Apollo ROBOTICS

Robot catalog

PUDU robots from Apollo











Alvin, Texas

(281) 286-3600

PUDU sales, deployment, training and service across Texas

Apollo sells PUDU robots, deploys them on site, trains the staff who will run them, and holds parts and service in the Houston area for all of Texas. The robots work in warehouses, hotels and restaurants, hospitals, offices and schools.

Tier 1
PUDU Robotics distributor

Houston area
Parts and service for all of Texas

Since 2005
Apollo has answered (281) 286-3600

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Specifications are PUDU's published figures. Ask Apollo for a quote.

5 units, pages 4 to 8

Commercial floor cleaners



PUDU CC1 Pro

Four-in-one commercial floor cleaner

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PUDU CC1

Four-in-one commercial floor cleaner

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Four-in-one commercial floor cleaner

PUDU CC1 Pro



One machine that sweeps, vacuums, dust-mops and scrubs. Built for the floors a building cleans every night: hallways, open floors and carpeted offices.

Where it works

- Hard floors overnight on the scrub setting.
- Open floors on a dust-mop cycle between busy periods.
- Hallways overnight, with a heatmap of what it found for the morning walk.
- Carpeted offices on the vacuum setting.

A day on the job

Run time is 5 hours scrubbing, 5 hours sweeping and vacuuming, 9 hours silent mopping, and a charge takes about 3 hours. It carries 15 liters of clean water and 15 liters of dirty water. With the optional docking station it refills, drains and charges on its own. The rear camera checks its own work and re-cleans a spot it missed.

Specifications

Dimensions	629 x 552 x 695 mm (24.8 x 21.7 x 27.4 in)
Weight	75 kg (165 lb)
Cleaning	Sweeping, carpet vacuuming, dust mopping, scrubbing
Coverage	700 to 1,000 m² per hour all-covered cleaning; 1,500 to 3,000 m² per hour cleaning rate
Run time	Scrubbing 5 h, sweeping and vacuuming 5 h, carpet vacuuming 4 h, silent mopping 9 h
Charging time	About 3 h
Battery	50 Ah
Cruise speed	0.2 to 1.2 m/s, adjustable
Cleaning width	500 mm (19.7 in) with side brush
Water tanks	15 L clean, 15 L dirty
Dustbin	2.5 L, or 6 L dust bag
Navigation	LiDAR plus visual fusion positioning
Minimum path	70 cm (27.6 in)
Connectivity	4G, Wi-Fi, Bluetooth; e-gate and elevator control optional
Docking	Auto charging and water refill and drain with the optional docking station

Source: pudurobotics.com/en/products/cc1-pro

Four-in-one commercial floor cleaner

PUDU CC1



One machine that sweeps, scrubs, vacuums and mops. It works on hard floors and, with an optional carpet unit, soft carpets.

Where it works

- Office buildings and education facilities.
- Retail and food and beverage venues.
- Public transportation and health care facilities.
- Manufacturing and hospitality sites.

A day on the job

Run time is 5 hours scrubbing, 5 hours sweeping, vacuuming and mopping, 4 hours carpet vacuuming and 9 hours silent mopping, and a charge takes under 3 hours. It carries 15 liters of clean water and 15 liters of waste water. If power runs low mid-task it remembers its progress and resumes after charging. With the separately purchased workstation series it adds water, drains, adds detergent and charges on its own, with no plumbing changes needed.

Specifications

Cleaning	Sweeping, mopping, scrubbing, vacuuming
Coverage	700 to 1,000 m² per hour (7,535 to 10,764 ft² per hour)
Run time	Scrubbing 5 h; sweeping, vacuuming and mopping 5 h; carpet vacuuming 4 h; silent mopping 9 h
Charging time	Under 3 h
Cruise speed	Max 1.2 m/s (3.94 ft/s)
Water tanks	15 L clean, 15 L waste
Suction	Max 17,000 Pa
Noise	Under 70 dB(A) while cleaning
Navigation	PUDU SLAM: visual SLAM and laser SLAM
Docking	Auto charging; docking station and mobile water station sold separately

Source: pudurobotics.com/en/products/puduCC1

Mid-size disc scrubber-dryer

PUDU CC1 Pro Disc



A mid-size disc scrubber-dryer with dual-disc brushes and 25 kg of scrubbing pressure. PUDU shows it working in retail environments and says AI spot cleaning lets it cover 5,000 to 8,000 m².

