

Review: New, smarter light bulbs do more than just turn on

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In the near future, the light bulbs in your house may do a lot more than turn on and off.

Thanks to new technologies and market changes, light bulbs are taking on new features. You can already find some in stores that have built-in musical speakers and others that can be controlled with smartphone apps. Other bulbs that are coming soon will include things like built-in cameras and smoke detectors.

"We're starting to move into - I'll call it the smartness era" for light bulbs, said Dean Freeman, an analyst who covers so-called smart lighting and the Internet of Things for Gartner, a tech research firm. "It's been evolving very rapidly."

Philips' Hue provided an early glimpse of the future possibilities of light bulbs when it debuted nearly three years ago. Using a <u>smartphone app</u>, you could not only dim the Hue bulbs and turn them off and on, but also direct them to change their color from white to red to blue and everything in between.

But smart light bulbs are quickly evolving to do more than just illuminate a room. On Best Buy's website, you'll find a variety of light bulbs that have built-in speakers. You can beam music to them from your smartphone via a Bluetooth connection.

Amazon offers some bulbs that have integrated Wi-Fi radios that can



extend the coverage of your wireless network. They promise to allow you to access the Internet in the corners of your house that your Wi-Fi router doesn't reach.

And other enhanced bulbs are in the works. At the Consumer Electronics Show, Sengled, a Chinese lighting company, showed off a bulb it calls Snap that will include a built-in security camera and a Wi-Fi radio. The bulb would allow you to keep an eye on your house without needing to install any new wires. Meanwhile, French design firm Bell & Wyson has integrated a smoke detector into an LED bulb. The smoke detector has its own battery that allows it to continue to work even when the light is off or the power is out.

You may see bulbs tricked out with other features in the near future.

Bulb manufacturers and electronics companies are "picking up on the opportunity," said Will Rhodes, an analyst who covers the lighting industry for research firm IHS. "They're looking at ways they can add value to these existing bulbs."

Manufacturers are motivated by a change in the lighting industry. The move to more efficient lighting - and particularly LED bulbs - has been a short-term boon to electronics makers because it's encouraged consumers to go out and buy new bulbs and because the bulbs tend to cost significantly more than older incandescents.

But the switch to LED bulbs also poses a longer term problem for manufacturers. Because the new bulbs are designed to last years longer than traditional light bulbs, companies face the prospect of plummeting sales in the not-so-distant future.

In response, manufacturers are looking to add new features to bulbs, both to encourage consumers to trade up to pricier lighting and to lure



them back to buy new bulbs in the future even before their old ones go bad.

Although there have been a few connected compact fluorescent bulbs, LEDs are much easier to turn into smart lighting because they are based on semiconductors, the same material as computer chips, and the bulbs typically have a collection of chips and other electronics inside of them. It's relatively easy to add other chips and electronic modules like radios and speakers.

It's still early days for enhanced light bulbs. IHS estimates about 1.5 million connected bulbs were sold worldwide last year, of which a small subset had things like speakers in them. That's out of a total market of more than 1 billion bulbs sold.

But the firm says they are catching on quickly. It initially forecast that 2 million connected bulbs would be sold this year, but plans to revise its estimate after getting some early indications of strong customer demand.

"Consumers are picking them up even faster than we thought they were going to," said Rhodes.

To be sure, there are some good reasons you may want to hold off on buying a smart light bulb, at least for now. For one thing, they're pricey. You can expect to spend at least \$15 for a standard-sized connected <u>light</u> <u>bulb</u>, compared to as little as \$2.50 for a basic LED bulb. And if you want one with a Wi-Fi repeater or a speaker, you're looking at a \$50 price tag or greater per bulb.

Another problem is that the bulbs aren't as easy to operate as simply flipping a switch. Many require you to use particular apps that won't work with competing bulbs. And many of the simple connected bulbs don't have Wi-Fi or Bluetooth radios, so you can't talk to them directly



with your smartphone or computer. In order to use your phone to dim your lights, you'll need to get a gadget called a hub or a gateway that can transmit the Zigbee or Z-wave signals those bulbs understand.

But costs will likely come down in the near future and standardized ways of connecting to smart bulbs will likely be developed. And one day, we may wonder how we ever got by with bulbs that just turned off and on.

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