Ittiam High Bandwidth Digital Content Protection (HDCP) Receiver Solution

ENABLING SECURE DISTRIBUTION OF AUDIO-VIDEO CONTENT BETWEEN DEVICES OVER WIRED/WIRELESS INTERFACES

INTRODUCTION

High Bandwidth Digital Content Protection (HDCP) is a digital copy protection mechanism to authorize, pair and securely distribute audio-visual content between two or more devices over wired (HDMI, DVI, HDBASE-T and DisplayPort) or wireless (Miracast, WirelessHD and WHDI) interfaces.

Ittiam's field-proven HDCP Receiver solution comprises an HDCP stack (library) for authorizing and pairing with a HDCP transmitter and decrypting encrypted content. It is available as a standalone component and is also optimally integrated with Ittiam's Miracast Sink stack.

SUMMARY

PRODUCT

HDCP receiver solution comprising HDCP stack (library) for:

- Authorizing and pairing with a HDCP transmitter
- Decrypting encrypted content

HIGHLIGHTS

- Compliant with Revision 2.2 of HDCP Interface Independent Adaptation Spec
- Uncompromised content security through highly optimized crypto modules
- Free of open source
- Enables highly optimized AES decryption
- Offers offline HDCP key encryption tool for Windows/Linux
- Extensively validated across Windows and Android (4.2+) devices

AVAILABILITY

- Available as a standalone component
- Optimally integrated for Miracast use cases

PRODUCT HIGHLIGHTS

- Compliant with Revision 2.2 of HDCP Interface Independent Adaptation Spec, and backward compatible with versions 2.1 and 2.0
- Offers support for pluggable crypto H/W accelerators (if available)
- Provides highly optimized crypto S/W IP for AES-128, SHA-256, HMAC-SHA256, PKCS#1 v2.1 & Random Number Generator (AES CTR-DRBG)
- Comprises highly optimized native components – free of open source
- Highly optimized AES decryption. Avoids CPU consumption for un-encrypted content
- Simple well defined C callable API
- Field tested with real keys
- Integrated with Ittiam's low latency Miracast media pipeline
- Tested for interoperability with a range of Windows and Android devices (running on android 4.2 and above)

DELIVERED TO LEADING AUTOMOTIVE OEMs ACROSS A RANGE OF PLATFORMS

PRODUCT OFFERING

- HDCP receiver stack
- Offline HDCP device key encryption tool for Windows/Linux
- Documentation (user guide & API document)
- Test plan and report
- Performance & memory report
- Sample application for HDCP receiver stack

STANDARDS

- HDCP v2.2 – Interface Independent Adaptation
- RSA private key decryption PKCS#1 V2.1, RFC 3447
- AES-128 CTR mode based Deterministic Random Bit Generator (DRBG) – NIST SP 800-90A
- SHA256 – RFC 6234
- HMAC SHA256 – RFC 6234
- AES-128 Encryption/Decryption – FIPS 197

TARGET APPLICATIONS

Proven across multiple deployments for automotive and consumer segments
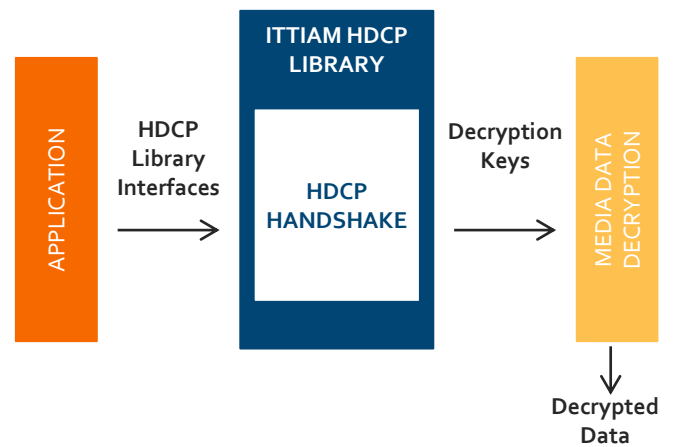
Automotive head units   Smart TV platforms

READ OUR BLOG
How we enable effective HDCP implementation with or without a TrustZone.

Ittiam HDCP Receiver Implementation

KEY MANAGEMENT

Device specific HDCP key is encrypted using an offline tool that is available as a:

- Linux (POSIX) shell script or
- Windows GUI tool

The encrypted key is pushed to the device during production

- This cannot be part of the firmware image, since each device has a unique key
- The key can optionally be stored in SoC specific secure storage (eg: ARM TrustZone)

Ittiam HDCP stack is initialized with the HDCP key as one of the initialization parameters. The unencrypted key is securely stored in the SoC during processing to enable dynamic use of the key.

For more information, explore our Automotive Infotainment Solutions or contact us at mkt@ittiam.com

ABOUT ITTIAM
Ittiam Systems is a trusted solutions provider to world leaders in multimedia, enabling next generation video experiences through its complete suite of intelligent video technologies, systems and solutions. Backed by its proven video expertise and insights, Ittiam's products deliver real intelligence to solve its customers' most complex technology challenges, empowering them to deliver high performance, efficient and reliable video products in rapid time. Ittiam's solutions are at the heart of millions of lifestyle products that drive mobility, content access, networking and sharing.

CONTACT

AMERICAS
Bob Lee
Senior Director
+1-847-477-2411
bob.lee@ittiam.com

Dirk Peters
SVP, Business Development
+1-408-850-7244
dirk.peters@ittiam.com

EUROPE
Elodie Livernette
Business Development
+33-185086071
elodie.livernette@ittiam.com

Marc Guillaumet
SVP, Marketing
+33-621403654
marc.guillaumet@ittiam.com

JAPAN
Kazuyoshi Yui
Manager, Business Development
+81-50-3632-6801
kazuyoshi.yui@ittiam.com

ASIA
Chaucer Kuo
GM, Sales & Marketing
+86-1391-037-0450
chaucer.kuo@ittiam.com

KOREA
YJ Kim
Manager, Business Development
+82-10-3754-6431
yjkim@ittiam.com