

PRODUCT FLASH

NVIDIA Poised to Enter Portable Gaming, SHIELD in Hand

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IN THIS PRODUCT FLASH

This IDC Flash discusses NVIDIA's announcement, made at the company's press conference at the Consumer Electronics Show on January 6, that the company will release a specialized portable gaming device in North America by midyear 2013. This Flash puts the device, code-named Project SHIELD, in the broader context of mobile/portable gaming.

SITUATION OVERVIEW

NVIDIA CEO Jen-Hsun Huang unveiled the Project SHIELD prototype in Las Vegas on January 6. The device has a clamshell form factor and, when open, looks like an Xbox 360 or PS3 controller with a 5in. flip-up screen attached to the back. (Pictures of the prototype and its current specs are available at shield.nvidia.com.) Project SHIELD is powered by NVIDIA's new Tegra 4 SoC design. The quad-core Cortex-A1 chipset features 72 GeForce GPU cores, delivering significantly more processing and rendering power than Sony's PlayStation Vita, Apple's third-generation iPad, or Amazon's Kindle Fire HD.

The multitouch-capable Project SHIELD screen supports 1,280 x 720 resolution (~300dpi), which also bests the Vita, and is much better than Nintendo 3DS' dual screens. Project SHIELD reportedly offers excellent sound via its built-in speakers (the device also has a headset jack and other standard ports). From a technical standpoint, it's very impressive; the device is likely to make many hardcore gamers' mouth water since all the familiar fast-twitch buttons, bumpers, analog sticks, and enough battery life are included for five-plus hours of AAA gaming action.

From an OS and a software perspective, Project SHIELD isn't as impressive. It runs Android Jelly Bean and can access the Google Play store and the Web over WiFi. Since it's got a quality touchscreen, any Android app or game that can run on a smartphone or small tablet should be downloadable and usable/playable. All the usual audio-video app suspects should be supported as well.

When playing a game that's controller capable, Project SHIELD remains locked in landscape mode. At TegraZone (www.tegrazone.com), NVIDIA offers a curated list of Android titles that have been QA tested, and one of the pull-down menu options is controller-compatible games. As we discuss later, it'll also be possible to play select Windows PC games on Project SHIELD using the built-in controller.

A number of other Android-based gaming-centric handhelds have been launched or announced in the past year. There's PlayMG's ~\$150 PlayMG, for example. Wikipad's newly released ~\$500 (Tegra 3 based) Wikipad gaming tablet is another. Razer's Project Fiona gaming tablet is apparently still forthcoming (at last check, it was Windows 7 based). Neither of the newly minted, Android gaming-oriented portables appears to have gotten much sales traction. For its part, Microsoft is also rumored to be working on a 7in. Surface tablet with a strong gaming focus.

Moving a bit further afield, Apple patented a game controller in mid-2012, suggesting that it might push further into portable gaming in 2013. Of course, the dedicated handheld gaming heavyweights — Nintendo and Sony — are also out there. Suffice to say that Project SHIELD will have lots of company when it debuts.

FUTURE OUTLOOK

The device itself is a technical *tour de force*. While I haven't gotten to play it personally, the design could change at the margins prior to release, and Huang's press conference demo got the point across in any event. The graphics are stellar. In my experience, however, hardcore gamers don't buy platforms based on their physical attributes alone. It's the successful marriage of games, hardware, and the surrounding ecosystem of apps, features, and related bells and whistles that gets hardcore gamers' wallets to open up.

NVIDIA is putting an intriguing twist on portable gaming with Project SHIELD. If gamers have a desktop or notebook PC with a GeForce GTX 650 or later graphics card and download the free GeForce Experience app, they can stream PC games from their PCs to the Project SHIELD portable and play them using its controller and screen. Think of it as a personal OnLive cloud MicroConsole system. More or less, any PC game that uses a controller can be streamed over WiFi and played on Project SHIELD. That's cool. It appears that ~10 million of these graphics cards have been sold to date, but only a portion was sold to North American gamers. The ceiling on this crossover base of potential customers will probably be no more than 5 million by the time Project SHIELD arrives.

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Filing Information: January 2013, IDC #238998, Volume: 1

Consumer IT Watch: Product Flash

NVIDIA's vision goes beyond this, however. Sometime in late 2013 the company will release a separately sold dongle that plugs into the HDMI port on TV sets. The dongle will allow PC games (again, PCs with a GeForce GTX 650+ card) to be streamed to the living/family room big screen and controlled with the Project SHIELD controller. To add yet another twist, NVIDIA has been working with Valve to integrate Steam's Big Picture mode into this capability. It appears that before the end of 2013, Steam's North American customer base could access the service and games on their HDTVs in much more of a plug-and-play manner, thanks to NVIDIA. The latency issues have been largely solved (via a proprietary protocol and a lot of engineering) as far as I can tell.

This PC-TV-SHIELD cross-functionality is pretty cool and distinct as well. And, yes, if gamers buy the dongle, they will reportedly be able to WiFi the Project SHIELD audio-video output to their living room big screens and use Project SHIELD as a controller. That's the third home usage scenario, and it doesn't require an NVIDIA graphics card.

The big question is cost. Given its specs, Project SHIELD could retail for \$500. The dongle is an unknown extra. The marketing pitch for hardcore gamers is that, by the end of this year, they could be playing their favorite Steam games and so on — including multiplayer titles — on a portable form factor as well as their HDTVs and be paying PC- and Android-type prices for those games from that point forward (again, assuming they have the proper PC graphics card). Hardcore gamers could go all digital and probably save a lot of money on software relative to traditional console game discs and have access to many of their favorite PC-only titles to boot.

The combined price tag for Project SHIELD, the dongle, and the graphics card could top \$1,000 though. That's a high entry barrier, especially given the size of the game catalog: There are <25 games in TegraZone's controller-compatibility list at present. NVIDIA executives suggest that Google Play offers a few hundred controller-compatible titles and that many more AAA games are in the works, but without the Steam/PC crossover catalog, that's slim pickings. As with OnLive, my chief concern is that the launch catalog will be too thin to attract many hardcore gamers. As a standalone device, Project SHIELD seems to be a Maserati that's confined to a rather small racetrack.

It's hard enough for device manufacturers to successfully break into a services business — which gaming is to a large extent. As currently outlined, NVIDIA is positioned to deliver a device that's unlikely to sell a large number of units in the critical launch window, similar to the other Android-based gaming portables that have arrived in the past year. If it outsold Vita in 2013 I'd be really surprised. Even if the price tag were cut to a bare-bones \$400, it will be tough sledding to take share away from subsidized smartphones and dedicated gaming handhelds.

If Project SHIELD finds a market this year, I suspect it will be mainly among Steam enthusiasts. There's every reason to believe, moreover, that commercial-grade GeForce GRID customers will be positioned to extend full cloud-based game streaming to Project SHIELD devices by the end of 2014. That represents another route to possible long-term success for NVIDIA with this device (and one that could involve subsidies). Neither of these possibilities is likely to deliver much lift out of the gate, however.

Another risk NVIDIA is running is that by getting into the platform business, Project SHIELD may induce some OEMs to source their chips from other providers. I find it hard to believe that Nintendo, Sony, or Microsoft will be signing large contracts with a vendor that's competing for shelf space in gaming. Whatever Project SHIELD's fate, it will likely be revealing of North American gaming industry dynamics.