

**World first true 4K2K ARVR HMD technology opened a new window to view the world.**

### Keywords:

- Virtual Reality, Augmented Reality, Head Mount Display, Large Field of View, Super Resolution, High Brightness
- 3D object perceiving, Immersive Experience, Virtual World Manipulation and Interaction

### Problems addressed

- Under the era of information explosion, people need to process more and more data every day.
- Smart mobile device such as smart phone is unable to provide first perspective information.
- Existing head mount display on the market suffers from low resolution, low field of view and low brightness. User is unable to effectively obtain adequate information or unable to have true immersive experience.

ASTRI ARVR compatible 4K2K HMD address these pain points through innovative birdbath optical design solution.

### Innovations

**ASTRI designed world first true 4K2K ARVR compatible HMD enables high resolution, high brightness, large field of view, true 3D experience to the user.**

The innovation outline:

- High Resolution: 3840x2160 ( single eye)
- Large field of view: 70 (D)
- Low distortion: <3.5%
- Compact size: 150x30x73mm
- Cost effective
- High color uniformity

### Key impact

- High brightness enable outdoor usage
- ARVR compatible feature fit for various application condition
- Large FOV, true 3D and high resolution enable deep immersive experience for education and training.

### Innovation snapshot



ARVR Compatible 4K2K HMD

### Project completed

- 2021

### Applications

- Education
- Smart Industry
- Logistic
- Smart Construction

### Patent(s)

- US App. No. 17/395,858 and  
CN App No. 202180002794.3

[ASTRI Patent Search](#)

### Commercialisation opportunities

- IP licensing
- Technology co-development

### Contact details

Director, Commercialisation  
Priscilla Yeung  
Email: [priscillayeung@astri.org](mailto:priscillayeung@astri.org)  
Telephone: (852) 3406 0280