



Gausium Product Catalogue



PROFESSIONAL | RELIABLE | SMART

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About Gausium

Gausium (alias "Gaussian Robotics") is a leading smart solutions provider of service robots. It designs, develops and manufactures autonomous cleaning and indoor delivery robots with AI-based autonomous navigation and automation technologies.

Founded in 2013 out of a passion for autonomous driving, Gausium Robotics built its class-leading autonomous navigation based on advanced SLAM technology and integrated it into cleaning machines in 2017. Gausium has since committed to providing total solutions of autonomous floor cleaning to meet different application requirements of various industries and scenarios.



40⁺
countries

150M^{km}
kilometer cleaning track

180⁺
patents

2,000⁺
customers

Gausium sets the industry benchmark with currently the world's most comprehensive commercial cleaning robot portfolio covering the functions of scrubbing, vacuuming, sweeping, dust mopping, degreasing, sanitizing, etc.

With a leading market share, the Gausium cleaning robots have been deployed in over 40 countries across 6 regions, recognized by thousands of satisfied customers with millions of autonomous operational hours accrued and billions of square meters covered.

Milestones



Leader in Robotic Cleaning Solutions

01. Cutting-Edge Productivity



02. Smart Avoidance



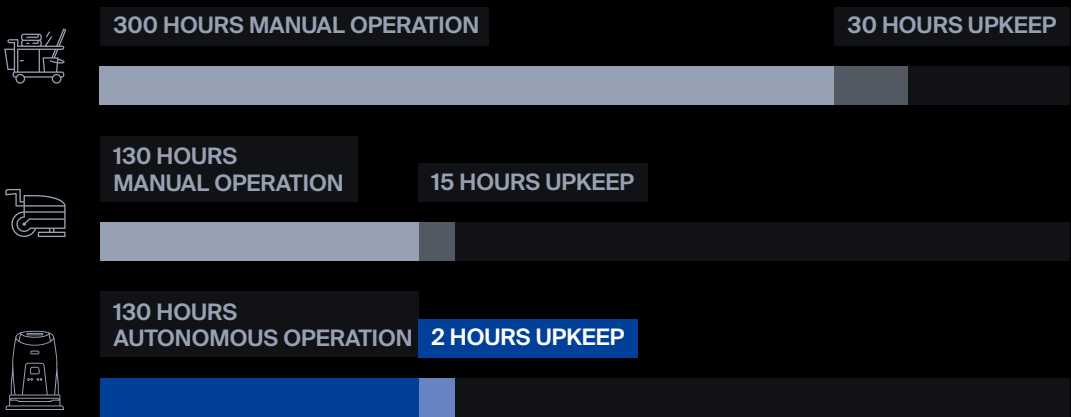
AVOIDS OBSTACLES AND CONTINUES CLEANING






REPLANS THE PATH WHEN BLOCKED BY OBSTACLES

03. Gausium Robots Compared to Manual Cleaning & Manual Scrubber

To clean 5000 sqm daily for 1 month



-  Autonomous operation(no man-hours required)
-  Manual operation(man-hours required)operation(no man-hours required)
-  Upkeep (man-hours required)

Gausium Full Stack Technology



Algorithm

- Visual-LiDAR SLAM
- Environmental Perception
- Flexible Path Planning
- Smart Avoidance



Cloud Platform

- Statistics
- OTA Upgrade
- Remote Control
- Task Scheduling



Application

- All-embracing Cleaning Operations
- IoT Integration
- Docking Stations

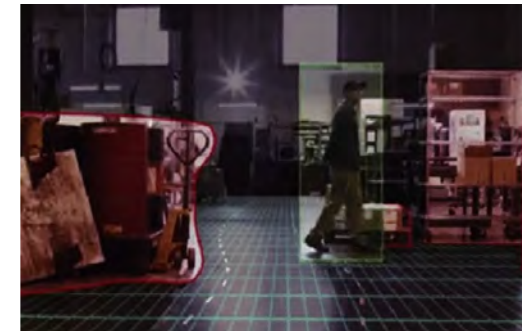


Data

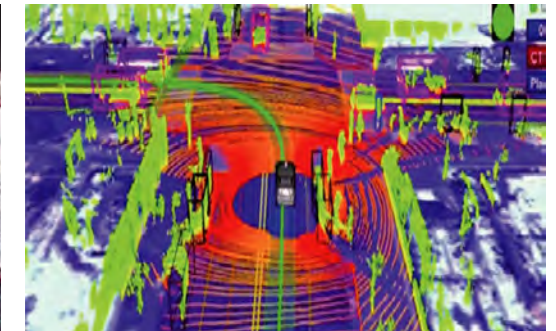
- Digital Management
- Predictive Maintenance
- Simulation

Easy to Use

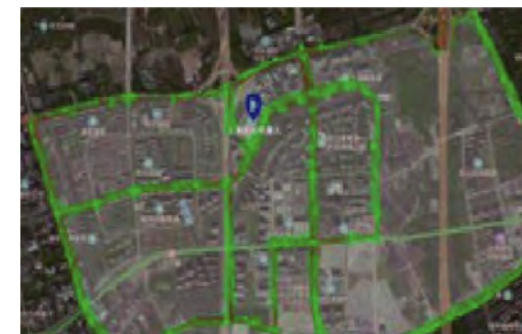
Our technology allows the operator to operate the robot with minimal training. As a reliable co-worker, Gausium robots have all the features you would expect from an autonomous robot.



