

## **DIMAcast interview with Johnson Chuang, vice president of Aiptek**

**Jennifer Kruger, PMA Senior Editor:** Aiptek is doing some very cool things with 3D technology. In just a few weeks, consumers will be able buy Aiptek's new, affordable 3D HD i2 camcorder and new portable 3D device, which work independently of each other, to greatly expand the way people experience still and video images. Johnson Chuang, vice president of Aiptek, is with us on the DIMAcast today to tell us all about his company's latest 3D innovations. Johnson, welcome.

**Johnson Chuang, vice president of Aiptek:** Thank you. I'm glad to be here.

**Jen:** We're so happy to have you. Your company's new Aiptek i2 3D HD camcorder shoots 3D still images and videos. Tell us about some of the features of this device.

**Johnson:** The Aiptek i2 3D camcorder is the newest and greatest, and also affordable. Let me explain why it is so great. The reason why is, it's easy to use, and affordable. It works with all kinds of devices from 3D TVs, 3D PCs, and laptops using nVideo 3D Vision. It also works with 2D traditional TVs, using the red and cyan glasses, but we will explain that later.

We have a dual 5MP sensor that captures 3D videos and stills in HD, simple one touch recording. The LCD preview screen offers 3D viewing without glasses, so when the user uses the i2 to capture the 3D videos or photos, they can preview it directly on the 3D camcorder screen. Also, we have an HDMI output for direct connection to HDTV or even 3D TV, so customers using it can preview or playback the 3D contents directly through the TV. We support SDHC cards up to 32 gigabytes, so it's plenty enough to shoot video.

**Jen:** What is the 3D technology used in the camcorder? How does it work?

**Johnson:** Aiptek is using dual 5MP sensors to capture two images at the same time. It's similar to a human being's left eye and right eye. We're using side-by-side images and video clips. Side-by-side is very mature, and already existing for a certain period of time and supported by most of the 3D TV manufacturers and even 3D broadcasters. So this is what we use, side by side.

**Jen:** Aiptek's 3D-HD utilizes "Parallax Barrier" technology on its LCD preview screen. What does that do for users?

**Johnson:** We like to provide the 3D effect immediately after the user shoots video clips or photos, so they can preview the 3D effect on their 3D creations without 3D glasses. So the 2.4-inch LCD that comes with the camcorder will have a 3D effect. We use a technology called parallax barrier that shows the 3D effect without 3D glasses.

**Jen:** Users can also view their 3D images on just about any already existing 3D TV. How does Aiptek make that possible?

**Johnson:** The reason why is, we are not using very advanced or proprietary technology. We are using standard, mature technology. It's called side-by-side. Side-by-side is like human beings using the left eye and right eye to see everything. We use a left eye and right eye – two dual sensors – to capture images or video simultaneously. This is side-by-side, two images we compose to one frame, so one frame has two images. Using a side-by-side technology, because it is standard, supported and mature, supported by most broadcasters and the 3D TV manufacturers, so they have the processor to process and overlay these two images. Using their proprietary, because 3D TVs, some use polarized 3D glasses, and some use the active shutter glasses, no matter what kind they support, using their proprietary system the 3D TV comes with, you can view our 3D creations directly on your 3D TV. So this is the reason we work with everything, all different. The reason why is, we are using mature technology, proved technology.

**Jen:** I'm sure this is welcome news to people who own a 3D TV – any kind they have, they can view their images from their Aiptek device on it. What about people who don't have a 3D TV? How can they view their 3D creations on something larger than the camcorder's LCD screen, like their PC or a standard TV?

**Johnson:** This is a good question. Again, Aiptek is using another mature technology we call anaglyph 3D. It's like in the old days, people watch a 3D movie using red and cyan (blue) glasses. Since it's very mature, this is using the same thing: two images overlaid. We have software included in the camera that will convert it easily to red and cyan format. Then, the images you see are red and cyan. The user can wear the included red and cyan glasses to watch the video in anaglyph. It's in red and cyan format. So they can see the 3D

effect. This is also a mature technology. Because it is mature, it's easy to use. So most 2D TVs -- I would say all -- using our software to convert it to anaglyph, then the customer can use the red and blue 3D glasses to view the 3D effect on a 2D monitor.

**Jen:** That is fantastic.

**Johnson:** There is one little drawback I'd like to mention. The drawback of the 2D, why we need a 3D TV, is because with 2D TV, we can watch the 3D effect but the quality is not as good as 3D TV. Because we use color, red and blue, so you have a little bit of color distortion. Some people might feel dizzy or a headache when using the red and blue glasses. So this is a solution for an individual who is very concerned about the 3D, or would like to have a better output, a better result. 3D TV will have a better output, a better solution.

**Jen:** One thing people love to do with their videos is upload them to YouTube. Can YouTube viewers actually see videos captured on your new camcorder in 3D?