Where it works

- Retail floors, turning around shopping carts, boxes and temporary obstructions.
- Spot scrubbing of coffee spills, sauces and puddles found during inspections.
- Large-scale spaces, covering 5,000 to 8,000 m² with AI spot cleaning.
- Floors with guardrails, warning signs and retractable belt barriers, which it detects and avoids.

A day on the job

The CC1 Pro Disc scrubs up to 5.3 hours on a charge, 3.8 hours or more in standard mode, and a charge takes about 4.5 hours. It carries 15 liters of clean water and 15 liters of dirty water. It navigates with LiDAR and 3D VSLAM, needs no QR codes, and fits a 68 cm path. With the optional docking station it refills, drains and charges on its own.

Specifications

Dimensions	629 x 552 x 695 mm (24.8 x 21.7 x 27.4 in)
Weight	80 kg (176 lb)
Cleaning	Scrubbing, polishing
Coverage	700 to 1,000 m² per hour all-covered scrubbing; 1,500 to 3,000 m² per hour spot scrubbing
Run time	Scrubbing up to 5.3 h (3.8 h or more in standard mode)
Charging time	About 4.5 h
Battery	69 Ah
Cruise speed	0.2 to 1.2 m/s (0.66 to 3.94 ft/s), adjustable
Cleaning width	380 mm (15.0 in)
Water tanks	15 L clean, 15 L dirty (3.96 US gal each)
Screens	10.1-inch LCD
Navigation	LiDAR plus 3D VSLAM fusion positioning
Minimum path	68 cm (26.8 in)
Connectivity	4G, Wi-Fi, Bluetooth; LoRa optional
Docking	Auto charging and water refill and drain with the optional docking station

Source: pudurobotics.com/en/products/cc1-pro-disc

Compact scrubber-dryer

PUDU ET1



A compact robot that sweeps, scrubs, vacuums and dust-mops, with a front-sweep, rear-scrub design that cleans dry debris and wet stains in one pass. It fits aisles 50 cm wide and cleans during business hours.

Where it works

- Narrow aisles and complex layouts during business hours.
- Hardwood and marble floors, left dry in one pass.
- Grease, footprints and other stubborn stains, with hot water up to 85°C (185°F).
- Floors with carpet, where it detects carpet edges and lifts the roller to keep carpets dry.

A day on the job

The ET1 runs 2.5 to 4 hours on a 35 Ah battery and charges in about 3 hours. It carries 8 liters of clean water and 7.2 liters of waste water, and its 2.5-liter dust box empties automatically, so disposal is about once a week. The 8-in-1 docking station charges it, cleans the roller, rinses the squeegee, spin-dries the roller, refills and drains water, doses cleaning agent and heats water. It maps a new area on its own, with no pre-mapping.

Specifications

Dimensions	500 x 380 x 580 mm (19.7 x 15.0 x 22.8 in)
Weight	About 45 kg (99 lb)
Cleaning	Sweeping, scrubbing, vacuuming, dust-mopping; hot water up to 85°C (185°F) from the docking station
Coverage	300 to 720 m² per hour (3,229 to 7,750 ft² per hour)
Run time	2.5 to 4 h
Charging time	About 3 h
Battery	35 Ah
Cruise speed	Up to 1.0 m/s (3.28 ft/s)
Cleaning width	Scrub and dust-mop 30 cm (11.8 in); sweep and vacuum 39 cm (15.4 in)
Water tanks	8 L clean, 7.2 L waste (2.11 and 1.9 US gal)
Dustbin	2.5 L (0.66 US gal)
Screens	Optional 21.5-inch advertising display
Minimum path	50 cm wide, 60 cm high (19.7 in, 23.6 in)
Docking	8-in-1 docking station: charging, roller cleaning, squeegee rinsing, roller spin-drying, water refill, drainage, agent dosing, water heating

