

May 27, 2021

## Panasonic's Large-screen WS HUD Incorporated in the Mitsubishi Outlander

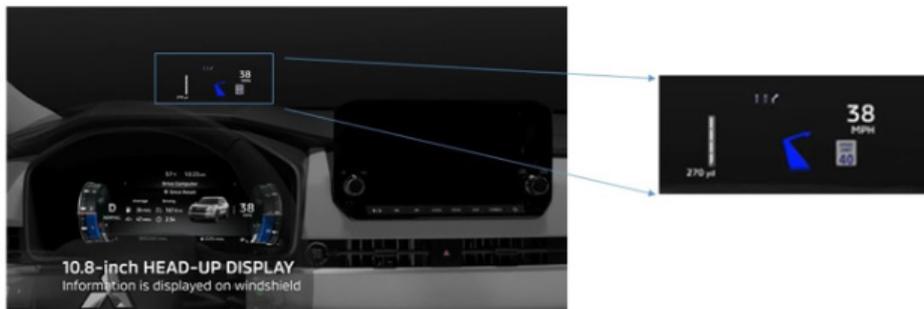
**Osaka/Tokyo** - The large-screen HUD (Head-Up Display) developed by Automotive Company of Panasonic Corporation is installed in the Mitsubishi Outlander, a new crossover SUV produced by Mitsubishi Motors Corporation, which was released in the U.S., Canadian, and Puerto Rican markets from April this year. This is the first time a Panasonic WS HUD has been used by Mitsubishi Motors, and the first time for them to use a WS (windshield) type HUD.



Outlander (Photo courtesy of Mitsubishi Motors Corporation)



Appearance of HUD



HUD screen image projected onto a windshield (Photo courtesy of Mitsubishi Motors Corporation)

The HUD is a system which presents a variety of information such as vehicle speed, navigation instructions, and MI-PILOT ASSIST\*1 driver assist information in the driver's line of sight by projecting it on the windshield. Since the display is projected near the center of driver's field of view, it reduces the burden on the driver by reducing eye movements and enhances the smooth interaction between driver and system.

\*1 MI-PILOT ASSIST: Driver assistance technology for highway use in single-lane traffic developed by Mitsubishi Motors Corporation

With its expertise in optical technologies acquired through development of digital cameras, Panasonic has applied the high precision free-form mirror and the high-intensity PGU (Picture Generation Unit) technologies to the HUD, successfully providing a large, bright, sharp screen with minimal distortion (field of view: 7 degrees × 3 degrees).

Overview of the developed technologies:

## (1) High precision free-form mirror

Panasonic's HUD uses a high precision free-form mirror to which the company applied its lens design and molding technologies originally developed for digital cameras. This minimizes the HUD unit while allowing projection of a low-distortion image on the large screen in the limited space in the vehicle.

## (2) High-intensity PGU

Panasonic's proprietary backlight design for the HUD, which was developed based on the lighting technology for LCDs, provides the drivers with a clear image even under conditions that might have made it difficult to see the display, such as under direct sunlight or while wearing sunglasses.

Panasonic strives to take a leading position in the field of HUDs, which are expected to see widespread use in the future. Leveraging the strength in the development and delivery of HUDs, Panasonic will contribute to the creation of safe, secure, and comfortable driving environments.

\* The images are fit and composited for convenience, so they may not be exactly the same as actual ones.

## Media Contact:

Public Relations Section, Panasonic Corporation Automotive Company

<https://news.panasonic.com/global/contacts/>

### About Panasonic

Panasonic Corporation is a global leader developing innovative technologies and solutions for wide-ranging applications in the consumer electronics, housing, automotive, and B2B sectors. The company, which celebrated its 100th anniversary in 2018, operates 522 subsidiaries and 69 associated companies worldwide and reported consolidated net sales of 6,698.8 billion yen for the year ended March 31, 2021. Committed to pursuing new value through collaborative innovation, the company uses its technologies to create a better life and a better world for customers. Learn more about Panasonic: <https://www.panasonic.com/global>.

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