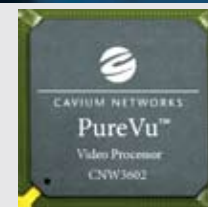**H.264 Video Codecs**

Lanai2- netHD Evaluation Reference Design Kit

Product Brief

OVERVIEW

Lanai2 is a complete, low cost netHD evaluation reference design kit, based on the Cavium Networks PureVu™ CNW3602 1080p60 H.264 video CODEC with SLL Technology™ (Super Low Latency Technology™) and the OCTEON™ CN50XX processor. Using standard wireless and wired technologies (WLAN 802.11n, Ethernet, MoCA, HPNA, Powerline, etc.), netHD can transport high quality 1080p60 HD video around the home. providing consumers with substantial benefits, such as ad hoc connectivity and freedom of relative placement of the source and the display device. With an IEEE802.11n wireless link there is the added benefit of whole house coverage as opposed to in-room only, at a cost far less than possible with HDMI cables and repeaters. The use of H.264, industry's most advanced video CODEC, guarantees preservation of original picture quality and effectively extends the range of the wireless link. The combination of standards-compliant H.264 and IEEE802.11n guarantees interoperability with the existing installed base of video and networking equipment, and reduces risk and cost. The CNW3602 not only provides pristine video quality all the way up to 1080p60, but also does so without adding perceptible latency.
SLL Technology™ provides the CNW3602 with "zero" latency encode-decode performance, which is unparalleled in the industry. This makes Lanai2 suitable for gaming, interactive Blu-Ray, menu navigation, seamless device control and any other interactive consumer video application.
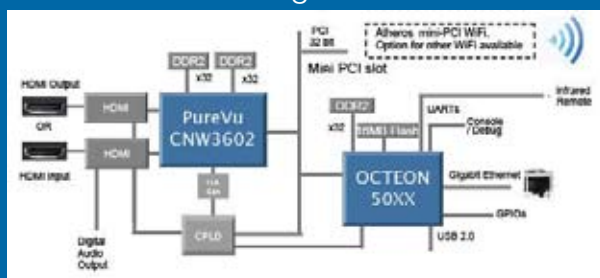

APPLICATIONS

- HDTV displays
- Game consoles
- Multimedia PCs
- Portable media players
- Set-top boxes
- DVD players
- IDVRs

KEY FEATURES

- Super Low Latency
- H.264 encode-decode
- IEEE802.11n Rx/Tx
- HDMI Rx/Tx
- 1080p60 and 720p60 support
- I2S and S/PDIF Rx/Tx
- CEC and E-EDID Rx/Tx
- IrBlaster Rx/Tx ready
- Hot-plug-detect
- Error resiliency & concealment
- Channel adaptive bit rate control

Lanai2 - Block Diagram

Lanai2 - netHD Evaluation Reference Design Kit

Product Brief

FEATURES

Video Compression
- CNW3602 with SLL Technology™
- H.264/MPEG-4 AVC (Part 10)
- Sub frame encode-decode latency

Video Resolutions
- 1080p60/50/30/25/24, 1080i60/50
- 720p60/50/30/25/24
- 480p30/24, 480i60
- 576p25, 576i50

Audio
- I2S
- S/PDIF

Control
- CEC
- E-EDID
- IR Blaster
- IR Receiver

Bit Rate Control
- Channel Adaptive

Video Input and Output Ports
- 1x HDMI input
- 1x HDMI output
- HDMI 1.1 compliant and HDMI 1.3 compatible
- VGA 15-PIN-D-Sub

Other I/Os
- RJ-45 LAN 10/100/1000Mbps
- USB 2.0 type A
- Console (debug port)

Security
- AES
- HDCP 2.0

WLAN Sub System
- Mini-PCI type IIIa interface
- Atheros WiFi mini-PCI card installed
- 5GHz IEEE 802.11n
- 128-bit AES encryption

Operational Characteristics
- Power 12VDC
- 0– +85˚ C ambient temperature
- 0-90% RH

Dimensions
- 16.5cm x 15cm

ORDERING INFORMATION

Part Number	Description
CNW3602-CDK-LNI2	Lanai 2 netHD Evaluation Reference Design Kit

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