

# Chapter 1

## FE310-G002 Description

### 1.1 Features

- SiFive E31 Core Complex up to 320MHz.
- Flexible clocking options including internal PLL, free-running ring oscillator and external 16MHz crystal.
- 1.61 DMIPs/MHz, 2.73 Coremark/MHz
- RV32IMAC
- 8kB OTP Program Memory
- 8kB Mask ROM
- 16kB Instruction Cache
- 16kB Data SRAM
- 3 Independent PWM Controllers
- External RESET pin
- JTAG, SPI I2C, and UART interfaces.
- QSPI Flash interface.
- Requires 1.8V and 3.3V supplies.
- Hardware Multiply and Divide

### 1.2 Description

The FE310-G002 is the second Freedom E300 SoC. The FE310-G002 is built around the E31 Core Complex instantiated in the Freedom E300 platform.

The *FE310-G002 Manual* should be read together with this datasheet. This datasheet provides electrical specifications and an overview of the FE310-G002.

The FE310-G002 comes in a convenient, industry standard 6x6mm 48-lead QFN package ( 0.4mm pad pitch ).