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**NEC NP-V302H Projector Review** 



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## NEC NP-V302H Review: 1080p DLP Projector for Business and Education

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The new **NEC NP-V302H** is a rock-solid 1080p projector for conference rooms, classrooms, and meeting rooms. Sporting a maximum output of 3,000 lumens, the V302H has 8W onboard stereo speakers, excellent connectivity, quiet operation, low cost of ownership, and - most importantly - a balanced, natural image. At \$999, the V302H isn't the least expensive 1080p projector available, but it packs in enough features and functionality to more than justify the cost. If your organization needs a presentation projector that can handle anything you throw at it, read on.

## The Viewing Experience

What struck us most about the V302H wasn't its brightness (though it is quite bright) nor its extensive features (though it includes quite a few). Instead, what jumped out at us was the natural, balanced appearance to the projector's image. The V302H starts up in Presentation mode, which not only gave us solid light output (1900 lumens) but also excellent color brightness (41%) for what is usually a high-powered mode. What's more, color temperature was about 7000K and stable across the grayscale, giving the image a smooth and even-toned character. None of this is required or expected from a projector built for classroom and presentation use, but it's definitely nice to see.

That same sense of pleasant surprise followed us through the projector's menu system. The V302H gives you control of overscan (a slider allows you to adjust it up and down), two User modes for specialized calibrations, and BrilliantColor (where you can turn it down, or off, if needed). And it's not limited to the menu system. The projector's HDMI1 port features MHL, so you can present from your smartphone. The lens barrel is recessed in the case and the cap is tethered. The projector

gives the impression that every detail has been thought through, at length, by someone who has actually used one before and knows what is and isn't important.

The projector's image modes are all tailored to a specific use, and most of them are well-suited for that use without much tweaking. High Bright mode boosts light output through the roof, peaking at 2920 lumens on our test unit. Movie and Video modes maximize color and contrast performance and offer different gamma settings for different types of content. Blackboard mode adjusts the color balance for those times when a real screen isn't available. And sRGB mode reduces light output and aims for maximum color accuracy.

## **Key Features**

**Clean picture.** The one word that best describes the V302H's image is "clean." The superbright modes aren't completely unbalanced, though they still prioritize white light output. Compared to other presentation projectors, it is the difference between "only brightness matters" and "brightness matters the most." In the projector's more video-focused modes, color light output is high enough to give a good sense of balance and a natural feel. The image is consistently sharp from edge to edge, which is something a lot of inexpensive presentation projectors have trouble with.

During testing, we saw fewer rainbows than we were expecting. Without speculating as to why that happened, it means the V302H is a good choice for business and education use that includes a lot of video. In fact, the projector is capable enough with film and video that you might be tempted to bring it home on the weekends for home entertainment use. Go right ahead. We would not recommend buying the V302H specifically as a home entertainment projector in most cases, but it's a great choice if you've already got one around the office.

**Great connectivity.** The V302H's connection panel is rather full, with two HDMI ports (one of which has MHL), one VGA port, a VGA monitor passthrough, wired RJ45 networking, several 1/8" and RCA audio ports, and an RS232 port. The projector is also compatible with the Crestron RoomView system.

**Onboard speakers.** Dual 8W stereo speakers mean the V302H can hold its own in a noisy classroom. Those speakers are quite loud; the scale runs from 1-20, and distortion only becomes a problem on the last notch. While a separate system is always preferable, the V302H's speakers are definitely usable in a small meeting room or classroom if there's nothing better available.

**Quiet fan.** Even at full blast, the V302H doesn't make much noise during operation. In Eco mode it might as well be silent - and from more than about two feet away, it is. High altitude is a touch loud, but even then it's very manageable. Volume is comparable to the air purifier I have running in my testing room, and like the purifier, fan noise is low in pitch and easy to ignore. You can easily speak over the high-altitude fan in a normal voice even when you're right next to it.

**Thoughtfully designed.** The little details on the V302H all seem thought-out and well-planned. The lens cap is tethered. The lens barrel is recessed in the case to prevent damage, as are all of the connection ports. On the side of the case, the exhaust vent is labeled "HOT". This is the kind of thing that makes the V302H user-friendly even for first-time users. That's beyond important in a business context, and it could lead to fewer IT call-outs and more productive (and therefore shorter) meetings.

