Product Description

The SOC video over WiFi kit provides a product development platform for both transmitter and receiver. The transmitter Development Kit includes firmware/software, as well as a user development environment to allow users to implement required features. The Hardware include:

• VTR-2000 board, Fig. 1;

• H.264 video/audio encoder module (1080@60fps), Fig. 2;

• HD, 1080p@60fps digital camera, Fig. 3.

• Third-party WiFi module, Fig. 4.

The Software/Firmware includes:

• VTR-2000 firmware Top level source code (VHDL);

• Ethernet/UDP/IP Network stack (10/100/1000Mbps);

• HDMI I/O drivers;

• HD/3G SDI I/O Drivers;

• Third-party WiFi tools;

• Schematics (PDF) of VTR-2000.
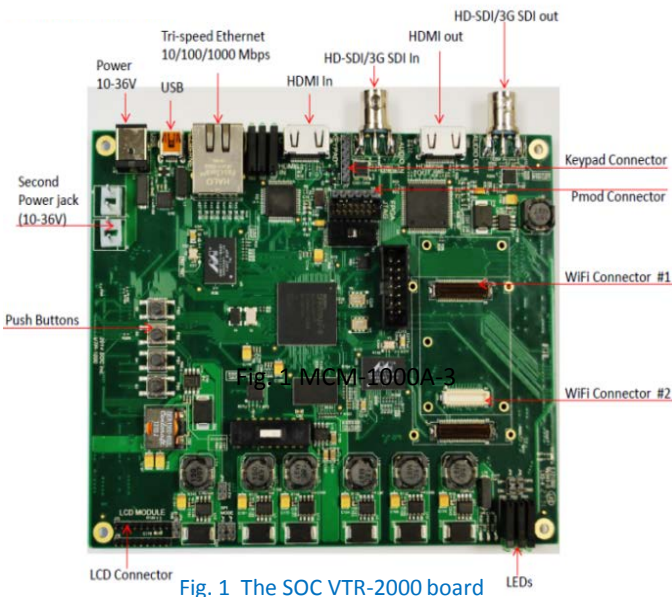

Fig. 1 The SOC VTR-2000 board

Fig. 2 The H.264 module   Fig. 3 HD camera   Fig. 4 WiFi Module

H.264 Encoder Specifications

• Standard: H.264/AVC (ISO/IEC14496-10)
• Profiles: High (Support Main, Baseline)
• Output bit rates: 1-80Mbps & above
• Video resolutions: up to 1080p
• Frame Rate: Up to 60fps
• Chroma Formats: 4:2:2 or 4:2:0
• Precision: 8 bits or 10 bits
• Output format: Transport Stream or Elementary
• Video Input format: YUV or RGB or
• Latency: 0.25ms (Min.)

Block Diagram

Fig. 5 shows a block diagram of the video over IP/WiFi product development kit. The video source can be any device that has an HDMI or SDI video output, with a camera included. An SOC H.264 video/audio encoder module is included in this kit. The Ethernet/UDP/IP network stack IP core for the LX45T FPGA on the VTR-2000 board is included in the firmware. Third-party WiFi tools are provided as well.

User required logics can be implemented in the Spartan-6 LX-45T FPGA on the VTR-2000. Contact SOC sales for details:

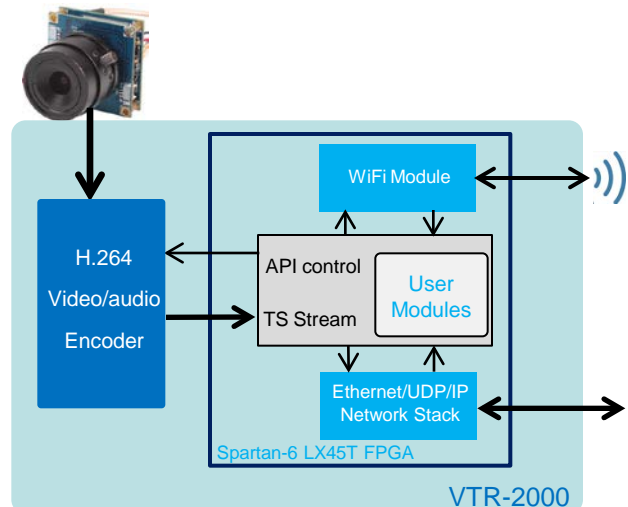E-mail: sales@soctechnologies.com
Telephone: +1 519 880-8609