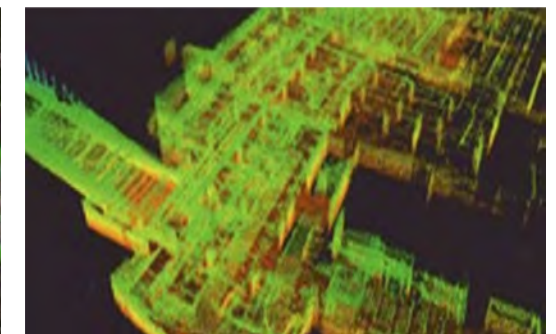
ENVIRONMENTAL PERCEPTION



DYNAMIC MAPPING



UNLIMITED MAPPING



3D MAPPING

- Only 30 minutes to map 3000 sqm (32,292 sq.ft)
- Maximum mapping of 1 million sqm (10.8 million sq.ft)

Revolutionary SLAM and Perception

SLAM in the past mainly worked on mapping and positioning, but now Gausium utilizes Machine Vision to extract semantic information, upgrading data association from traditional pixel-level to object-character level.

Semantic SLAM advances the applicability of SLAM technology in environment perception, navigation and path planning, enables robot to perceive the surroundings with significantly higher precision, smarter obstacle detection and avoidance capability in complex or dynamic environment.

Commercial Environments

- ▀ Shopping malls
- ▀ Supermarkets
- ▀ Office buildings
- ▀ Hotels



Institutional Environments

- ▀ Transportation
- ▀ Hospitals
- ▀ Schools
- ▀ Public service facilities



Industrial Environments

- ▀ Logistics
- ▀ Warehousing
- ▀ Manufacturing plants



Gausium Operation System

Easy Deployment

Mapping, editing and task creating can be done by the operator on the robot without external assistance. Deployment of a Gausium robot requires less than 1 hour at a 3000 sqm (32,292 sq.ft) site.

Natural Navigation

Gausium robots performs robustly in complicated environments. No extra assistance is needed for guiding or positioning.

Real-Time Auto Cover

Gausium robots dynamically maps and plans cleaning paths to maximize cleaning coverages in a changing environment.

Flexible Task Combination

Gausium robots uses multiple methods to create cleaning paths: Teach & Follow, Sketch, and Real-time Auto Cover. Cleaning tasks can combine unlimited paths flexibly to achieve the best results in complicated environments.

Smart Avoidance

Safety is our first priority. State-of-art AI perception technology can detect moving and static obstacles from 2cm (0.8 in) wide and 6cm (2.4 in) tall.

Recovery

Gausium robots can resume previous unfinished task after interruption.





Phantas

Product Introduction

Phantas is an AI-powered floor cleaning robot designed for small- and medium-sized commercial facilities, particularly office buildings. It integrates 4 cleaning modes and all kinds of Gausium's latest technology breakthroughs to deliver a highly productive and cost-effective all-in-one cleaning solution.

Compactly designed, Phantas has strong passibility and enables cleaning in tight spaces such as under-table areas. This, combined with its powerful edge cleaning capacity, guarantees maximum floor cleaning coverage.

Driven by deep learning, Phantas is able to identify floor types and automatically switches to a suitable cleaning mode. It can also detect filth and perform autonomous spot cleaning, and recognizes obstacle types to make smart avoidance decisions.

Phantas is developed to free up manpower and reduce human intervention to the greatest extent. The workstation and IoT connectivity provide Phantas with highest level of autonomy. In the meantime, with the user-friendly Gausium App, operators can control the floor cleaning via any smart mobile devices from anywhere, anytime.

The superb versatility and ease of use make Phantas a product accessible to all – it is created to serve everyone, everywhere.

➔ All-in-one Floor Cleaning

Integrates vacuuming, scrubbing, sweeping, dust mopping in one machine

➔ Strong Passability

Effortlessly passes through and clean narrow aisles and under-table areas

➔ Zero Distance from Edge

Able to clean along the edges 0cm-close, leaving the edges spot-free

➔ Auto Spot Cleaning

Autonomously performs spot cleaning where waste or stains are detected, bringing up to 4X efficiency improvement

➔ Floor Type Recognition

Identifies flooring types and automatically adjusts brush height to protect flooring materials

➔ IoT Integration

Able to autonomously take elevators and pass through fare gates without human assistance

A Comprehensive Cleaning Solution for Small-medium Facilities

Applicable environments and flooring types

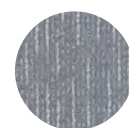
Office buildings | Retail stores | Apartments | Hospitals...



