



Wireless Streaming HD Video

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Introduction

SRD is a systems design house specializing in mission-critical, complex control solutions. From its R&D center in Silicon Valley, SRD's multi-disciplinary team has a **100% proven successful track record** of designing customized turn-key products for distinguished clientele.

Employing real-time and open-source technologies with unique intellectual expertise, SRD is unsurpassed in creating integrated hardware & software embedded systems, inventing and prototyping technologies from simple designs to complex solutions. SRD's expertise is entirely *"in-house,"* ensuring a single point of accountability for the entire development project and a commitment to getting results on time and on budget.

Applications include: automotive, green energy, flow control, medical, video, tracking, production and fabrication.

SRD's video software stack and fully integrated boards can be purchased in batch quantities.



Wireless Streaming HD Video

Imagine an on-camera, high definition streaming video solution that breaks the barriers of quality in an ultra-low power environment. This is the challenge that SRD addresses by creating a fully integrated hardware/software solution that delivering wireless streaming HD video and a host of video analytics for static and mobile applications. It is a solution ideally suited for in-field performance, particularly hand-held and power-starved applications.



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Revolutionary HD Camera Design

SRD's HD Camera supports two 5-megapixel cameras for simultaneous recording of two 720p video streams, each at 30FPS (frames per second), or one 720p video stream at 60FPS.

- Video formats include industry standard H.264, MPEG-4, and motion JPEG compatible with existing applications.
- 10/100 Ethernet for fast network access on existing infrastructure.
- WiFi (optional via SDIO) supporting portable network access for streaming videos or data. Small form factor is easily embedded into hand-held mobility devices or areas where wired networking is impossible.
- Record video or save images to USB or SDHC removable storage media or even ATAPI hard disk or DVD drive.
- Ultra-low power solution requires no active cooling from fans.
- 24-bit on-chip dedicated audio DSP supports encode/decode and playback of AAC, MP3, and WMA audio formats for warning, operational, or even environmental sounds.
- Hardware based secure ID encryption means information can be stored or transferred securely as needed.
- Business-card-sized rugged form factor for portable/mobile applications.

Room for Custom Applications

The camera design was built to easily allow expansion with added features and functions. Some key items include:

- 900 MIPS (million instructions per second) and FPU performance at 3.5 GLOPS (billion floating point operations per second).
- 256MB DDR2 RAM for execution of multiple simultaneous applications.
- 2GB optional expandable flash supports storage in encrypted file systems and/or multimedia storage for applications for non removable media.
- 24-bit color TFT LCD controller with touch screen interface for display or NTSC video output.
- 2-D graphics HW accelerator for fast GUI or high-quality map rendering.
- Two SDIO ports and two USB 2.0 ports support the addition of removable storage and/or peripherals such as WiFi, Cellular modems, keyboards, or mice.

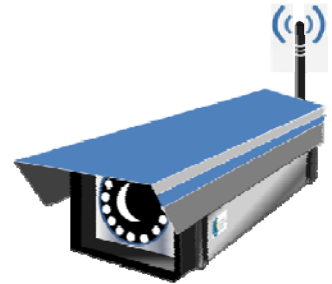


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Intelligent Software Stack

SRD offers their unique software stack either with or without the hardware board. Licensing for the stack is based on the functionality and support required.

- Automatically adjusts bitrate to compensate for degrading bandwidth while maximizing quality.
- On-camera analytics enable 3D stereoscopic vision and depth perception.
- Live or recorded RTP/RTSP network streaming of two encoded 720p HD video streams with low latency for access to video streams from remote locations over the internet.
- Linux 2.6.30 or NetBSD 5.9.9 O/S environment featuring cutting edge technologies, industrial strength stability and portable libraries for fast development time.
- QT embedded or GTK+ GUI interface provides software libraries for fast, portable, GUI based application development.
- HTTP web server and full web browser stack creating a web based interface for client viewing of video streams and a full web browsing experience for the mobile device.
- Optimized libraries for surveillance video analytics providing customizable algorithms for real time face and object detection/recognition in camera-captured live video streams.
- Linux multimedia libraries support a wide array of open source applications for porting onto the system.



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Want to know more?

For more information about wireless HD video and how SRD's extensive knowledge of embedded systems can advance your development project, please contact:

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