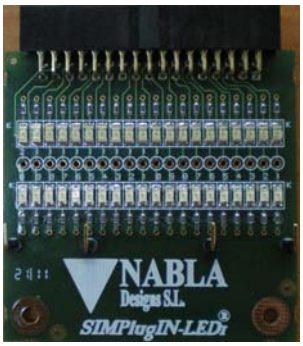
Now SIMPlugIN- 6XL45 development board offers you Xilinx Spartan6 LX45 with…

- **Flexible and convenient power supply**.
  - 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)
  - 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

      Note: both 2A and 3A are available SIMULTANEOUSLY.
  - All supply currents can be monitored using external ammeter(s).
  - **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**
  - Standard 0.10" (2.54 mm) pitch square pin headers
  - 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 USB 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
  - Optional low cost SIMPlugIN-program kit specifically designed for SIMPlugIN family.
  - Standard JTAG or SPI programmer using on board standard connectors.

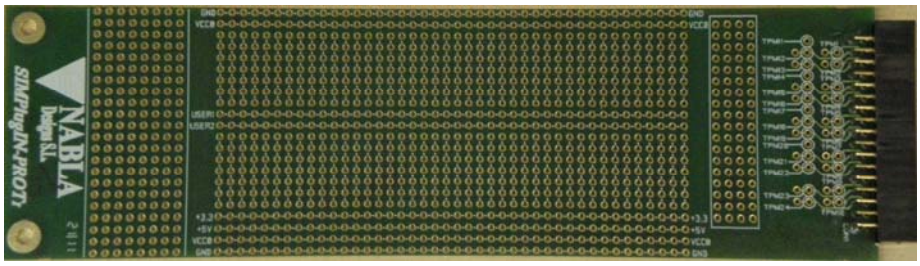
Ample choice of SIMPlugIN add-on boards **(see next page)**

SIMPlugIN-DIGIT
- 2 hex digit displays
- 4 switches
- 20 test-points



SIMPlugIN-LED
- 20 red leds (when 0 logic level)
- 20 green leds (when 1 logic level)
- 20 test-points

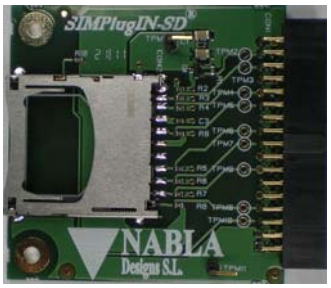
SIMPlugIN-SERIAL
- 1 complete RS232 port
- 2 RS485 ports (or 1 RS422 port)
- simultanous operation of all ports
- Testpoints for all relevant signals



SIMPlugIN-PROTOTYPING
- high quality two sided plated holes
- tracks with power supply distribution
- ample user areas

SIMPlugIN-ETHER100
- Ethernet 100Mbit / 10 Mbit
- test-points for all relevant signals

SIMPlugIN-USB
- USB full speed (12 Mbit) USB 2.0
- test-points for all relevant signals



SIMPlugIN-SD
- SD card slot
- test-points for all relevant signals

SIMPlugIN-VIDEO
- high speed, 10 bit, triple video DAC
- complete VGA port
- also composite video
- also general purpose triple DAC
- test points for all relevant signals

SIMPlugIN-PROGRAMMER
- JTAG programming
- SPI programming
- simple USB interface (software included with the board)

Note: photos shown on different scales