**Sipeed TANG Primer RISC-V FPGA Development Board**

**Sipeed’ s TANG is an FPGA Development Board features Anlogic EG4S20 FPGA**

TANG features Anlogic EG4S20 FPGA which run a RISC-V softcore, and all is packaged in a small form factor. It can be used for applications like machine vision processing, parallel computing acceleration or just for learning/debugging/researching of soft cores such as RISC-V. EG4S20 has a 20K logic unit (LUT4/LUT5 hybrid architecture), about 130KB SRAM, built-in 32-bit 64M SDRAM, rich LVDS pin, built-in 12-bit 1MSPS ADC. The FPGA can also emulate “Hummingbird E200/E203 RISC-V core” to help people get familiar with the open source MCU.

**Features**

* Core unit: Anlogic Technologies EG4S20
* Logical unit: 20K (LUT4/LUT5 hybrid architecture)
* SRAM: About 130KB
* SDRAM: Built-in 32bit bit width 64MBit
* Flash: FPGA configuration Flash, 8Mbit User Flash, nor/nand optional
* Download and debug: Onboard FPGA JTAG Download Debugger, RV debugger can debug hummingbird core
* Interface:

- FPC40P socket, can be connected to RGB LCD, VGA adapter board

- FPC24P socket, can be connected to DVP camera, high speed ADC module

- Resistive touch screen controller for I2C interface, used with RGB LCD

* Pin and lead:

- The adjacent pins LVDS are drawn in the same length, leading out 8 GCLKs, and all 8 ADCs are taken out.

- Double row pin spacing 900mil, compatible with breadboard development

- Half hole leads to an extra 40 IO, and the whole board leads to 130+ IO

* Electrical characteristics:

- Micro USB 5V power supply; 2.54mm pin

- 3.3V~5V power supply; 1.27mm stamp hole power supply

- 3-channel DCDC power supply chip, stable and efficient power supply

- independent adjustment of Bank0 IO level

**Applications**

* High-speed communication interface interconnection
* Learning, debugging, research of soft cores such as RISC-V
* Machine vision processing
* Parallel computing acceleration

**Key Search Terms**

Sipeed, Lichee, TANG, FPGA Development Board, Anlogic EG4S20, RISC-V Development Board, machine vision, parallel computing acceleration

**Parts Lists**

* Sipeed TANG Primer RISC-V FPGA Development Board x 1