MARBLE



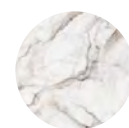
EPOXY



NYLON



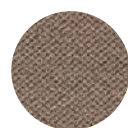
CERAMIC



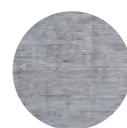
ARTIFICIAL
MARBLE



CONCRETE



OLEFIN



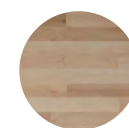
POLYESTER



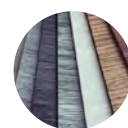
GRANITE



BELGIAN
BLUESTONE



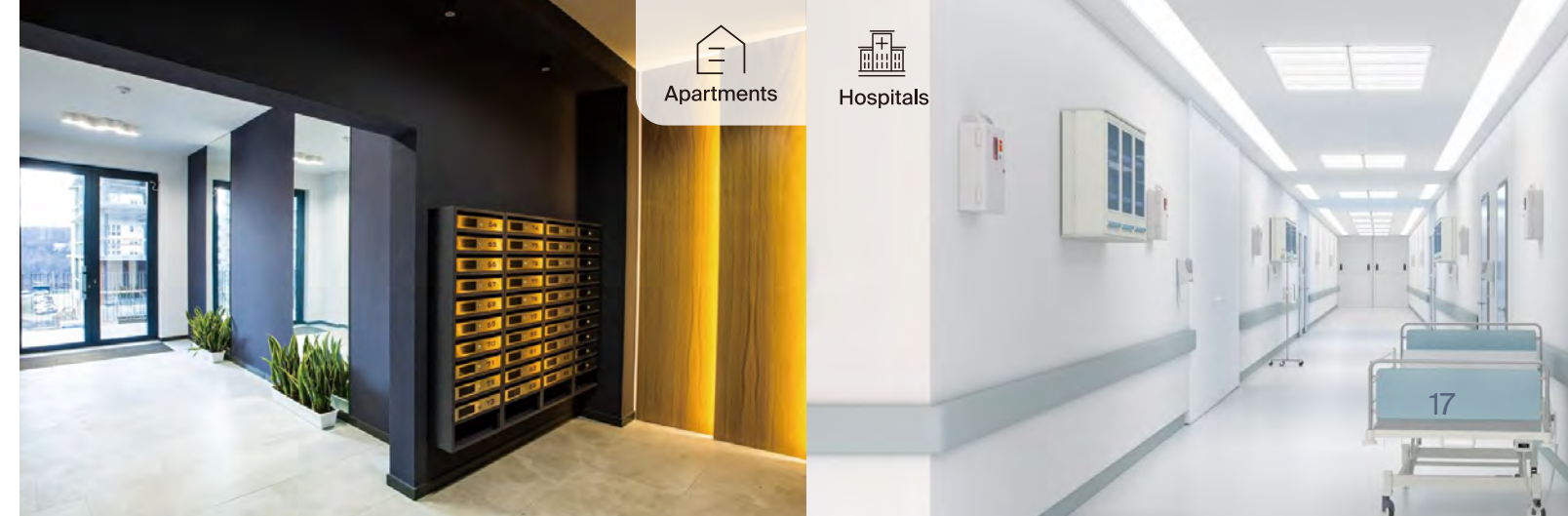
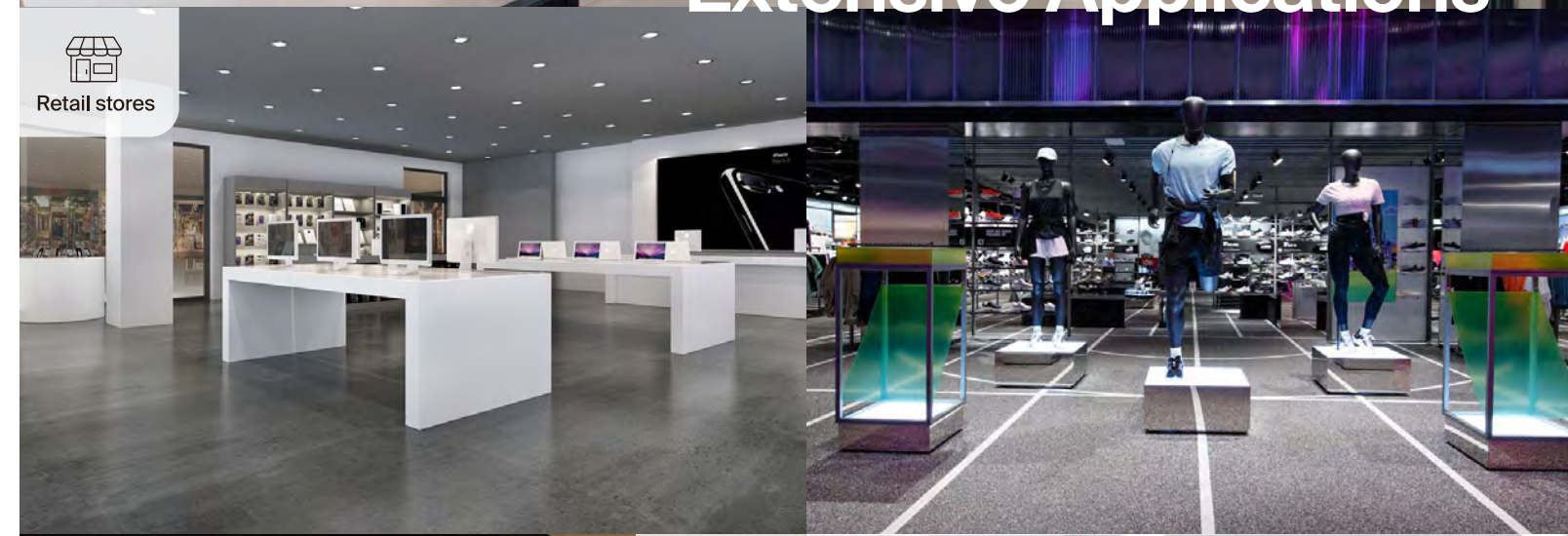
HARDWOOD



PVC



Extensive Applications





Optional
Diffuser Kit



Vacuum 40 / 40 Diffuser

Product Specifications

Feature	Vacuum, Sweep, Mop, Sanitize/Scent (Optional)
Size (without Diffuser Kit)	1700*w570*h875 mm (127*w22*h34in)
Unladen Weight (without Diffuser Kit)	80kg (176 lb)
Cleaning Width	720mm (28in)
Theoretical Max. Cleaning Productivity	1,200m ² /h (13,000 ft ² /h)
Rated Voltage	24v dc
Max. Output power	960w (1.3 hp)
Max. Air Flow Volume	2.0 m3/min
Max. Gradeability	4.6°
Max. Moving Speed	1m/s (2.2 mph)
Dust Mop	Compatible
Dust Bag	12l (3 us gal)
Trash Tray	2.5l (0.7 us gal)
Max. Vacuum Pressure	24 kpa (3.4 psi)
Air Filter (hepa)	h13
Max. Gradeability	4.6°
Sensor System	2D LiDAR, 3D Camera Air Pressure Bumper
Diffuser Kit	Sanitizing / Scenting
Atomization Type	Ultrasonic / Air Comperssor Pump
Container Capacity	4L (1.05 gal) / 500ml (0.13 gal)
Max. Atomization	1.5 l/h (0.4 gal/h) / 6 ml/h (0.002 gal/h)
Atomizer Lifespan	≥ 5,000 h / ≥ 8,000 h
Recommended	Hypochlorous, QAC Sanitiser / Essential Oils

