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## NVIDIA SHIELD Android TV OTA Update Improves HTPC Credentials

17 Comments

by Ganesh T S on September 30, 2015 8:59 AM EST

Posted in Android TV Media Streamer Shield NVIDIA



The NVIDIA SHIELD Android TV was launched back in May with the intent to dominate the over-the-top set-top-box (OTT STB) landscape. Premium features such as full HDMI 2.0a support and HEVC Main10 decoding enabled the coveted Netflix 4K certification. No other set top box (including the recently announced 2015 Apple TV and the Amazon 4K Fire TV) has anything close to the SHIELD Android TV in terms of advertised hardware and software capabilities. Our review, however, pointed out a few missed opportunities. Aside from the experience with Android TV as a software platform (something for which NVIDIA is not directly responsible), we had indicated that NVIDIA could have done a better job of codec licensing and configurability to cater to HTPC enthusiasts. Today, NVIDIA is announcing an OTA update to address some of those issues.

Today's OTA update (v2.0) brings a notable set of features for local media streaming

### Expanded codec and container support:

- Adds pass-through support for Dolby TrueHD and DTS-HD Master Audio lossless audio\*
- Adds MPEG2, VC-1, and WMV9 hardware-acceleration
- Adds M2TS, ASF, and WMV container support for VC-1
- Adds WMA audio support (including WMA Pro, and WMA Lossless)

Currently, the above set of features are available for use in the native Android Video and Photo apps. NVIDIA is working closely with third-party app developers (including Kodi and MX Player) to ensure that these media players will also be able to take advantage of the newly added features.

The other important feature that is being made available is the ability to set the display refresh rate to 23.976 Hz. Currently, it is a static setting available under Settings > Device > HDMI > Resolution. Only 60 Hz (US) / 50 Hz (Europe) and 23.976 Hz are currently available, and the UI is also set to the selected refresh rate. However, NVIDIA expects third-party app developers to be able to dynamically alter the display refresh rate based on the content frame rate using the new APIs. This will be important since consumers should not be playing games or actually be navigating the user interface at 23.976 Hz. Syncing up the display refresh rate to the content frame rate should hopefully turn out to be a transparent exercise with the third-party apps.

The new firmware also brings support for overscan adjustment (particularly useful for display sinks that tend to overscan, resulting in a cropped view of the interface). Most TVs don't need this.

Other enhancements include native 4K rendering for select Android games (Beach Buggy Racing, Bombsquad, Hardwood Solitaire IV, Riptide GP 2, Kosmik Revenge, Video Poker Duel, Leo's Fortune, Machinarium, Meltdown, Never Alone, Samurai II, and Sky Gamblers: Storm Raiders), ability to transfer data between USB storage and a microSD card, ability to manually turn off the SHIELD controller and lowering the audio latency by as much as 40ms compared to standard Android. The last aspect is especially important for gaming, and it will be one of the prime reasons to pick up the update before checking out the GeForce NOW cloud game streaming service that is getting launched today.

NVIDIA has also updated the table comparing the SHIELD Android TV to the competition. The latest version is reproduced below. As usual, these are NVIDIA's claims and need to be taken with a pinch of salt.

Feature	Apple TV	Apple TV (2015)	Roku 3	Fire TV (2015)	SHIELD
<b>Raw Performance</b>	1x	12x	1.3x	7x	<b>34x</b>
<b>UI Performance</b>	Average	Good	Average	Good	<b>Best</b>
<b>Voice Recognition</b>	Not Supported	Good	Limited	Good	<b>Best</b>
<b>4K videos</b>	No	No	No	Yes	<b>Yes, 60 fps</b>
<b>10-bit Color (ITU-R BT-2020) and HDR video</b>	No	No	No	TBD	<b>Yes</b>
<b>Netflix 4K videos</b>	No	No	No	Yes	<b>Yes</b>
<b>24-bit/192 KHz Audio output</b>	No	No	No	Yes	<b>Yes</b>
<b>H.265 and VP9 support</b>	No	No	No	No VP9	<b>Yes</b>
<b>HDMI 2.0 and HDCP2.2</b>	No	No	No	4K 30	<b>Yes - 4K 60</b>
<b>HDMI-CEC</b>	No	Yes	No	No	<b>Yes</b>
<b>Gaming Performance</b>	Poor	OK	Poor	OK	<b>Best</b>
<b>Cloud Gaming Experience</b>	Not Supported	Not Supported	Not Supported	Not Supported	<b>Best</b>
<b>System Memory</b>	512 MB	2 GB	512 MB	2 GB	<b>3 GB</b>
<b>Storage Capacity</b>	8 GB	32 GB	256 MB	8 GB	<b>16 GB</b>
<b>USB 3.0 ports</b>	0	0	0	0	<b>2</b>
<b>USB 2.0 ports</b>	i1	0 (only for support)	1	1	<b>1</b>
<b>Wi-Fi Speed</b>	802.11n	802.11ac	802.11n	802.11ac	<b>802.11ac</b>
<b>Ethernet Speed</b>	100 Mbps	100 Mbps	100 Mbps	100 Mbps	<b>1000 Mbps</b>
<b>MicroSD slot</b>	No	No	No	No	<b>Yes</b>
<b>Controller/Remote Features</b>					
<b>Console Grade Controller</b>	None	None	None	No	<b>Yes</b>
<b>Low Latency Controller</b>	None	None	None	No	<b>Yes</b>
<b>Headset Jack on Controller or Remote</b>	No	No	Yes	No - Remote; Yes-controller	<b>Yes - both</b>
<b>Microphone input on Rechargeable Battery</b>	No	Yes	Yes	Yes	<b>Yes</b>
<b>Rechargeable battery</b>	No	Yes	No	No	<b>Yes</b>

We did go through the various aspects with concrete 'yes' or 'no' answers and the table seems to line up well with the actual specifications of the competitors' products. The SHIELD Android TV continues to justify the premium flagship tag despite recent entrants such as the 2015 Apple TV and the Amazon 4K Fire TV. NVIDIA's willingness to also focus on local media playback is good news for the general consumers as well as HTPC enthusiasts. For this reason alone, we can and do recommend the SHIELD Android TV over competing OTT STBs.