**Johnson:** Yes. This is related to the last question. People are viewing YouTube on a 2D monitor. As long as we offer anaglyph, the viewer can use red and cyan glasses, 3D glasses, to watch 3D effects on YouTube just using their everyday PC.

There are two solutions, actually. YouTube already provides a 3D conversion, so as long as we provide a side-by-side format, we upload to YouTube and YouTube can convert to 3D video and then the customer can share with the world using the red and blue glasses and see the 3D effect. The other solution is, we have software. This software offers a couple functions. One is a one-button upload of the content to YouTube 3D. The other one can convert to red and cyan or nVideo 3D Vision format. So after converting, you can upload to traditionally YouTube 2D, because we already converted to 3D, so the viewer can still view the 3D effect using the red and blue glasses. This is a solution for YouTube 3D.

**Jen:** That is very, very cool.

**Johnson:** Thank you.

**Jen:** Aiptek is also introducing a new Portable 3D Display, that works with pictures and videos captured on your 3D camcorder -- but also allows users to turn their regular 2D images into 3D. Please tell us more about this device.

**Johnson:** This device actually is using the technology called parallax barrier. It's the same as what we use on the LCD i2 camcorder display. Basically, with this one, we don't need glasses. You can watch the 3D effect without glasses. This will be a good companion with our i2 camcorder. Some people don't like to upload to YouTube and they don't like to convert. This unit will be easy to plug and play, just take a photo or video, take out the SD card, plug it into the display, and you will play the 3D effect directly. It is around an inch, so it's a good size for personal use. So we call it the 3D portable display. It's a good solution, easy for seniors or people who just don't like to use a PC or to use other stuff. It's easy to use.

**Jen:** Right. And people who don't want to wear glasses, too.

**Johnson:** Yep, and no glasses.

**Jen:** How do you see 3D technology like Aiptek's impacting the way consumers use images? Do you think 3D is a trend or a niche that will appeal to a certain segment of the market – or do you envision 3D becoming the standard for mainstream consumers over time?

**Johnson:** This is a very good question. Before I answer your question, I would like to give the credit to Fujifilm. Fujifilm's FinePix 3D is the world's first 3D digital camera. Not only Fujifilm, actually. There are many companies that are working together, Aiptek and others, we are trying to make this more, this 3D more mature. You see movies, TV broadcasters, TV manufacturers, even like nVideo, and some 3D imaging companies, like Fujifilm and others, they are working, everybody is working to make the 3D environment ready. I say environment, which means input, output and display all together. Not only ready, but make it affordable. There are some challenges. Like I mentioned before, some people when they're watching 3D movies or other 3D stuff, they feel dizzy or a headache. This is something the manufacturers still need to put effort to overcome, to release the pressure and make it more comfortable for viewing the 3D contents.

We believe that 3D is a trend. You see more and more 3D TVs coming up, 3D videos, movies coming out every year. And getting more popular. They're bestsellers. We believe it is popular. Consumers like to view 3D content. But there are some challenges, like limited contents, only limited to 3D Blu-ray discs ready today. And limited content is coming out in the near future. But Aiptek can help.

Aiptek's affordable i2 3D camcorder will help a user to create their own contents and share contents through YouTube 3D. This problem we can help.

Also, another problem I mentioned is that some viewers feel dizzy or a headache. This problem manufacturers and neuroscientists are working together to reduce this kind of drawback of headache or dizziness. And 3D TV today is still very pricey. I believe that coming in a couple of years, it will get more affordable. Also, some people don't like to wear glasses, 3D glasses, no matter if it is active shutter or polarized. So in the future, when 3D TV is without 3D glasses needed, that will be more convenient for viewers.

So we believe that 3D is a trend. There are more and more new release movies in 3D. And there are more 3D TVs coming up. The price is getting more affordable, especially YouTube 3D will make the 3D contents spread to the world and not only spread, it's a good platform to create personal contents, personal stuff. So what Aiptek can do is help make 3D contents not only personal and affordable but easy-to-use, easy to share through YouTube 3D and we did it strongly. 3D is a trend and it's affordable to explore in just a few weeks. Thank you.

**Jen:** Johnson, thanks so much for joining the DIMAcast today. The new 3D HD camcorder will be available Aug. 30 and new Portable 3D Display will be ready Sep 30, and they each carry a suggested price of \$199. If our listeners have a pair of 3D glasses lying around – and as we've mentioned, even the old fashioned cardboard variety with the red and blue plastic lenses will work – I highly recommend checking out the 3D videos and still images captured by the 3d HD camcorder. You can do that at the Aiptek website – just go to: [www.aiptek.com/3D/Camcorder/](http://www.aiptek.com/3D/Camcorder/)

Johnson, thanks again.