55dB

Quiet operation as low as 55dB

Auto Charging

Optional charging dock allows self-charging of batteries

Close to Edge

Side brush enabling 0-2cm (0.8in) close-to-edge cleaning

Productivity

Maximum cleaning productivity is 1,200 sqm/h (13,000 sq.ft/h)

3 in 1 Cleaning

Vacuuming, sweeping and mopping functions in one unit

Sanitizing / Scenting

Diffuser kit for atomizing disinfection and/or aroma diffusion (40 Diffuser)

Floor Vacuuming Expert

Applicable environments and floorings

Hotels | Office buildings | Offices | Banks | Hospitals | Schools
Small shopping malls | Small and medium-sized markets | Pavilions



MARBLE



TERRAZZO



PLASTIC FLOORING



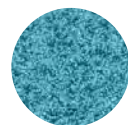
CERAMIC



EPOXY



SILICON CARBIDE



CARPET

Suction Power²

24 KPa (3.4 PSI) suction motor with max. air flow volume of 2m3 per minute

Dual Purpose⁴

Auto and manual mode

Dust Bag¹

Super Capacity 12L (3 US GAL)

HEPA⁵

H13 filter grade

Charging dock⁷

Optional

Adjustable Roller Brush³

Adjustable roller brush to adapt to different floorings

Trash Tray⁶

2.5L (0.7 US GAL) capacity





Optional
Sprayer Kit



50 SPRAYER IS CURRENTLY UNAVAILABLE IN THE US MARKET.

Scrubber 50 / 50 Sprayer

Product Specifications

Feature	Scrub, Sweep, Mop, Sanitize
Size (without Sprayer Kit)	1860*w700*h1,030 mm (l33*w27*h40in)
Unladen Weight (disc brsush / roller brush/ without Sprayer Kit)	155/145 kg (342/320 lb)
Cleaning Width (disc brsush / roller brush)	500 / 460 mm (20/18in)
Theoretical Max. Cleaning Productivity	1,600 m ² /h (17,222 ft ² /h)
Max. Output power	1200 w (1.6 hp)
Max. Gradeability	4.6°
Max. Moving Speed	1 m/s (2 mph)
Disk Brush	Height Adjustable 2*230mm (9in)
Roller Brush (optional)	Height Adjustable 2*ø72*370mm (2.8*14.5in)
Dust Mop	Compatible
Clean / Recovered Water Tank	24/18 l (6.3/4.8 us gal)
Trash Tray (for roller brush)	2*0.6 l (0.16 us gal)
Sensor System	2d Lidar, 3*Depth Camera, Air Pressure Bumper
Max. Endurance	≈3~8h
Nozzle	2
Atomized Particle	1-5 micron
Max. Atomizing Flow	1.8 l/h (0.5 us gal/h)
Atomizing Duration	3h
Life Span of Atomizer	≥5,000 h
Recommended Disinfectants	Hypochlorous acid, QAC Sanitizer, etc.

Water Saving

Saves up to 2,000L (528 US gal)*
of water every month

Close to Edge

Min. 5-10cm (0.2-0.4in) cleaning
distance to edge

Maneuverability

Passes through aisles as
narrow as 930mm (36.6 in)

4 in 1

Scrubbing, sweeping, dust
mopping and sanitizing can be
combined in one machine

Productivity

Maximum cleaning productivity
is 1800 sqm/h (19,375 sq.ft/h)

Auto Spot Cleaning

Autonomously performs spot cleaning
where waste or stains are detected,
bring up to 4X efficiency improvement

Solutions to Cleaning Challenges in Small-medium Environments

Applicable environments and floorings

Office buildings | Hotels | Hospitals | Schools | Banks | Shopping malls
Small and medium-sized markets | Manufacturing factories | Logistics centers



MARBLE



TERRAZZO



PLASTIC FLOORING



CERAMIC



EPOXY



CEMENT

Dual Purpose³

Auto and manual mode

Multiple Sensors¹

Long-range lidar, visual sensor, and passive
collision sensors are all fused together to
empower the robot to detect various
obstacles from all directions

Work station⁴

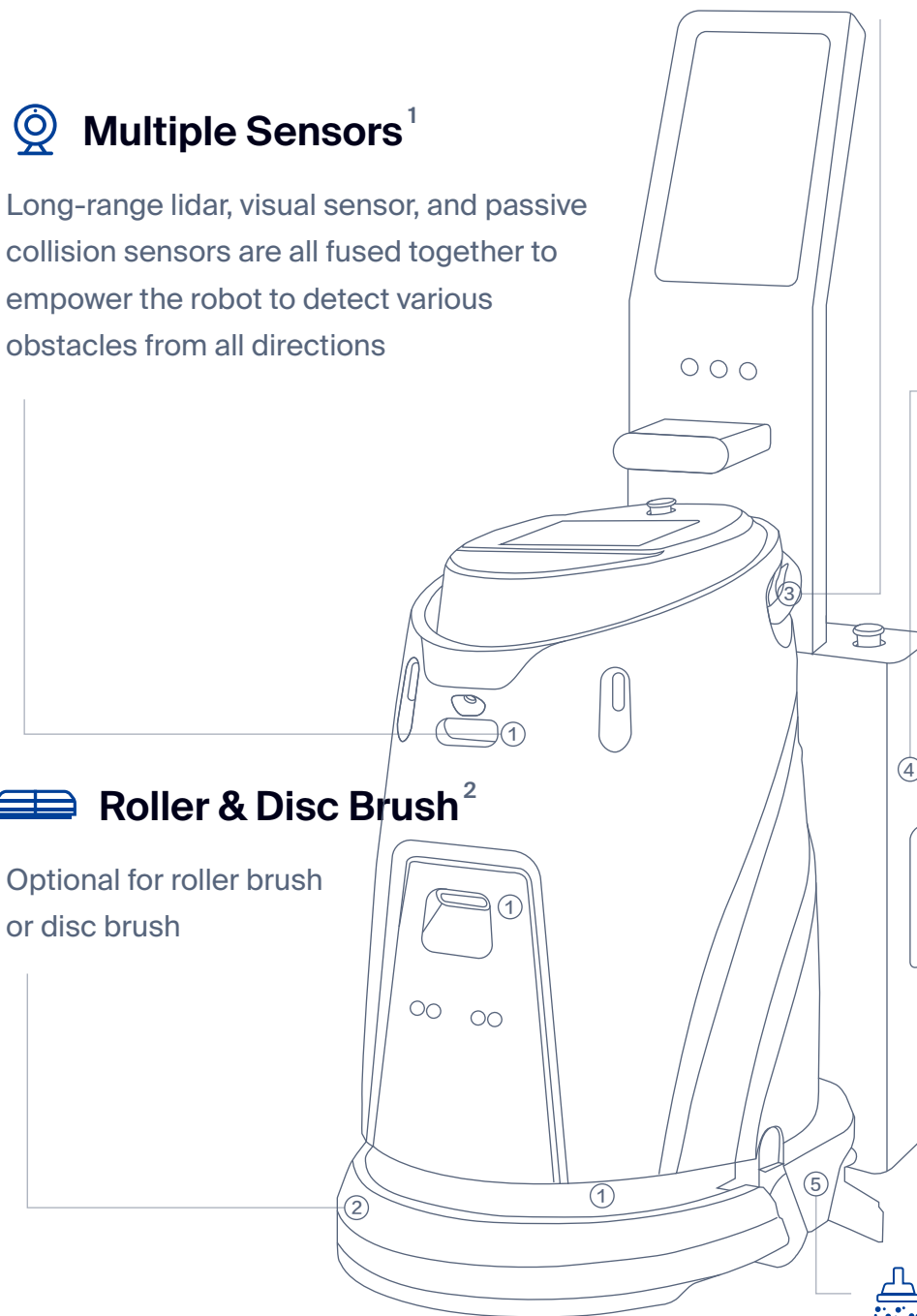
With optional work station
the robot can charge, refill
and drain itself autonomously

Roller & Disc Brush²

Optional for roller brush
or disc brush

Dust mop⁵

Dust mopping function
is available





*ONE RUN PER DAY

Scrubber 75 / 75P

Product Specifications

Feature	Scrub, Sweep, Mop, Degrease
Size	11370*w962*h1,417 mm (54*38*56in)
Unladen Weight	400 kg (880lb)
Cleaning Width	750 mm (30in)
Theoretical Max. Cleaning Productivity	3,000 m ² /h (32,292ft ² /h)
Max. Output power	2,000 w (2.7 hp)
Max. Gradeability	8°
Max. Moving Speed	1.1m/s (2.5 mph)
Max. Passable Obstacle Height	10 mm (0.4in)
Disc Brush	3*254 mm (3*10in)
Roller Brush (optional)	2*ø100*370 mm (3.9*14.5in)
Clean / Dirty Water Tank	75/50l (20/13 us gal)
Sensor System	3D LiDAR, 2D LiDAR, 3D Camera Collision Bumper Millimeter-wave Radar (75 P)
Max. Endurance	≈4 ~ 6h

Water Saving

Saves up to 4,000L (1,057 US gal)*
water every month

6 Hours Battery

Cleans continuously for up to
6 hours on a single charge

Millimeter-wave Radar (75 P)

Faster and more accurate perception
of the vehicle movements

Productivity

High cleaning productivity up
to 3,000 sqm/h (32,292 sq.ft/h)

4 in 1

Degreasing, scrubbing, sweeping
and dust mopping combined
in one machine

Oil Cleaning Mode

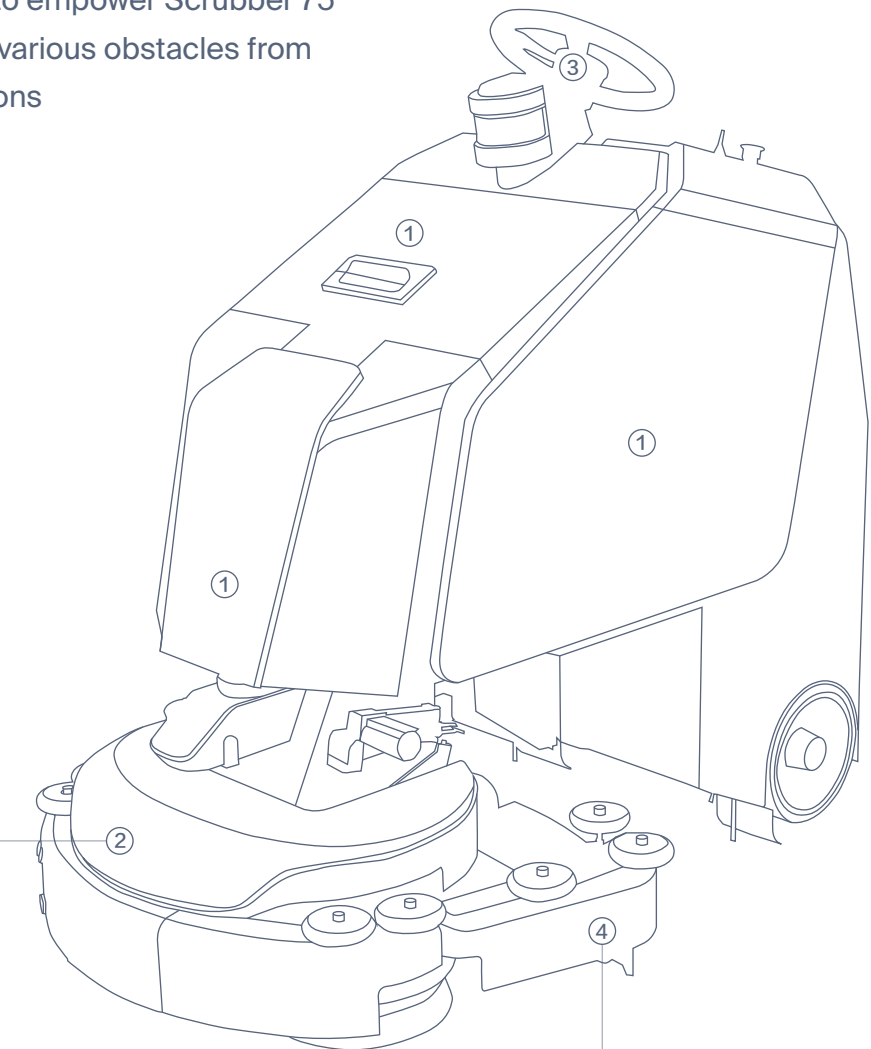
Able to mark oil stains in the map and
perform thorough oil cleaning

Multiple Sensors¹

3D lidar, 2D lidar, visual sensors, and
passive collision sensors are all fused
together to empower Scrubber 75
to detect various obstacles from
all directions

Dual Purpose³

Auto and manual mode



Ideal for Indoor & Outdoor Large Environments

Applicable environments and floorings

Parking lots | Airports | Stations | Shopping malls | Supermarkets
Manufacturing facilities | Logistics warehouse | Piazza



MARBLE



TERRAZZO



PLASTIC FLOORING



CERAMIC



EPOXY



CEMENT

Front Brush Head²

Front brush head rotate 270° with brush
rotation speed at 270 rpm and scrubbing
pressure 45kg (99 lb) , leaving no area
uncleaned

Mini Roller Brush⁴

Optional for light sweeping



Sweeper 111

Product Specifications

Feature	Sweep
Size	11530*w1,010*h1,400 mm (160*w40*h55in)
Unladen Weight	500 kg (1,100lb)
Cleaning Width	1,100 mm (43in)
Theoretical Max. Cleaning Productivity	5,500 m ² /h (59,200ft ² /h)
Max. Air Flow Volume	2 m ³ /min
Rated Voltage	24v dc
Max. Output Power	2,500 w (3.4 hp)
Max. Moving Speed	1.2 m/s (2.7mph)
Max. Gradeability	11°
Max. Passable Obstacle Height	40 mm (1.6in)
Side Brush	Height Adjustable 2*ø400 mm (15.7in)
Roller Brush	Front Fixed + Rear Adjustable, 2*ø330*480 mm (13*19in)
Trash Box	60l (16 us gal)
Max. Cleanable Trash Size and Weight	200*50*50 mm (8*2*2in), 250 g (0.55 lb)
Sensor System	3d lidar, 2d lidar, 5*depth camera air pressure bumper
Max. Endurance	≈4h ~ 7h

Auto Dumping

Recognizes the garbage bin and completes the dumping process automatically

7 Hours Battery

Runs for up to 7 hours on a single charge

Productivity

Consistent cleaning productivity up to 5,500sqm/h (59,200 sq.ft/h)

Low Maintenance

Requires as low as 2 hours every month for general maintenance and upkeep, pushing productivity to new levels

Self-dumping Heavy-duty Autonomous Sweeper

Applicable environments and floorings

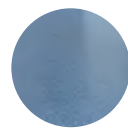
Industrial Park | Integrated park | Campus | Square | Scenic area



BITUMINOUS ROAD



RUBBLE FLOORING



PLASTIC FLOORING



EPOXY



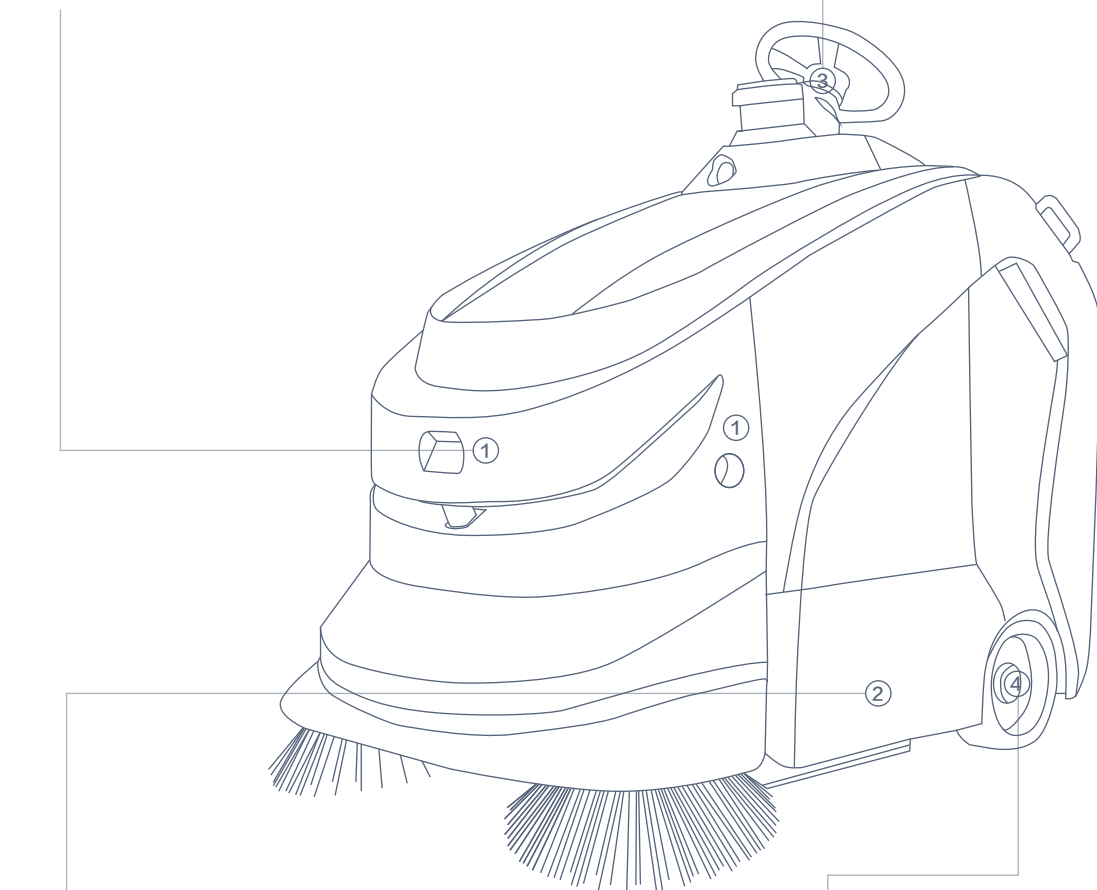
CEMENT

Multiple Sensors¹

Long-range lidar, visual sensor, and passive collision sensors are all fused together to empower Sweeper 111 to detect various obstacles from all directions

Dual Purpose³

Manual and automatic mode



Climbing ability²

Climbs up to 11 degrees

Differential chassis⁴

Flexible steering gear free to move in and out



Delivery X1 / X1 Pro

Product Specifications

Feature	Indoor Delivery
Size	1520*w484*h1,250mm
Unladen Weight	35 kg
Tray Dimension	400*(L)*470(W)mm
Load Capacity	10kg*3
Tray Features	Weight Sensor and Nteractive Light
Network Standard	4G
Wifi	2.4GHz
Screen Size	10.1 Inches
Max. Travel Speed	1.2m/s
Max. Climbing Degree	5°
Min. Passage Width	80cm
Min. Turning Diameter	80cm
Braking Distance	5cm
Battery Capacity	20Ah
Rated Voltage	29.4V
MAX. Output Power	230W
Uptime	14H
Charging Time	4H
Sensor System	Lidar, Depth camera, Bumper pressure sensor for tray (X1 Pro)

Marker-less Deployment

Automatic mapping without scanning
QR location code, saving 75%
deployment time

Strong Passability

Effortlessly passing through narrow aisles
supported by high-precision sensors

Superb Productivity

Holding up to 30kg of heavy load and
reaching up to 3 tables in one go

High Performance Battery

Adopting lithium phosphate battery— higher
thermal stability and longer endurance

Industry-leading Shock Mitigation

A combo of independent suspension
chassis and shock absorbing trays for
best shock mitigation effect

Multi-robot Collaboration

Able to realize intercommunication between
robots to work collaboratively in large sites

Making Indoor Delivery Safer and Easier Applicable environments

Restaurants | Cafes | Hotels | Hospitals | Office

dTOF LiDAR

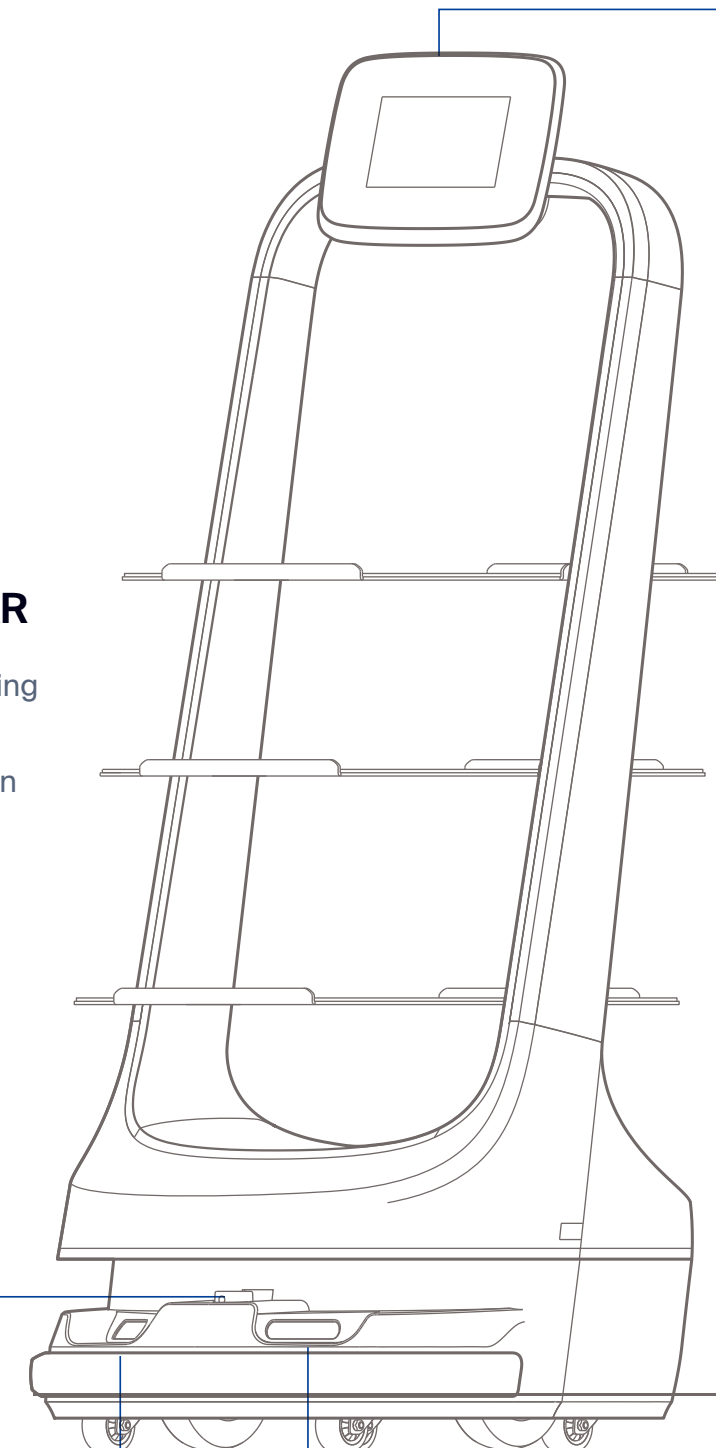
Class-leading ranging
and 3D imaging for
all-round perception
of the surrounding
environment

