

New TV tech promises better picture for mainstream consumers

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If all you want for Christmas is a TV whose picture hops off the screen, this could be your year.

Televisions that promise a significantly improved picture will be available this holiday season at mainstream prices for the first time. Using a technology called HDR, or high-dynamic range, the sets can display more dynamic colors than older TVs and will allow you to see more details in both bright and dark areas of the screen.

HDR is only available on TVs that offer 4K - or ultra-high definition - resolutions. It promises to do what 4K generally doesn't - offer a noticeable difference in picture quality.

"You'll know it when you see it as to how good the 4K-HDR combination looks," said Paul Gray, a London-based principal analyst with market researcher IHS Market Technology. "The display is very arresting when done properly."

When HDR sets debuted last year, the technology was limited to premium models. That's no longer the case. In pre-holiday sales, you can find 4K HDR sets for as little as \$450. To be sure, that was for a 40-inch model from Hisense, a second-tier Chinese brand.

But even sets in bigger sizes from top manufacturers are available at affordable prices. Best Buy was recently offering a 55-inch Samsung HDR TV for \$900, a 65-inch Sony model for \$1,200 and a 75-inch Sony



set for \$3,000.

Besides the low prices, another thing that could drive sales of HDR TVs is the growing amount of movies and TV shows optimized for HDR. Netflix, Amazon and Vudu all offer HDR-enhanced videos. Consumers also will find a growing number of HDR movies available on Blu-ray disc.

"We are starting to get into this virtuous cycle of new technologies being available to consumers, new formats being offered to give you something to watch on your brand-new TV set," said Gray.

While more programming and cheaper TVs are hitting the market, analysts are skeptical that a consumer rush on HDR sets is imminent. While the 4K HDR sets offer dazzling pictures, the increase in quality is not nearly as dramatic as the leap from older TVs to the first generation of flat-screen sets.

"The experience is noticeably better, but it's not a gigantic, dramatic difference," said Ben Bajarin, a principal analyst with Creative Strategies, which tracks the tech sector. "'Do I really need this?' is the question that consumers will ask themselves this holiday."

Plus, while the number of HDR videos is increasing, they are still few and far between. Apple's iTunes doesn't offer any HDR videos. Nor does Hulu or most of the other major streaming services.

Another factor that could hold up sales is a nascent standard war between different flavors of HDR technology. Some sets and online video services support a standard pushed by Dolby called Dolby Vision. Other TVs and video services support a standard called HDR10 that was developed by a coalition of set manufacturers. Dolby Vision promises even a wider range of colors and far greater contrast than HDR10, but



right now HDR10 is more widely supported.

Netflix and Amazon support both standards. Blu-ray DVDs right now only support HDR10. But video streaming service Vudu only supports Dolby Vision.

Making the right choices for a 4K HDR set won't necessarily be easy. First of all, what about an ideal price point?

One other complication: Even if a TV set is marketed as "HDR-compatible," it may not actually offer you a better picture. In some cases, that label may simply mean it can display content in that format, albeit in an unenhanced fashion.

One item to look for: nits. The more nits, which refers to the brightness of a display, the better. Consumers should seek TVs with a spec of at least 1,000 nits, said Paul Gagnon, San Diego-based director of TV research with IHS.

Plus, there's the old rule of thumb for buying a TV: Experts recommend shoppers seek out high-end models produced by well-known manufacturers.

"There are a lot of claims made by companies around specifications, but the consumer needs to make those judgments in person," Gagnon said. "It really pays to go into a store and look at demonstrations. We all perceive images differently.

"You really need to be there in person to see if it's worth the difference in price."

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