MOPIC - Providing Amazing Visual Experiences

About the Company

Established as an offshoot of Samsung Electronics in 2015, Mopic is a provider of a total solution for Light Field displays that realistically connects you to the world, simply through a display. Mopic's solution is used in various industries that require three-dimensional display, such as 3D endoscopy, simulation systems, automotive displays, microscopes, remote control systems, and metaverse.

Background

The world we see with our eyes is always three-dimensional (3D). However, commonly-used 2D displays compress the three-dimensional space into two dimensions, making it difficult for us to accurately sense the depth and distance of images. While 3D displays have been around for quite some time, they had shortcomings such as inferior quality, low usability of having to wear a head-mounted display (HMD) or 3D glasses, and high price.

Mopic's mission is to roll out high-quality Light Field 3D technology for the general public. As a result, its products, while having the appearance of an ordinary display, enable a realistic perception of depth that makes the user feel as if looking right out of a cockpit window, and scenes change along with the user's movements. Users just have to look at the display from anywhere they want, without wearing 3D glasses,

Mopic's technology is readily applied to a client's existing systems. The Light Field 3D display system is enabled just by adding a few components, and no changes in the client's system is required.

About the Product

Mopic's Light Field 3D display provides a three-dimensional viewing experience without the need for 3D glasses. Mopic also offers software that is compatible with any 3D content, as well as plugins that allow users to convert 3D content by themselves.

For Light Field 3D display to work, you just need to have three things in addition to your existing 2D display system: A camera to track the user's location. 3D optical lenses that act as 3D glasses, and an API that combines all the software elements needed to portray images in 3D.

The result is a stunning viewing experience, one that you have never experienced. The most realistic sense of depth and space is consistently provided regardless of the viewing position. Mopic's rich experiences and technology range from content optimization and 3D image software to overall hardware design.

A case in point is Mopic's ability to apply 3D disp-

Application of Mopic's Light Field 3D Display Solution to a Digital Microscope

Application of Mopic's Light Field 3D Display Solution to a Virtual Meeting System

lays to virtual meetings, which allows users to talk to each other as if they are in the same room with only a window between them.

Mopic is also creating incredible customer value by applying its 3D solutions to 2D display systems. Our software APIs seamlessly connect to 3D displays and portrays a realistic sense of depth and excellent resolution.

Mopic's 3D technology is also used in endoscopic surgery. An accurate sense of depth is critical for surgeries that require high precision. Currently, surgeons operate by using 3D monitor glasses that display 3D images captured with endoscopic cameras. Currently, surgeons at Seoul National University Medical Centers are training by watching recorded 3D surgeries with Mopic's glasses-free Light Field 3D display devices.

Competitive Edge and Business Strategy

Mopic's business model aims to provide what customers need. We are working with excellent professional manufacturing partners and have built a very refined high-quality supply chain.

Mopic can supply a wide range of Light Field 3D software and hardware samples of various form factors in a modular way, giving customers the opportunity to try new things without worrying about costs. This is the unique strength and competitive edge of tech startups that use their own technology and have a quick decision-making process.

Mopic has extensive 3D development experience, including high-tech 3D quality analysis and design tools and highly scalable software libraries. The fact that global leaders such as Google and Samsung have chosen Mopic's technology is a testament to its know-how and infrastructure.

Future Plans

In Korea

- Jointly developing a gaming smart display with Samsung Electronics.
- Signed a five-year system supply contract with the Smart Simulation Center of Seoul National University Bundang Medical Center
- The objective is to command a majority share in Korea's hospital simulation systems market.

Worldwide

- After being selected as Google's strategic tech partner, Mopic is currently supplying its Light Field 3D display module to Google.
- As an official partner of Germany's Solectrix, Mopic is supplying its Light Field 3D display as an ODM.
- Currently working with the world's top three pachinko machine makers to display 3D images on general pachinko machines.

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** The opinions expressed in this article are the author's own and do not reflect the views of KOTRA.*