The ‘SC2000 Smart-Kit’ is a 4K UHD camera reference design-kit which enables rapid development of mobile camera applications. Customers can easily achieve general camera and image streaming functions including UVC and RTP. The included Software Development-Kit (SDK) will enable easy code development for various target applications. All components are built under Linux Ubuntu 14.04.5 LTS 64-bit using a pre-installed environment.

**Key Features**

- **High Imaging Quality**
  - DSLR-Grade Pixel Processing and Enhancement
  - Advanced Noise Handling
  - EIS

- **High Performance**
  - 4K@30fps + 1080p@30fps Recording
  - 720p@30fps Streaming

- **High Flexibility**
  - HDMI2.0 Support
  - Image Streaming by RTP and UVC

- **Various Action-Cam Functions**
  - Burst Capture
  - Time-Lapse

**Target Applications**

- Surveillance Camera
- Flying Camera
- Home Security
- IoT Device
- Industrial
- Robotics
Board Overview

Specifications

- **Chip**: Socionext SC2000 SoC
- **Core Architecture**: Quad-Core ARM Cortex-A7
- **CPU**: 450-658MHz
- **Memory**: 2GByte LPDDR3
- **NAND Flash Memory**: 4Gbit
- **Operating System**: Linux 4.4.15 Based
- **Image Sensor**: Sony 12MPixel CMOS Sensor
- **Lens**: Horizontal FOV 84º F2.8
- **Wi-Fi**: IEEE 802.11ac Compliant
- **IMU Sensor**: 6-Axis Gyro/Accel Sensor
- **Operation Interface**: x4 Push Button
- **Dimensions**: 70mm x 70mm (Stacked 3 Boards)
- **Power Supply**: 12V 2A AC Adapter

**Camera Functions**

- **Mode**: Video Recording, Single Capture, Multi-Shot (Burst/Time Lapse), Playback
- **Video**: 3840x2160@30 (Media) + 1080p (Wi-Fi) + 480p@30 (Media) + 720p@30 (HDMI)
- **Sound**: PCM, AAC-LC (License Needed)
- **Image Output**: USB (UVC), Ethernet/Wi-Fi (RTP), HDMI (Rev 2.0), SD Card
- **Adjustable IP**: AE, AWB, EIS, 3DNR
- **Image Settings**: ISO, AE Metering, Exposure, Control, Flicker, White Balance
- **Tool**: Camera Setting/Image Tuning Tool
- **USB**: MTP, CDC, UVC

**Interface / Connectors**

- **HDMI**: Micro Plug
- **USB3.0**: Micro-B Connector
- **USB2.0**: Micro-B Connector, Type-A Connector
- **LCD Connector**: 25-pin DSI Flat Flex Cable Connector
- **Memory Card Slot**: Micro SDIO x 2
- **Ethernet**: 1000 BaseT Ethernet Socket
- **Audio**: Line In/Out, PDM Mic

**Debug Connectors**

- **Mode Selector**: 8-Pin Dip Switch
- **ICE Connector**: 20-Pin SWD ICE Connector
- **20-Pin JTAG ICE Connector**
- **UART Interface**: x3 USB Micro-B Connector
- **User Interface**: Rotary Switch, Joy Stick

**Deliverables**

- **Hardware**: Smart-Kit Board
- **Software**: Firmware Binaries
- **Document**: Linux BSP and Sample Code
- **Schematic PDF/CAD Data**: OrCAD, Allegro
- **PCB Layout PDF/CAD**: Allegro BOM List

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