

INTRODUCING

CC1



Multipurpose Floor Cleaning Robot

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CC1



A Complete Floor Cleaning Solution

- CC1 is a complete floor cleaning solution for multiple flooring types, including low-pile carpet and hard floors. Autonomously clean floors on set schedules, or switch to manual mode for spot cleaning.
- With CC1 on the job, floors get cleaned automatically, reducing janitorial costs and giving staff time to focus on other tasks. Advanced object avoidance technology means CC1 is safe to operate in busy facilities, 24/7.

Autonomous Cleaning is Cleaning Made Easier

Fully
automatic
Safe
autonomous
operation

Versatile use
cases



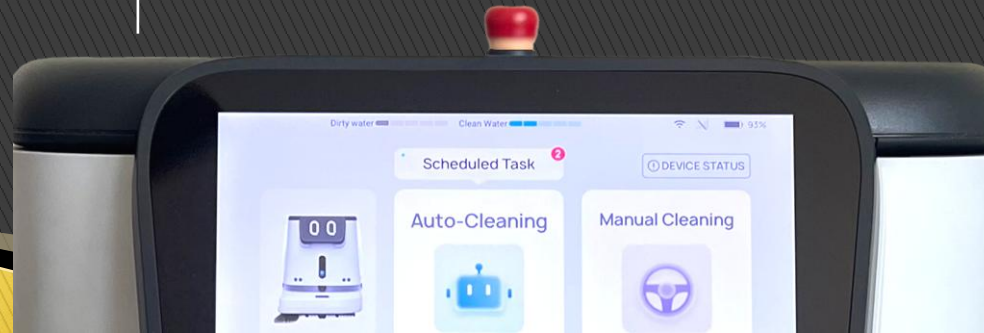
Long
battery
life, fast
charging

Vacuum,
Sweep,
Scrub, Mop

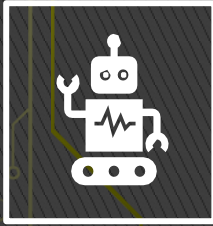
Switch
between
functions
with one
click

Quick and
easy to use
Simple
interaction

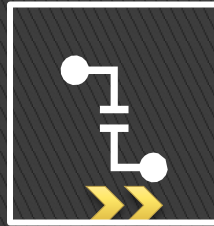
Cloud-based
monitoring,
In-depth
training and
responsive
customer
service



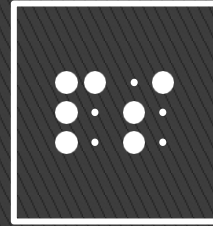
Eight Special Functions That Make Cleaning Easy and Efficient



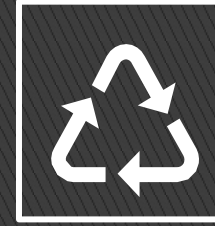
Automatic
charging, filling,
and draining



Break point
resuming



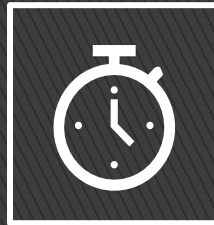
Cleaning of
missed areas



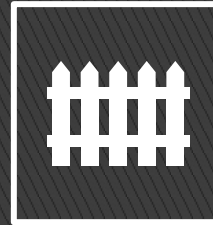
Automatic
cleaning of
recovery tank



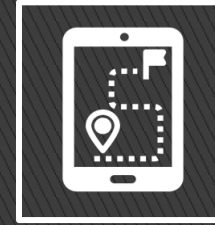
Detailed
Cleaning Report



Scheduled
tasks



Autonomous obstacle
avoidance



Intelligent
mapping



Cleans a variety of indoor facilities with ease



Hospitals



Schools



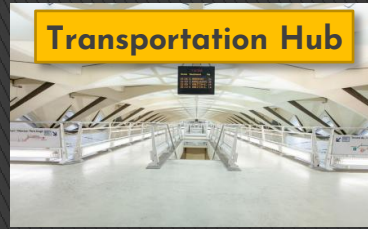
Office Building



Shopping Center



Transportation Hub



Airport Lobby



Sports Facility



Convention Center



Hotel





CC1 handles 4 jobs in 1



Sweep



Scrub



Vacuum



Mop

All of the Clean, None of the Hassle



Helping Facilities to Reduce Costs and Improve Efficiency

- ✓ Vacuum, sweep, scrub, mop
- ✓ Switch functions with 1-click

1+1

Total cleaning solution

- ✓ Cleans 6,000 - 8,000 ft²/hr
- ✓ Zero turn radius, fits tight spaces



Nimble and quick

Optional workstation for automatic charging water discharge, and refill



Hassle free



The Most Versatile Floor Cleaning Robot on the Market

Versatile Cleaning

Four-in-one cleaning robot (Scrubbing, Sweeping, Vacuuming, Mopping)

