

21-bit Soft FPGA-Based Custom Processor

Registers:

- 5 General Purpose Registers (21 bits)
- 1 Control Register (15 bits)
- 1 Stack Pointer Register (21 bits)

ALU Operations:

- ADD
- SUB
- Mult
- Div
- And
- Xor
- Or
- 1's Complement
- Mov
- Inc
- Dec
- Push
- Pop
- RLS
- LLS

CPU Organisation:

- General Register Organisation:
3 operands – 2 operands
- Single Accumulator Organisation:
single operand
- Stack-Based Organisation:
None operands

Instruction Format:

