

## Gausium Celebrates CES Debut with Its New-Generation Autonomous Navigation Engine

LAS VEGAS, USA, January 11, 2023 /EINPresswire.com/ -- Gausium, a leading company of <u>autonomous</u> <u>cleaning and service robots</u>, made its debut at the world's most influential tech show CES 2023 in Las Vegas. During the show, Gausium displayed an array of robot models and introduced for the first time its selfowned autonomous navigation system named "GMind X".

According to the speaker of Gausium, GMind X adopts a multimodal mapping and localization framework integrated with multiple machine learning models to support long-term safe autonomous operation in changing environments. The multimodal framework is a fusion of CV-SLAM (ceiling vision-based simultaneous localization and mapping), V-Reloc (visual relocalization), Ground Intensity Localization and WIFI Positioning — all developed by Gausium's in-house tech team.



Gausium booth at CES 2023



Gausium Phantas

## Particularly, WIFI Positioning is a new

feature that will be available by the first half of 2023. Based on WIFI fingerprints, the localization system enables the <u>Gausium service robots</u> to precisely identify floors working in multi-storey buildings, especially in hotel environments where the identical floor plans made vision-based localization methods unreliable for floor identification. According to Gausium, the WIFI positioning system also allows operators to position themselves via mobile devices, and so they can "summon" the robots to come over for occasional tasks.

Another highlighted feature of the navigation engine is the deep-learning-based environmental perception. It is claimed that the algorithms are trained with millions of real-world images and that the empowered cleaning robots are able to recognize types of obstacles and garbage with 99% accuracy.

Exhibited on a platform in the middle of the booth, Phantas, the latest robot product of Gausium, grabbed the most attention from the visitors. According to Gausium, this <u>compactly-structured commercial cleaning robot</u> is developed specially for small and medium-sized facilities. It integrates multiple cleaning modes to suit diversified flooring materials. Driven by AI deep learning, Phantas can detect waste and perform autonomous spot cleaning, and recognizes obstacle types to make smart avoidance decisions. The robotic floor cleaner, officially released in May 2022, was approved by the cleaning industry with the top honor ISSA 'Innovation of the Year' Award five months after its launch.

As a SLAM-based autonomous navigation system, GMind X is applicable to a broad range of indoor mobile service robots. It has fueled Gausium's fast product line extension in the past few years along with the company's other in-house technologies. By leveraging the highly scalable robotics software useful to a multitude of product areas and business units, Gausium will be able to meet a wider scope of market needs in the future.

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