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In a 2010 survey, the Federal Communications Commission (FCC) found that 80 percent of people with broadband Internet in the U.S. didn't know the speed of that broadband connection [source: Gurin]. In addition, some may be surprised to learn that they're only getting a fraction of their service's advertised maximum speeds. For example, your Internet service provider (ISP) might have you on a plan that says "up to 30 Mbps down" while you're really only getting download speeds of around 19 Mbps. Web sites like speedtest.net offer free tests for both the upload and download speeds of your Internet connection, but be cautious of some of the tempting "start" buttons in ads on the sites -- many are actually well-designed ads that look like they're part of the site's test mechanisms. Before you call your ISP about any discrepancies, remember that the plan you're on is based on a maximum value. Your actual results are affected by factors like your ISP's peak Web use times, the number of people sharing your line and your distance from the ISP's fiber pipeline. When it comes to streaming HD video, you'll need a broadband speed, or bitrate, that's capable of handling a progressive scan rate of 720p. Since your HD-capable screen is refreshing the screen 60 times per second, this means ensuring that all those video frames are received and ready to play before they're needed. Your computer or other device will cache all the incoming data and queue the video frames so they're ready for smooth playback. From there, determining the speed you'll need seems to be a matter of math. That math, though, requires some idea about the size of the video file. This depends on how the file is encoded, more commonly referred to as the file type. A one-hour 720p video in the MPEG-2 standard might be 2.7 GB while the same video in one of the newest video standards, H.264/Advanced Video Coding (AVC), could be almost 13 GB [source: Digital Rebellion]. Thus, differences in file size could be one explanation for why different Web sites have different speed recommendations for streaming their HD content. Suppose the video you're streaming is one hour long, and the file size for that video is 6 GB. While a broadband connection of up to 10 Mbps lets you easily stream a lot of video content online, you'll want 15 Mbps or more for this six-gigabyte HD video. Here's a quick look at the math: Approximate megabytes: 6 GB = 6,144 MB (1 GB = 1024 MB)Approximate megabits: 6,144 MB = 49,152 Mb (1 byte = 8 bits)Number of seconds per hour calculation: 60 x 60 = 3,600Megabits per hour calculation: 49,152 / 3,600 = 13.65 Mbps When you're streaming HD content, also consider whether the connection jumps over a wireless router. If so, note that the connection speed could drop over the connection if the WiFi standard isn't fast enough. You'll want to avoid slower 802.11b connections, and the newest 802.11n is the ideal choice to keep up with faster broadband services. As with anything you do over your broadband connection, be sure to note whether your ISP will slow down or stop your service after reaching a certain bandwidth threshold. Some sites, such as Netflix, let you choose a lower playback quality to help you stay within those thresholds, even though it means giving up the higher definition. Also, make sure the hardware you're using isn't just HD-capable, but it has the processing power to cache and play video files in HD. For lots more information about your internet connection and streaming HD video, head on over to the next page. On the whole, gadgets designed for the connected home still have some convincing to do. Take smart thermostats that control your home's heating, for example: they're great unless they malfunction, as Google's Hive did earlier this year, to send temperatures soaring through the roof.Similarly designed to keep you safe but with no tanger of toasting your toes, Wi-Fi connected home security cameras are rising in popularity due to their ease-of-use and relatively low cost compared to traditional fixed models.SpotCam, a lesser-known name in the market, is looking to take on the main players with its SpotCam HD camera. It's a budget offering that comes with 720p recording and both free and paid-for cloud storage services. Competition is fierce, with Netgear's Arlo, Belkin's NetCam HD, Ring's StickUp cam, Nest's Dropcam and Withings' Home camera all vying for a place on your shelf. (You might also want to check out Parrot's Flower Power which is happier when nestled in a plant pot.)Amazon is currently selling the SpotCam HD for £119 in the UK and \$129 in the US (around AU\$8168). It has more than a whiff of Nest's DropCam about it, possessing a similar feature set but operated from a less polished software interface. It's also £40/\$56/74 cheaper, so if you're satisfied with the SpotCam's 720p recording quality (rather than 1080p which Nest offers) and don't require as many features, the SpotCam's lower price tag may make it the more attractive option.DesignThe