Center display with seamless controller and gesture recognition

シームレスコントローラ、ジェスチャー操作搭載センターディスプレイ

Aim

・A connection of the display and the seamless controller provides the efficient use of the display space.

・Some operation can be done by gesture input.

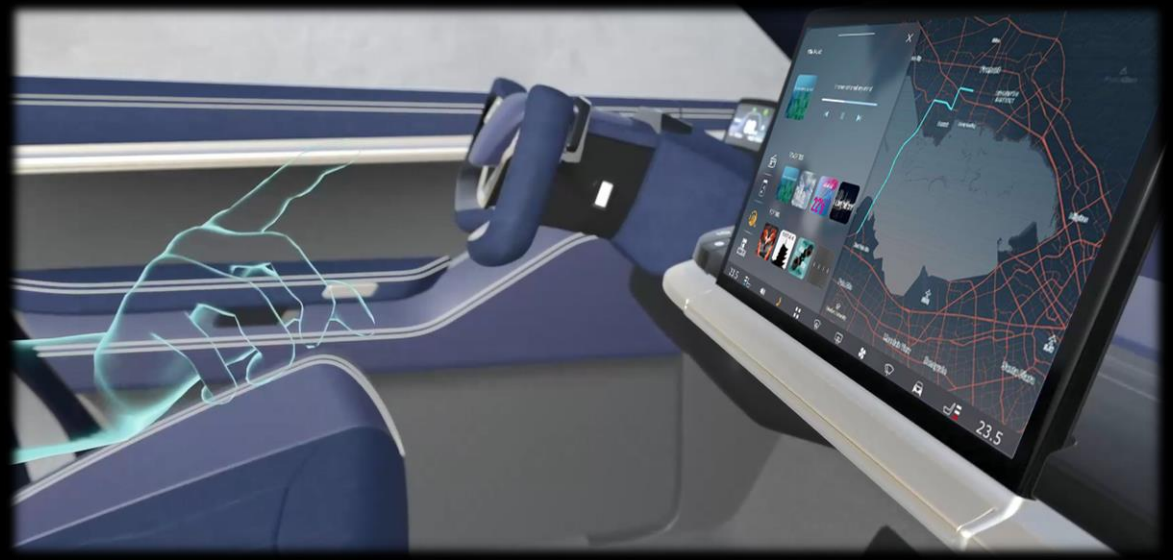
Outline

・The capacitance detecting seamless controller is installed beneath the display.

・Hand gestures and an approaching finger are recognized by contactless capacitance detection technology.

※This is a joint development with Alps Alpine.

・An icon is enlarged by putting the finger on it.
・Functions are switched by flick.



・Contactless gesture input (for some functions)
・An icon is enlarged by putting the finger on it.

Technology

Seamless Controller Technology

Functions shown on the display can be operated by the detection of a finger position and the mechanical confirmation of the decision. Patent applied

(The display does not respond just by a finger touch; the mechanical confirmation of the decision gives a clear feedback to the display.)

Detection of finger position

+

Confirm the decision

Application

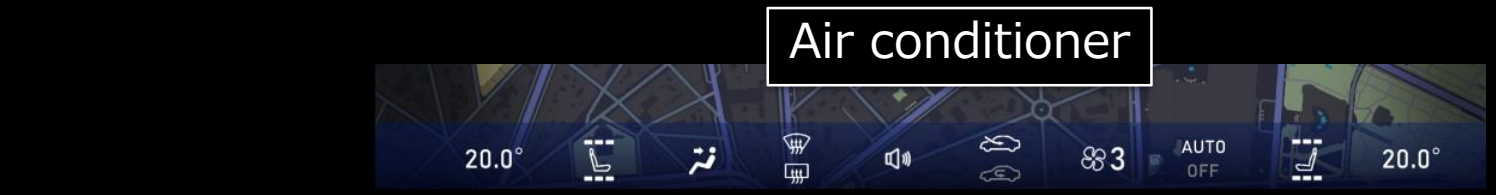
Efficient use of display space

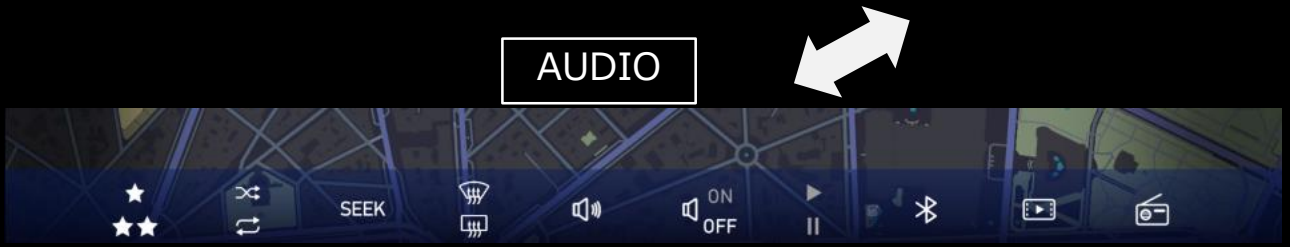
・The icon of a function is enlarged only when a user touches the seamless controller (when a user has decided to operate the display).

