



ENHANCED HUD EXPERIENCE

HEAD-UP DISPLAY WITH LARGER AND CLEARER IMAGE - NOT ONLY FOR CARS



Conventional HUD solutions are only able to display information in a very limited, few-square-inch area of the windscreen without suffering from various optical errors, such as ghost images. Moreover, the projected image can typically only be seen from a small eye-box, and many solutions can only display monochromatic images. Our groundbreaking technology aims to make driving safer and increase user experience by eliminating these limitations and achieving a near-immersion level goggle-based augmented reality (AR).



SOLUTION

With our technology (patents pending), the size of both the projected surface and the eye-box can be significantly increased (larger viewing angle, up to +9° vertically and +30° horizontally), with no ghost image present. The novel illumination system also effectively blocks the glare light of external light sources (eg. sunshine, street lamps).

TRL 4 Technology validated in lab (breadboard model ready, prototype is being finalized)

SEEKING one or more industry partners to further develop the technology and for licensing purposes.

We have ample expertise in optical design and further ideas to improve or customize the solution.

PUBLICATIONS Pál KOPPA, Ábel SULYOK: *Elimination of ghost image in expanded viewing angle head-up display systems*, Opt. Eng. 59(9), 095101 (2020)

BENEFITS

- Up to 5 times larger projected surface
- Larger eye-box
- Colorful and color-proof image
- No ghost image
- More authentic AR effect
- Glare free projection
- Small volume

APPLICATION

- Upper class and upper secondary class automotive vehicles
- Aircraft (civil aviation and military)
- Ships and other watercraft
- Autonomous vehicles (entertainment systems)

INVENTORS

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INTELLECTUAL PROPERTY

Priority HU patent applications:
P1900393 (filed on 21 Nov 2019)
P2100167 (filed on 22 April 2021)
PCT application PCT/HU2020/050046 (filed on 8 Oct 2020)

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