TOF Camera

Processing high definition
depth image data for
high-precision positioning

3D Camera x 2

Class-leading ranging and
3D imaging for all-round
perception of the
surrounding environment



Charging Dock

The charging docks have been designed to increase the robots' power endurance. They are available for Vacuum 40, Scrubber 50 and Sweepr 111.

When battery is low, the robot can automatically return to the charging dock to recharge. When charging is complete, it can automatically resume its previous task.

 Auto Charging



(CD-01)



(CD-03)

Parameter

Dimension (l*w*h)	500*400*690 mm/19.68*15.74*27.16in (cd-01) 850*460*1.010 mm/33*18*39.8in(cd-03)
Maximum Power	900 W/1.2 HP (CD-01) / 2,400 W/3.2 HP (cd-03)
Rated Voltage	110-220V
Operating Temperature	-10 ~ +45°C (14 ~ 113°F)
Operating Humidity	20% ~ 75% RH
Storage Temperature	-40 ~ +45°C (-40 ~ 113°F)
Storage humidity	20%~93% RH

Work Station

The work stations have been designed to increase the Gausium robots' endurance and are currently available for the Scrubber 50 and 75 series. The robot can return automatically to the work station for charging, filling and discharging.

A dosing system* is installed on the workstations to deliver accurate detergent proportioning, ensuring detergents to be used at their optimal concentration. The deployment of work stations minimizes manual intervention and enables the Gausium robots to provide truly intelligent floor cleaning services.

 Auto Charging  Auto dosing

 Auto filling  Auto discharging



(WS-01)

Parameter

Dimension (l*w*h)	450*480*1,400mm/17.7*18.9*55in (ws-01) 1,170*690*1,260mm/46*27*50in (ws-02)
Total Weight	30 kg/66 lb (ws-01), 85 kg/187lb(ws-02)
Rated Voltage	110-220V
Operating Temperature	-10 ~ +45°C (14 ~ 113°F)
Operating Humidity	20% ~ 75% RH
Storage Temperature	-40 ~ +45°C (-40 ~ 113°F)
Storage Humidity	20% ~ 93% RH

Global Reach



Media Reports



Customer Testimonial

The cleaning service partners operating the Gausium robot at the airport generally find it safe, easy and efficient to use it. The robot's adoption and awareness of its capabilities by the cleaning team and leveraging on its technology for its daily cleaning operations is increasingly improving.

— **Jerome Francis**
Changi Airport Operations Management (Singapore)

Our train presentation and station cleaning teams have been working tirelessly throughout the pandemic and the new Eco Bot (Scrubber 50) will help free up a lot of time, so colleagues can focus on additional sanitisation.

— **Simone Bailey** Greater Anglia (UK)

The robot takes a lot of time off our work in the area, which we can put into more elaborate handicrafts. We have tested it intensively here and are sure that it will soon support us permanently in our day-to-day business.

— **Georgios Sarantos**
Dussmann Service (Germany)

Continuing to implement our innovative cleaning solutions with these robotic floor scrubbers and driers... There's a reason we're one of the UK's leading cleaning service providers.

— **Mitie Cleaning Services** (UK)

Our robots work 24 hours a day without compromising the efficiency. So, we provide a cleaner service with a unique quality and comfort level for our customers.

— **Seris Konsalnet** (Poland)

With this technological robot, it renews itself day by day. It has systems that can take the elevator. Scrubber 50, a small one of which can take the elevator, charge itself, fill and empty its own water...If it sees a living thing, it changes its path. You can manage it via the panel, web or mobile. You have the cleaning done over and over again by using the remote panel without being there.

— **Nazlı Uzunlar UFS Facility Services** (Turkey)

Providing Global Top Users With Excellent Services

Deployed in more than 2000 commercial, institutional and industrial facilities around the globe



Transportation & Industry

- London Luton Airport, UK
- Helsinki Port Terminal, Finland
- Abu Dhabi Airport, UAE
- Melbourne Airport, Australia
- French National Railways SNCF Factory

Shopping Mall & Supermarket

- Yakarine Ford Shopping Centre, Australia
- Auchan Supermarket, Portugal
- Krisma shopping mall, Finland
- Lotte Mart, Korea
- Central world shopping mall, Thailand
- M&S Mall, Manchester, UK



Hospital & Hotel

- BNH Hospital, Thailand
- SHARON Hospital, Tel Aviv, Israel
- Crowne Plaza, Singapore
- Sheraton Hotel, Qatar



School & Exhibition Hall & Park

- Sentosa Scenic Area, Singapore
- National University of Singapore
- University of Political Science and Law, Thailand
- National Gallery of Singapore
- University of Toronto, Canada



Key Accounts & Partners



Gaussian Robotics
Valeton 4 N, 5301LW Zaltbommel, The Netherlands

 Our Offices:
Singapore: 3 Fusionopolis Place, Galaxis Work Loft #04-52/53 Singapore
Hong Kong SAR: RM 212, Core Building No.1E, Hong Kong Science Park Phase 1, 1 Science Park East Avenue, Shatin, NT
Mainland China: No. 666 Shengxia Rd., Pudong District, Shanghai, China.

 www.gausium.com

 +31 (0)611872148

 support@gausium.com

   @Gausium

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