



# Tiga Media Stick-256 - OTT & Wireless Display Adapter Reference Design

Preliminary Product Brief

## OVERVIEW

Cavium's Tiga Media Stick-256 (TMS256) reference design is an ultra low-power small form-factor Over-The-Top(OTT), media streaming, and wireless display TV adapter, in the form of an HDMI plug-in media stick. Its ultra-small size (slightly larger than a USB flash drive) and light weight make it suitable as a portable consumer accessory. Support for a wide range of OTT and media streaming standards, including Microsoft's Smooth Streaming™, HLS, and DLNA®, as well as wireless display standards such as Cavium's WiVu™, WiFi Alliance's Miracast™, and Intel®'s WiDi, make TMS256 an ideal OTT universal wireless media stick for viewing both user generated and premium content on high definition displays. In addition to a stand-alone media stick, the TMS256 design can serve as a reference for integrated module inside wireless monitors, portable displays, and projectors.



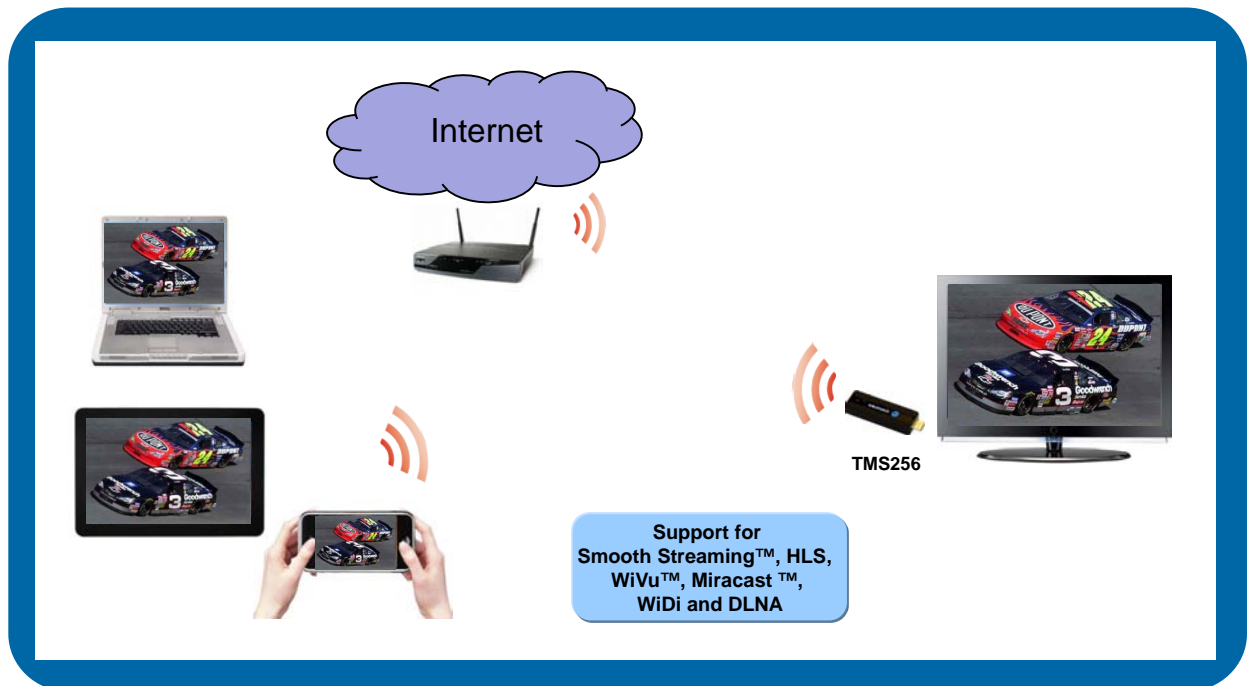
Based on the innovative CNW6611L media SoC from Cavium, the TMS256 reference design offers support for full 1080p high definition content. The reference platform is designed to simply expose only what is necessary for an enjoyable consumer viewing experience, without unnecessarily increasing the size of the device or increasing the overall system cost. As such, the only interfaces available on this small form-factor design are the HDMI output, (with male HDMI connector build in), a 3.5mm mini-plug for IR remote control receiver, and the mini-USB interface (used to power the devices). A simple status LED provides feedback to the user regarding the operation of the device and a small push button for WPS PBC pairing, and reset is available.

## APPLICATIONS

- IP Thin client
- Wireless display TV adapter
- Home media streaming receiver
- Wireless monitors and TV module

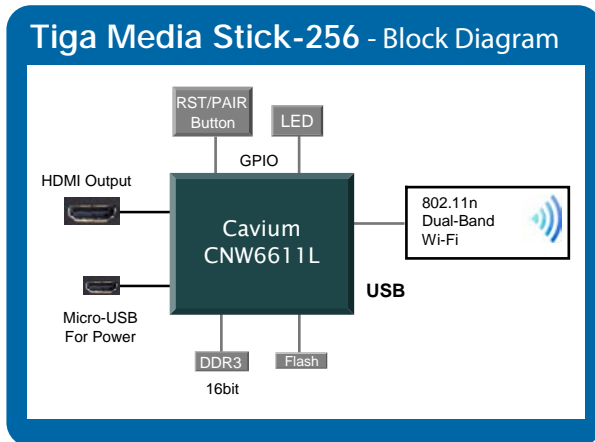
## KEY FEATURES

- Multi-format audio and video decode
- Support for Smooth Streaming, HLS, DLNA, WiVu, WiDi and Miracast
- HDMI 1.3 output
- Up to 1080p display capability
- Support for HDCP 2.x and DTCP-IP
- USB powered
- IR remote control support



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## FEATURES

### Video Processor

- Support MPEG-2 high definition main profile, up to HD MP@HL, decode
- Support H.264 high, main and base profile, up to HD HP@L4.1, decode
- Support VC-1 SP/MP/AP profile at 1080p@30fps, decode
- Support AVS high definition jizhun profile, up to HD JIZHUN@6.2, decode
- Support MPEG4 SP & ASP, H.263 & Sorenson Spark, DivX Home Theater Profile, Real Video 8/9/10 at 1080p@30fps, decode
- Max resolution: 1080p30 or 1080i60

### Audio Processor

- Programmable audio DSP with advanced DMA
- Decodes MP1/2/3, AC3, AAC-LC, HE-AAC audio streams

### Security

- HDCP 2.x
- DTCP-IP

### Video & Audio I/Os

- HDMI 1.3 output
- IR remote control receiver via 3.5mm mini-plug

### Memory Configuration

- 256MB FLASH and 512MB SDRAM

### WLAN

- Dual-band Dual-stream IEEE 802.11n Wi-Fi with concurrency

### Other I/Os

- USB for Power only

### Power Requirements

- < 2.5W USB powered

### 2D Graphic Engine

- Supported Color formats: ARGB8888, RGB565, ARGB4444, ARGB 1555, CLUT8 and CLUT4
- Color keying
- Alpha Blending
- Raster Operation (ROP) and/or blending at the outputs
- Anti-flicker (Vertical 2-Tap FIR Filter)

## Tiga-mini - Product Family

Part Number	Description
CNW6611L-EVK-TMS256	Tiga Media Stick-256 - OTT & Wireless Display Adapter Reference Design



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