Spotcam HD is more conspicuous than its Netgear and Belkin competitors - and it's even taller than the Nest DropCam. Clad in white plastic with a large black lens and grey SpotCam logo, it's one of the longer security cameras which makes it tricky to hide out of view.The camera's round base is wider than the camera itself, making it difficult to lay on a side; however, SpotCam has added the option to rotate the capture area so that you can mount the camera's base to a wall.Around the back is a switch used for configuring the SpotCam, alongside a power connector that plugs into the mains using an AC adapter on the end of a 10-foot long cable. The camera is light and easy to move around the house if you want to monitor different locations at certain times of the day.Setup and usageSetting up the SpotCam HD takes a matter of minutes, with the first positioning it to monitor the area you want to keep an eye on. I set it up to watch my dog wander around the living room, which will no doubt be one of the more common uses for this camera.Its 110-degree field of view is easily enough to monitor a medium-to-large sized room, though it's worth bearing in mind that the clarity of images increases the closer the camera is to objects. After plugging in the camera's power adapter to the mains, I was then able to run through the setup process and choose my home Wi-Fi router using the camera's software. Note that you can only connect the SpotCam to a 2.4GHz Wi-Fi network as 5GHz isn't supported.There are two ways to use the camera, either as a private or public device. Keeping it private means that only you can view your live stream, along with whoever you invite to watch it (by way of inputting one or more email addresses).Making your stream public means you've given your permission for SpotCam to embed your stream on its website. A quick visit to SpotCam's website lets you view a number of different streams, which at the time of writing include somebody's garden, an office in California and an aircraft hanger in New Zealand.PerformanceThe SpotCam HD produces clear images and a reasonably sharp picture, although it clearly doesn't pack as much detail as 1080p offerings such as the Nest DropCam. It works well at night too thanks to a nightvision mode that uses 12 high-power infra-red LEDs to light up objects, people and pets in the dark. Night vision mode is excellent and does a great job of illuminating what's in the room.Recording takes place automatically when the camera detects movement. Alternatively, you can watch a livestream and hit the record button manually to capture what's going on at any given moment. The SpotCam software can be configured to send alerts (with an accompanying snapshot) to an email address when it detects motion to let you know when the camera has captured activity, and motion sensitivity can raised or lowered. This comes in useful when you want to recieve more or fewer alerts.The camera has an in-built microphone that lets you have a two-way conversation with whoever is listening in on the livestream. Although it works, the amount of static produced muddles what can be heard making it difficult to have a fluid conversation without straining to hear.Final verdictSimple to set up, affordable and offering a decent level of video quality, the SpotCam HD is a no-frills entrant into the home surveillance camera market. Although it doesn't offer 1080p video recording like some of its competitors, its 720p quality is sufficient for capturing basic video feeds and sharing them with friends, family or the world. The SpotCam HD is, however, let down by poor microphone audio quality and a fairly basic software set that you need to tinker with for a while before you get truly comfortable with it. Rumours that all 360 avatars come with specs and pimples have yet to be confirmed Engadget HD is reporting that the upcoming revamp of the Xbox 360's interface - dubbed New Xbox Experience - will offer 'for the first time anywhere, streaming High Definition movies.Although you can already download HD movies to the 360 using Microsoft's own Live Marketplace, the Netflix service will be the first to offer movies streamed live in High Def.There will only be a small HD selection (around 300 titles) available on its launch date of 19 November, with pricing and resolution still to be confirmed.Netflix to hand HD to Microsoft firstThe launch of HD streaming on the 360 is quite a coup, as even subscribers to Netflix's own Watch Instantly portal won't be able to access the service initially.Naturally, the streaming of HD movies will be dependent on having a decent, uncontended broadband connection, such as can be found in many cabled homes in the US.The Experience will also bring avatars to the 360, as Microsoft targets casual gamers and kids alongside its traditional audience of bedroom gamers.Users will be able to set up simple avatars on the console, with an avatar store selling fancier clothes and features to follow. Don't count on being able to purchase Second Life-style genitals, mind.