Source: pudurobotics.com/en/products/et1

Cordless walk-behind scrubber-dryer

PUDU SH1



A cordless scrubber-dryer that a custodian pushes by hand. It is not autonomous. It scrubs and pulls the water back up in one pass, so the floor dries behind it.

Where it works

- Kitchens and restrooms: the greasy or wet floors PUDU built it for.
- Dining areas, since it is cordless and weighs 17 kg.
- Small buildings and offices that have no ride-on scrubber.
- Glass, tiled walls and tight corners, with the vertical and edge attachments.

A day on the job

The SH1 runs 70 minutes in standard mode and 100 minutes in ECO mode, and charges in 2.5 hours. It cleans a 44 cm path with a 49 cm squeegee and holds 4 liters of solution and 4 liters of recovered water. PUDU rates it at 1,100 to 1,600 m² per hour. The screen warns when the recovery tank is full, the solution is low or a motor faults, and walks a new user through brushes, squeegee and tanks.

Specifications

Dimensions	490 x 530 x 1200 mm (19.3 x 20.9 x 47.2 in)
Weight	17 kg (37.5 lb)
Cleaning	Scrubbing and drying in one pass, pushed by an operator
Coverage	1,100 to 1,600 m² per hour
Run time	Standard mode 70 min, ECO mode 100 min
Charging time	2.5 h
Battery	18 Ah
Cleaning width	44 cm (17.3 in)
Squeegee width	49 cm (19.3 in)
Water tanks	4 L solution, 4 L recovery
Suction	20,000 Pa
Noise	Standard mode 72 dB(A), ECO mode 69 dB(A)

Source: pudurobotics.com/en/products/sh

5 units, pages 10 to 14

Large sweepers and scrubbers



PUDU BG1

Large sweeper-scrubber

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PUDU BG1 Pro

Large sweeper-scrubber with 3D LiDAR

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PUDU MT1 Max

Outdoor and semi-outdoor sweeper

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PUDU MT1

Commercial dry sweeper

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PUDU MT1 Vac

Commercial sweeper and vacuum

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Large sweeper-scrubber

PUDU BG1



A large sweeper-scrubber that sweeps and scrubs in the same pass, sized for large open floors: event spaces, concourses and big lobbies.

Where it works

- Large open floors after an evening event.
- Concourses and lobbies on a nightly route.
- The long main corridors of a large building.
- Event centers between bookings.

A day on the job

The BG1 runs up to 7.5 hours sweeping and scrubbing. A charge takes about 3 hours on a supply of 180 volts or more, and about 4.5 hours below that. It carries 75 liters of clean water and 60 liters of waste water, and doses detergent on its own from two tanks. It needs an 85 cm path and cruises at up to 1.0 m/s. Running unattended needs the optional workstation. The BG1 Pro adds a 3D LiDAR package and a 1.2 m/s top speed.

Specifications

Dimensions	1195 x 760 x 1303 mm with squeegee (47.0 x 29.9 x 51.3 in)
Weight	About 344 kg (758 lb)
Cleaning	Sweeping and scrubbing in one pass, edge scrubbing, automatic dual detergent dosing; dust mopping and polishing optional
Coverage	Up to 2,000 m² per hour covered cleaning; up to 6,000 m² per hour spot cleaning
Run time	Up to 7.5 h sweeping and scrubbing
Charging time	About 3 h at 180 V AC or more; about 4.5 h below 180 V
Battery	90 Ah, 48 V
Cruise speed	0.2 to 1.0 m/s (0.66 to 3.28 ft/s)
Cleaning width	550 mm, 708 mm with side brushes (21.7 in, 27.9 in)
Water tanks	75 L clean, 60 L waste (19.8 and 15.9 US gal)
Detergent tanks	Two, about 7 L total (1.85 US gal)
Dustbin	5 L (1.32 US gal)
Navigation	LiDAR plus 3D VSLAM fusion positioning
Minimum path	85 cm (33.5 in)
Connectivity	4G, Wi-Fi, Bluetooth; e-gate and elevator control optional
Docking	Unattended operation with the optional workstation