Fig. 5 Block diagram of video over IP based on VTR-2000

Product Description

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- VTR-2000 board, Fig. 1;
- H.264 video/audio encoder module (1080@60fps), Fig. 2;
- Third-party WiFi module, Fig. 3.
- Video displayer, Fig. 4.

The Software/Firmware includes:

- VTR-2000 firmware Top level source code (VHDL);
- Ethernet/UDP/IP Network stack (10/100/1000Mbps);
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- HD/3G SDI I/O Drivers;
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- Chroma Formats: 4:2:2 or 4:2:0
- Precision: 8 bits or 10 bits
- Input format: Transport Stream or Elementary
- Video output format: YUV or RGB or
- Latency: 0.25ms (Min.)

Block Diagram

Fig. 5 shows a block diagram of the video over IP/WiFi receiver development kit. The compressed video stream is sent into the VTR-2000 through the Ethernet port. An SOC H.264 video/audio decoder module is included in this kit. The Ethernet/UDP/IP network stack IP core for the LX45T FPGA on the VTR-2000 board is included in the firmware. Third-party WiFi tools are provided as well.

User required logics can be implemented in the Spartan-6 LX-45T FPGA on the VTR-2000. Contact SOC sales for details:

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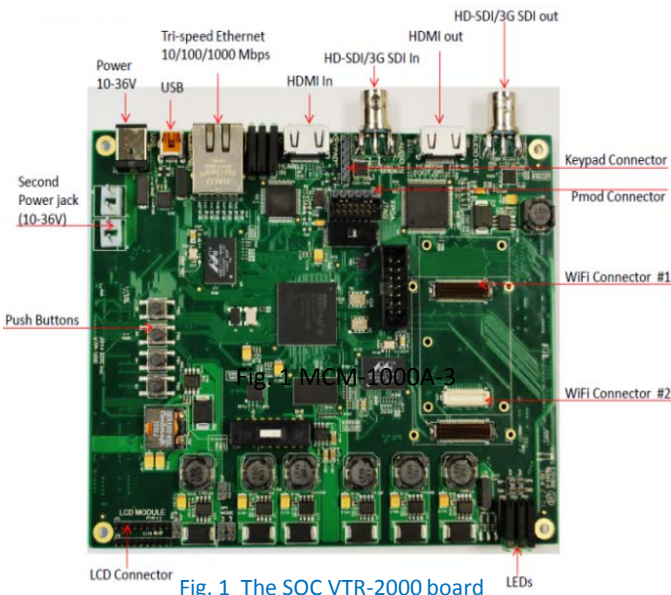Telephone: +1 519 880-8609

Fig. 1 The SOC VTR-2000 board

Fig. 2 The H.264 module
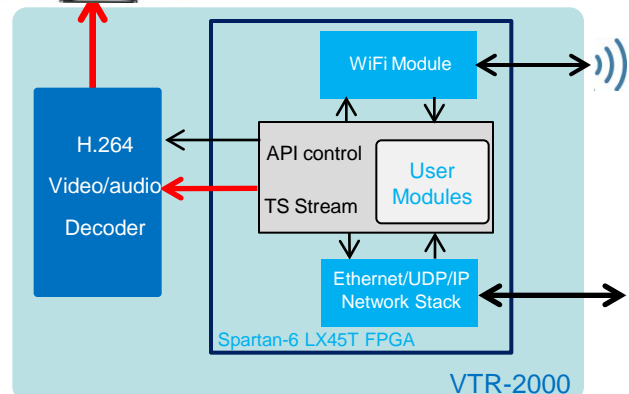

Fig. 3 WiFi Module

Fig. 4 Video Displayer

Fig. 5 Block diagram of video over IP based on VTR-2000