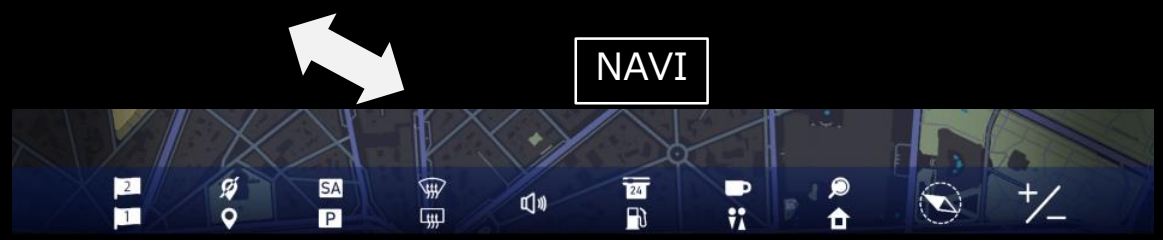
or

Function switching

・Various functions can be operated in a single device by switching functions by flick







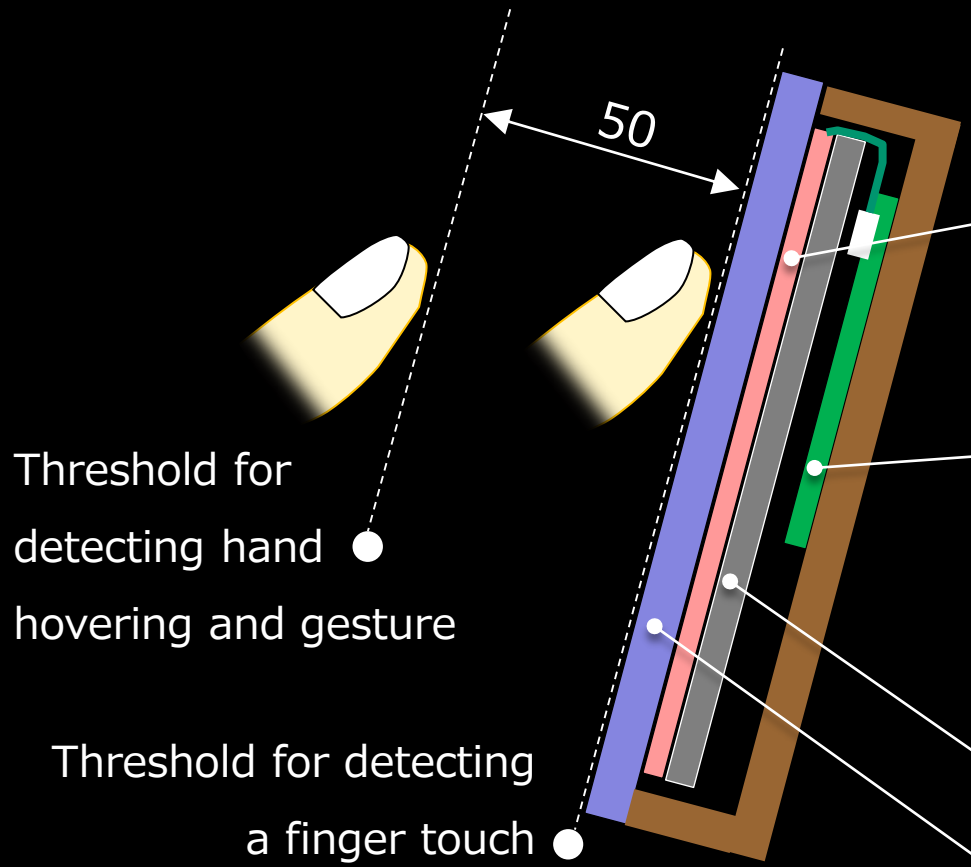
・Functions can be arbitrarily assigned by GUI, OTA available, user-customizable

・Available for smartphone-like operation, such as swipe for volume control

Technology

Hand hovering and gesture recognition by contactless capacitance detection technology

A finger or hand 50 cm away from the display can be detected by the capacitance detection technology that is overwhelmingly sensitive and excellent in noise resistance.



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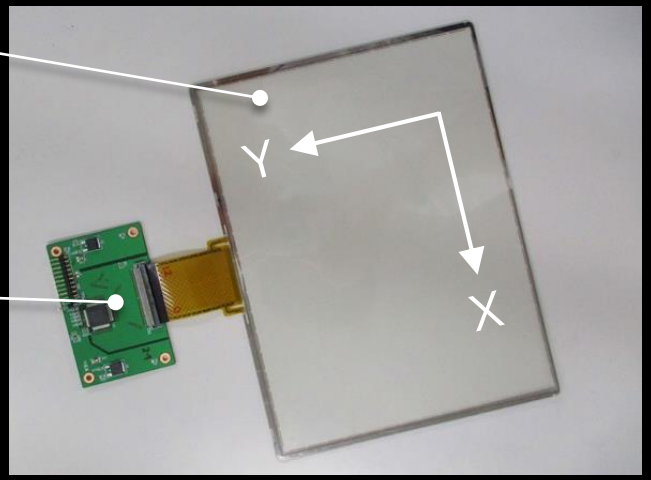
Touchpanel

Hovering and gestures are detected from xy coordinates



Touch control circuit

Noise resistance improved by an absolute self-capacitance sensing IC

- Two-step operation, non-touch and touch interactions, can be detected based on capacitance