Source: pudurobotics.com/en/products/pudu-bg1-series

Large sweeper-scrubber with 3D LiDAR

PUDU BG1 Pro



The Pro version of PUDU's large sweeper-scrubber. It sweeps and scrubs in one pass, and adds 3D LiDAR positioning and a 1.2 m/s top speed over the BG1.

Where it works

- High-clearance spaces, mapped and localized with 3D sensing.
- Nighttime cleaning runs, which the 3D perception package is built to handle.
- Busy public areas, with light and sound alerts for pedestrians and vehicles.
- Walls and shelving edges, where the scrubbing brush extends to reach the edge.

A day on the job

The BG1 Pro runs up to 7.5 hours sweeping and scrubbing. A charge takes about 3 hours on a supply of 180 volts or more, and about 4.5 hours below that. It carries 75 liters of clean water and 60 liters of waste water, and doses detergent from two tanks of about 7 liters total. It needs an 85 cm path and cruises at up to 1.2 m/s. Unattended operation needs the optional workstation.

Specifications

Dimensions	1195 x 760 x 1303 mm with squeegee (47.0 x 29.9 x 51.3 in)
Weight	About 344 kg (758 lb)
Cleaning	Sweeping and scrubbing in one pass, edge scrubbing, automatic dual detergent dosing; dust mopping and polishing optional
Coverage	Up to 2,000 m² per hour covered cleaning; up to 6,000 m² per hour spot cleaning
Run time	Up to 7.5 h sweeping and scrubbing
Charging time	About 3 h at 180 V AC or more; about 4.5 h below 180 V
Battery	90 Ah, 48 V
Cruise speed	0.2 to 1.2 m/s (0.66 to 3.94 ft/s)
Cleaning width	550 mm, 708 mm with side brushes (21.7 in, 27.9 in)
Water tanks	75 L clean, 60 L waste (19.8 and 15.9 US gal)
Detergent tanks	Two, about 7 L total (1.85 US gal)
Dustbin	5 L (1.32 US gal)
Navigation	3D LiDAR plus 3D VSLAM fusion positioning
Minimum path	85 cm (33.5 in)
Connectivity	4G, Wi-Fi, Bluetooth; e-gate and elevator control optional
Docking	Unattended operation with the optional workstation

Source: pudurobotics.com/en/products/pudu-bg1-series

Outdoor and semi-outdoor sweeper

PUDU MT1 Max



A sweeper for parking lots, loading areas, covered walkways and other outdoor and semi-outdoor ground. It maps the area once, then runs it on a schedule and empties into a 35-liter container.

Where it works

- Parking lots and drop-off loops, on a route that repeats every night.
- Loading areas and the apron outside a building, before the day starts.
- Covered walkways and breezeways between buildings.
- Semi-outdoor areas with a roof and open sides.

A day on the job

The MT1 Max runs 5 to 10 hours on a charge, 8 hours in standard mode, and returns to charge in under 3.5 hours. It sweeps a 70 cm path with the side brush. Navigation is VSLAM with markers and 3D LiDAR.

Specifications

Dimensions	840 x 600 x 675 mm (33 x 23.6 x 26.6 in)
Weight	85 kg (187 lb)
Cleaning	Sweeping
Coverage	Up to 2,200 m² per hour cover cleaning; up to 7,000 m² per hour spot cleaning
Run time	5 to 10 h, standard mode 8 h
Charging time	Under 3.5 h
Battery	60 Ah
Cruise speed	0.2 to 1.2 m/s, adjustable
Cleaning width	70 cm with side brush
Navigation	VSLAM plus marker plus 3D LiDAR SLAM
Waste container	35 L (9.25 US gal)

Source: pudurobotics.com/en/products/mt1-max

Commercial dry sweeper

PUDU MT1



A robotic sweeper with dual-disc brushes that picks up larger debris such as leaves and bottles along with fine dust. PUDU says it is designed for big venues, up to 100,000 m² of dry cleaning.