**Full HD 3D.** The V302H is compatible with all 3D formats listed in the HDMI 1.4 specification. So whether you're using a Blu-ray player or some other 3D source, the V302H will handle it.

#### **Performance**

**Light output.** Our test sample of the V302H measured 2920 lumens in its brightest mode out of a rated 3,000 lumen maximum. For all intents and purposes, that's dead-on accurate.

The brightest mode, called High Bright, disables Eco mode and retunes the projector for maximum (greenish) white light output. Disabling Eco mode is another sign that this projector has been thought through from beginning to end - why would anyone select the brightest image mode and then reduce lamp power?

The other image modes are Presentation (1894 lumens), which has a slight blue tint but excellent balance; Video (960 lumens) and Movie (1075 lumens), which maximize contrast; sRGB (659 lumens), which has the best color accuracy; and Blackboard (1985 lumens), a mode specially tuned for getting a reasonable image when projecting onto a chalkboard instead of a screen.

**Contrast.** Some folks might be scared off by the V302H's 8,000:1 on/off contrast rating. They shouldn't be. In reality, any ambient light in a room will reduce any projector's contrast to a fraction of even that conservative number, so tuning a presentation projector for superdeep inky blacks is about as effective as buying a Ferrari and only driving it through school zones.

In reality, the V302H is not at any contrast disadvantage against its competitors, regardless of the specs. The image appears bright and three-dimensional, and in a room with the lights dimmed, the V302H does an excellent job with film and video for a projector in its class. Ignore the specs.

**Color.** We did not subject the V302H to a full painstaking calibration, because the people buying this projector likely don't care if the color adheres exactly to the standards. We did notice, though, that the V302H's color looks believable in all of its image modes, including the bright ones. Some other projectors start looking obviously out of whack in their brightest modes, and it's not difficult to see the difference between them and the V302H. The bottom line is that you aren't likely to switch to a new image mode and come across an image that looks completely artificial or out of whack.

**Detail and Clarity.** The NEC V302H gives you a razor-sharp HD picture with no sign of artifacts or other ugliness in the image. And whatever the cause, it manages to keep the picture completely in focus from edge to edge, which is something many other inexpensive presentation projectors have trouble doing.

**Input lag.** Using a native 1080p/60 input signal over HDMI, the V302H measured 33 milliseconds, or two frames, of lag. This is a very common measurement for DLP presentation projectors and does not represent any unusual challenges for the intended use. Gamers looking for a super-quick projector could do better, but they could also do much worse.

### Limitations

**Long throw.** While the V302H has a fairly standard 1.2:1 zoom, it has a longer throw distance than some other 1080p projectors built for this market. The closest the V302H can sit in order to display a 100" diagonal image is nearly eleven feet. That's fine for conference rooms and classrooms, but it does mean portable/rolling cart use will be a little tricky without using small image sizes.

**Less portable.** In the marketing literature, NEC talks about the portability of the V302H. While the projector is certainly portable in the absolute sense, it weighs 6.5 pounds, while

most portable projectors weigh less than five. As we mentioned before, it also has a relatively long throw distance. In small rooms, this can be tricky, especially if you place the projector near the front of the room for ease of access but still want a large image. So while the V302H is a very capable projector, portability is not its best feature. That said, if you know what you're getting into and consider the limitations in advance, the projector does function well as a portable in larger rooms.

#### Conclusion

In a market full of "me-too" projectors all clamoring for a slice of market share, the folks at NEC have done something remarkable. Despite reviewing more sub-\$1000 1080p projectors than I'd care to think about, the NEC NP-V302H feels new and different. The little details - the tethered lens cap, recessed barrel, clearly marked exhaust vent, well-formatted menus - add up to give the V302H a feeling of freshness and thoughtfulness. Add that to the projector's great picture quality and you get a high-performance 1080p projector for business and education use that is both fully-featured and reasonably priced.

(08/20/15 - 11:59 AM PST)
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