FPGA C

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FPGA C (or fpgac) is a compiler for a simple hardware description language [1]. It takes a program written in a subset of the C programming language, and produces a circuit that will implement the program. The circuit is intended for FPGAs, CPLDs or even ASICs. This manual describes version 4.2 of fpgac

FPGA C sources and documentation are derived from TMCC by Dave Galloway, Department of Electrical and Computer Engineering, University of Toronto, who did this great pioneering work in support of the Transmogrifier projects.

Example

Here is a simple fpgac program that makes the 8 LEDs on the Xilinx 4000 demo board count up:

```
main() {
    char lights, count;

#pragma outputport(lights, 60, 59, 58, 57, 66, 65, 62, 61);

    count = 0;
    while(1) {
        count = count + 1;
        lights = ~count;
    }
}
```

The **#pragma outputport**

If you just want to see the xnf output, and not run the vendor tool chain, use the -S flag.The optional -ppartname flag can be used t

```
PIN, O, O, CLK
END
EXT, FPSCLK, I
SYM, STARTUP, STARTUP
PIN, CLK, I, CLK
END
```

If you want to use a name other than CLK for the clock source, use the -cYOURCLOCKNAME option. A simple -c option will leave t

may halt, or start executing code from two dif