Where it works

- Big venues, up to 100,000 m² of professional-grade dry cleaning.
- Floors with leaves and bottles as well as fine dust and dirt.
- Narrow passages, at 75 cm of clearance, with zero-gap edge cleaning.
- Round-the-clock runs, completing three full-charge cycles per day.

A day on the job

The MT1 runs 4 to 8 hours on a charge depending on cleaning level and charges in under 3 hours. It carries a 35-liter trash bin and sweeps a 70 cm path. With the optional Auto-Empty Station it heads to the station when full, empties into an on-site trash bin and returns to cleaning. Navigation is VSLAM, markers and LiDAR SLAM.

Specifications

Dimensions	840 x 600 x 490 mm (33.1 x 23.6 x 19.3 in)
Weight	65 kg (143 lb)
Cleaning	Sweeping
Coverage	Up to 1,800 m² per hour standard cleaning; up to 6,000 m² per hour spot cleaning
Run time	4 to 8 h, depending on cleaning level
Charging time	Under 3 h
Cruise speed	0.2 to 1.2 m/s (0.66 to 3.94 ft/s), adjustable
Cleaning width	70 cm (27.6 in)
Waste container	35 L (1.2 ft³)
Navigation	VSLAM plus marker plus LiDAR SLAM
Minimum path	75 cm (29.5 in)
Docking	Optional Auto-Empty Station: empties waste into an on-site trash bin

Source: pudurobotics.com/en/products/mt1

Commercial sweeper and vacuum

PUDU MT1 Vac



A robotic sweeper and vacuum for commercial and industrial floors. It recognizes carpet and hard floor in real time and adjusts suction and brush speed to match.

Where it works

- Carpet and hard floors, with floor type recognized in real time.
- Under racks and sofas, at 52 cm of low clearance.
- Narrow aisles, at 75 cm of path clearance.
- Walls, pillars, sofa sides and glass, with edge-to-edge cleaning and the hand-vacuum extension.

A day on the job

The MT1 Vac runs 3 to 6.5 hours on a charge, 4 hours in standard sweep and vacuum mode on hard floors, and charges in under 3.5 hours. It carries a 6-liter trash bin and 14 liters of dust bags, and cleans a 55 cm vacuum path. Filtration is H11, with an optional H13 filter. Navigation is VSLAM, markers and LiDAR SLAM.

Specifications

Dimensions	840 x 600 x 490 mm (33.1 x 23.6 x 19.3 in)
Weight	75 kg (165 lb)
Cleaning	Sweeping, vacuuming, dust mopping
Coverage	Up to 1,400 m² per hour (15,069 ft² per hour)
Run time	3 to 6.5 h; standard sweep and vacuum on hard floors 4 h
Charging time	Under 3.5 h
Cruise speed	0.2 to 1.2 m/s (0.66 to 3.94 ft/s), adjustable
Cleaning width	Vacuuming 55 cm (21.7 in); sweeping 70 cm with side brush (27.6 in)
Dustbin	14 L dust bags, 7 L x 2 (0.494 ft³)
Waste container	6 L trash bin (0.21 ft³)
Navigation	VSLAM plus marker plus LiDAR SLAM
Minimum path	75 cm wide (29.5 in), 52 cm high (20.5 in)
Air filtration	H11, optional H13

Source: pudurobotics.com/en/products/mt1-vac

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Service and delivery robots



BellaBot Pro

Delivery and service robot

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BellaBot

Tray delivery robot

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KettyBot Pro

Delivery and reception robot

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PuduBot 2

Universal delivery robot

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PUDU FlashBot Max

Building delivery robot

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FlashBot Arm

Semi-humanoid delivery and service robot

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Delivery and service robot

BellaBot Pro



Four trays, 40 kg of payload and up to 11 hours of run time with no load. In a restaurant it carries food from the kitchen to the table so staff stay with their guests.