Easy to install Workstation

Large water tank capacity
Automatic Water Addition/Drainage

Multi-Machine Intelligent Scheduling

Track and monitor as part of a fleet or individually

Suits Various Floor Types

Suitable for both hard floors and soft carpets



Automatic Location & Navigation

Equipped with SLAM, perform tasks more efficiently in complex environments

Extra-long run-time for cleaning

4 hours fully charged, 5 hours battery life, guarantee cleaning time and frequency

Digital Cleaning

Remote operation via APP, automatic generation of cleaning reports

Fast and Highly Efficient, Sleek and Nimble

Machine Dimension	663*568*682mm
Machine Weight	75kg
Sweeping Width	500mm
Scrubbing Width	400mm
Water Tank Capacity	Clean Water Tank 15L Waste Water Tank 15L
Charging Time	<3h
Run Time	Max 8h
Cleaning Efficiency	700-1000m ² /h
Cleaning Operating Noise	<70dB
Cruise Speed	Max 1.2m/s
Local Interaction	10.1-inch touch screen
Positioning Method	Visual + Laser Positioning



Powerhouse Functionality in a Small Package



Emergency Button

Touch Screen

RGBD

Ultrasonic Radar

Main Lidar

RGBD

Rolling Brushes

Side Brush



Handle

Top-view Camera

Turn Indicator

Water Refilling

Solid-state Lidar

Wireless Charging

Water Drainage

Squeegee



Easy Maintenance



CC1's workstation gives you options

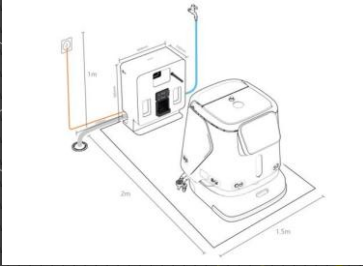
Automatically returns to the workstation when the power is low

Automatic Recharging

Automatic refill and draining

Maintenance-free, less manual intervention, longer running time on one charge

Odor-free, less manual intervention, improved sanitation



Well-Designed Safety System: Double Protection Supported by Hardware and Algorithm

Hardware

Anti-collision, anti-skid, anti-fall functions



Electromagnetic braking, safe
parking



Algorithm



Multi-sensor fusion sensing, 360° coverage
without blind spot



Supporting multi-mode intelligent obstacle
avoidance and mapping

Leading Fusion Positioning & Fusion Sensing Technologies

Fusion Positioning Solutions

“Four-in-One” Framework for Fusion Positioning



Laser SLAM: positioning and navigation in areas with specific features



RTK: positioning and navigation in open or spacious areas



IMU: low-cost IMU with guaranteed accuracy of fast positioning (DR)



Wheel speedometer: high-precision wheel speedometer with guaranteed accuracy of fast positioning (DR)

Recommended hardware configuration

Standard



LiDAR: 16-beam



Vision: FOV 60° * 1 + FOV 90° * 2



Ultrasonic sensor: 12

Optional



Surround view: FOV 190° * 4



LiDAR: 16-beam * 1 (complex scenario / small obstacle detection)

LiDAR 16-beam * 1 (complex scenario / small obstacle detection)

Algorithms

Laser obstacle detection

Visual detection

Laser-vision space time synchronization

Ultrasonic detection

Multi-sensor fusion

Main Functions

Position, type, length, width, height, etc. of the obstacle

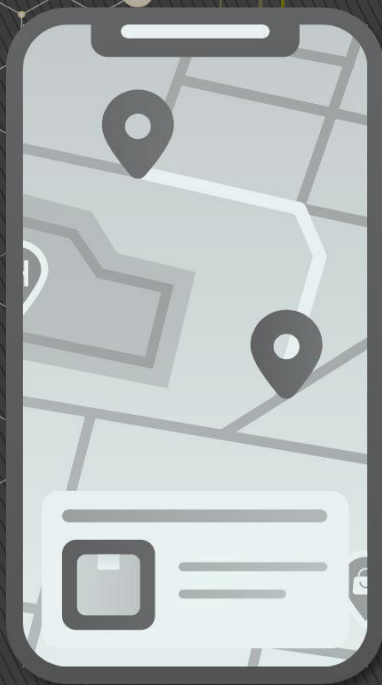
Typical obstacle, traffic light, lane line detection, etc.

External parameter calibration of high-precision laser camera; laser-vision time synchronization triggered by hardware

Ultrasonic radar target output

Multi-source information fusion based on GNN/EKF/DST

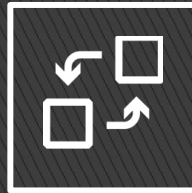
User-Friendly Interface



Operator



One-click
start



One-click manual-
Automatic switch



Cleaning the
missed areas



Break Point
Resuming



Scheduled
task

Supervisor



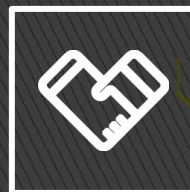
Operation
Report



Cloud-based
operation



Cloud-based
service



Worry-Free
after sales
service



OTA
Service

Thank You



PRINGLETM
ROBOTICS