System Architecture

Processor Specifications:

ST Microelectronics STM32L151ZDT6 Low-Power ARM Processor.

Key Features:
    32 MHz @ 238 uA/MHz
    382 KB ECC Flash
    48 KB ECC SRAM
    12 KB ECC EEPROM
    LQFP144

Operating System:

ChibiOS/RT 2.4.3 RTOS

Key Features:
    1.2-5.5 KiB Kernel Size
    preemptive scheduling, round-robin for like priorities
    128 priority levels
    mutexes, semaphores, events, message queues
    thread-safe heap
    hardware abstraction layer with STM32L1 support
    GPLv3

JPEG Compressor:

Modified jpegant code

Key Features:
    Integer DCT
    Low memory footprint
    GPLv2 (The author will release under GPLv3 within the week)