Where it works

- Kitchen-to-table runs during the dinner rush, four trays at a time.
- Item delivery across a store, on the same four trays.
- Tray lights show which tray to take, so the right person picks up the right order.

A day on the job

BellaBot Pro runs 11 hours unloaded on a 4.5 hour charge, at 0.2 to 1.2 m/s. It navigates by VSLAM, markers and LiDAR and needs a 65 cm path. Service modes are Cruise, Guide and Birthday.

Specifications

Dimensions	57 x 55 x 129 cm (22.4 x 21.7 x 50.8 in)
Weight	55 kg (121 lb)
Maximum load	40 kg total, 10 kg per tray (88 lb, 22 lb per tray)
Tray size	410 x 500 mm (16.1 x 19.7 in)
Charging time	4.5 h
Run time	11 h, no load
Cruise speed	0.2 to 1.2 m/s, adjustable
Screens	10.1-inch and 18.5-inch LCD
Navigation	VSLAM plus marker plus LiDAR SLAM
Minimum path	65 cm (25.6 in)
Service modes	Cruise, Guide, Birthday

Source: pudurobotics.com/en/products/bellabotpro

Tray delivery robot

BellaBot



A delivery robot with a cat-like face, trays and 40 kg of payload. PUDU describes it as built for food delivery, with dual SLAM navigation and 3D obstacle avoidance.

Where it works

- Food delivery, on trays with infrared tray sensors.
- Spaces with low-lying and overhanging obstacles, which its 3D sensors avoid.
- Calling by the PUDU Link app, a push button caller or a 4G watch.
- Round-the-clock service, with quick battery swap.

A day on the job

BellaBot runs 13 hours with no load and charges in 4.5 hours. It carries up to 40 kg, 10 kg per tray. It navigates by LiDAR or visual SLAM, with 3 RGBD cameras and LiDAR for obstacle detection, and climbs slopes up to 5 degrees. Marker positioning supports a maximum height of 8 meters, and laser positioning is code-free with no height restriction.

Specifications

Dimensions	56.5 x 53.7 x 129 cm (22.2 x 21.1 x 50.8 in)
Weight	55 kg (121 lb)
Tray size	410 x 500 mm (16.1 x 19.7 in)
Tray height	23 cm, 20 cm, 20 cm and 18 cm (9.1 in, 7.9 in, 7.9 in, 7.1 in)
Run time	13 h, no load
Charging time	4.5 h
Maximum load	40 kg, 10 kg per tray (88 lb, 22 lb)
Cruise speed	0.5 to 1.2 m/s (1.64 to 3.94 ft/s), adjustable
Slope	Up to 5°
Navigation	Dual SLAM: LiDAR and visual; marker positioning up to 8 m height, laser positioning code-free
Perception	3 RGBD cameras plus LiDAR

Source: pudurobotics.com/en/products/bellabot

Delivery and reception robot

KettyBot Pro



A delivery and reception robot with an 18.5-inch ad display. It carries trays to tables, can lead customers to their seats, and fits aisles as narrow as 52 cm in specific situations.

Where it works

- Delivering to multiple tables in one run.
- Leading customers to their tables, with the rear cover fitted (sold separately).
- Cruising set areas to offer free snacks and drinks while broadcasting services and promotions.
- Showing promotional material on the ad display.

A day on the job

The KettyBot Pro runs 9 hours with no load and charges in 3.5 hours. Each layer carries 10 kg. 360-degree fisheye lenses and smart tray detection let it tell whether the trays are loaded. It navigates with laser and visual dual navigation, and when the battery is low it gives a voice alert and returns to the docking station, which is sold separately.