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nathandrews - Wednesday, September 30, 2015 - link  
VERY important update!

"Adds pass-through support for Dolby TrueHD and DTS-HD Master Audio lossless audio\*\*"

Is the asterisk a typo or is there something special we should know about the passthrough support?

REPLY

jublín - Wednesday, September 30, 2015 - link

Probably an asterisk to say you must have a compatible receiver, for the cover-your-arse aspect.

REPLY

JohnGalt1717 - Wednesday, September 30, 2015 - link

The \* means that the app has to support it first. So Plex etc. have to be updated first.

Any idea when this will be available? Mine still isn't showing up.

Also any rumored availability of Amazon Instant Video? I'm using my xbox one right now because of no Amazon and Plex not having delete functions among the list above and would love to use the Shield instead.

REPLY

DigitalFreak - Wednesday, September 30, 2015 - link

The update will be available tomorrow (10/1).

REPLY

JohnGalt1717 - Wednesday, September 30, 2015 - link

Excellent! Thanks!

REPLY

Kerome - Wednesday, September 30, 2015 - link

There doesn't seem to be that much interest in this box... Why don't they go the standard platform owners route and create some high end platform specific content to draw the crowds?

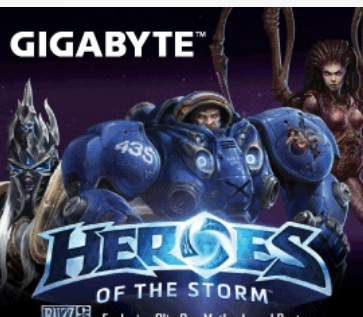
REPLY

Morawka - Wednesday, September 30, 2015 - link

its the only real 4k streaming box and it's being advertised as such.. Best buy picking this up will really push sales.

Anyone serious about watching 4k content on their new 4k tv, is throwing their money at nvidia right now.

REPLY



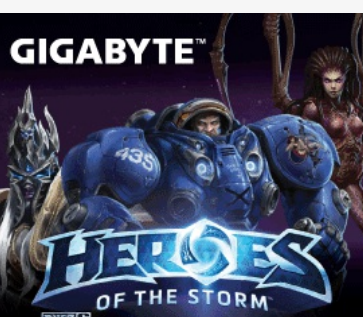
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## TWEETS

IanCutress: I've been running automated 4v4 Rocket League benchmarks this week with random inputs. Just saw the character score for the first time. HA

IanCutress: @ServeTheHome @ryanshrout :D

IanCutress: @ServeTheHome @ryanshrout is that all?

IanCutress: @ryanshrout Software has to be NUMA aware, be able to pin DRAM to CPUs to maintain low latency. Most software isn't. Hopefully Premiere is

IanCutress: @ryanshrout it has access, but you might get cross-QPI memory access which increases latency and code stalls. Research NUMA on dual proc

ganeshts: @eddychik In an ideal world, yes, encoding should be free. But, if a co. takes commercial adv. of a codec, it's fair they pay reasonable amt.

ganeshts: @undecidability @eddychik Any 3rd party test reports to support 'VP9 is practically as good as HEVC'?

ganeshts: Really happy with the focus that NVIDIA is putting on local media playback - something that most OTT STBs ignore https://t.co/9tttdKkVpE

RyanSmithAT: @noahcrowley @codinghorror It definitely depends on the workload though. If you are single-threaded bound, you do want a big fast core

RyanSmithAT: @theotherlinh @JoshuaHo96 So we could draw some conclusions, but I would be uncomfortable without a second OS for the A57 results

RyanSmithAT: @theotherlinh @JoshuaHo96 The problem with doing a great analysis is that you can't get the same processor on iOS and Android

RyanSmithAT: @scottwasson As excited as you are right now Scott, is coffee such a good idea?

ganeshts: .@GetKuna Being able to operate the #smarthome without being completely reliant on the cloud

ganeshts: @SFoskett @edswindelles Would appreciate it if you didn't confuse @anandtech with Ars :) Link points to AT, text says Ars

RyanSmithAT: RT @anandtech: iPhone 6s and iPhone 6s Plus Preliminary Results http://t.co/cullpnMUw

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chizoide - Wednesday, September 30, 2015 - link

It's very clear that the ShieldTV is the best media streamer on the market, by most measures. It only lacks HBO GO and Amazon video, and HBO GO is supposedly "coming soon" (promised since June).

Thing is, the FireTV is literally\_half\_ the price. Oh, and it supports HBO GO and Amazon video, right now. Kodi runs great too.

Is the FireTV as snappy as the ShieldTV? Certainly not. But even the old FireTV is more than fast enough to stream video, and the new one is twice as fast. Again, coming in at \$99.

REPLY

jm9843 - Wednesday, September 30, 2015 - link

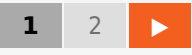
FireTV also has half the capabilities if we're being generous.

REPLY

Wolfpup - Wednesday, September 30, 2015 - link

Depends on what capabilities you're looking at. IMO a media streamer that can't stream one of the big services is pointless. Yeah Shield is more powerful, but why do I care? I'm not going to run games or programs on it, I'm using a PC or console for that. It can stream games (I guess) from a PC with a recent Nvidia GPU, but that's its draw IMO, and the Steam box thingee is 1/4 the price (not sure whether Nvidia or Steam's streaming support for all games is better though).

REPLY



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