Specifications

Dimensions	43.5 x 45 x 112 cm (17.1 x 17.7 x 44.1 in)
Weight	38 kg (84 lb)
Tray size	35.2 x 34 cm (13.9 x 13.4 in)
Tray height	24.8 cm, 25.3 cm and 22.3 cm (9.8 in, 10.0 in, 8.8 in)
Charging time	3.5 h
Run time	9 h, no-load operation
Maximum load	10 kg per layer (22 lb)
Screens	18.5-inch ad display
Cruise speed	Max 1.2 m/s (3.94 ft/s)
Navigation	Laser and visual dual navigation
Minimum path	52 cm or more (20.5 in), in specific situations

Source: pudurobotics.com/en/products/kettybot_pro

Universal delivery robot

PuduBot 2



A delivery robot with three trays by default and up to seven, built for deliveries in manufacturing, hospitals and clinics, entertainment and leisure, retail and office buildings.

Where it works

- Hospitals and clinics.
- Retail and office buildings.
- Manufacturing sites.
- Entertainment and leisure venues.

A day on the job

PuduBot 2 charges in 4 hours. It carries up to 40 kg. It maps spaces up to 40,000 m², works under ceilings up to 30 m, and fits an 80 cm path. Delivery modes are Delivery, Birthday, Cruise and Dish Return, and it recharges itself without manual intervention.

Specifications

Dimensions	58 x 53.5 x 129 cm (22.8 x 21.1 x 50.8 in)
Weight	39 kg (86 lb)
Tray size	52 x 43.2 cm (20.5 x 17.0 in); 3 trays default, up to 7
Maximum load	40 kg (88 lb)
Charging time	4 h
Cruise speed	0.5 to 1.2 m/s (1.64 to 3.94 ft/s)
Minimum path	80 cm (31.5 in)
Docking	Wired and auto-charging
Service modes	Delivery, Birthday, Cruise, Dish Return
Navigation	PUDU VSLAM+ with dual LiDAR
Connectivity	Type-C, 4G, LoRa, Wi-Fi

Source: pudurobotics.com/en/products/pudubot2

Building delivery robot

PUDU FlashBot Max



PUDU calls it its "Building Delivery Expert." It runs room service and deliveries between floors, calling elevators and using turnstiles without manual help, and carries each load in a compartment that opens by password, phone number or NFC.

Where it works

- Room service in hotels, from the kitchen to the door, between floors.
- Medicine and lab samples in hospitals and clinics, in secure compartments.
- Office buildings and other multi-floor sites, with the elevator called automatically.
- Semi-open areas such as garden corridors, fitness zones and poolside.

A day on the job

The FlashBot Max runs 9 hours, charges in 4 and returns to its charger on its own. Cloud Elevator Control needs no elevator modifications and works with KONE and OTIS; PUDU also offers a hardware elevator control option. It carries 10 kg per layer in 2 to 4 adjustable compartments, with a fan that ventilates them continuously. It needs a 60 cm path, sees low and overhanging obstacles with 3D obstacle avoidance, and several robots can be scheduled together.

Specifications

Dimensions	538 x 534 x 1052 mm (21.18 x 21.02 x 41.42 in)
Weight	60 kg (132.28 lb)
Maximum load	10 kg per layer (22.05 lb)
Compartments	2 to 4, adjustable; single 187 x 410 x 280 mm, double 380 x 410 x 280 mm; continuous fan ventilation
Run time	9 h
Charging time	4 h
Cruise speed	0.5 to 1.2 m/s, adjustable
Navigation	VSLAM+ plus LiDAR SLAM
Perception	3D obstacle avoidance for low and overhanging obstacles
Minimum path	60 cm
Access	Password, phone number verification or NFC
Connectivity	IoT: automatic calls, turnstile access and elevators; Cloud Elevator Control works with KONE and OTIS

Source: pudurobotics.com/en/products/flashbot-new

Semi-humanoid delivery and service robot

FlashBot Arm



A semi-humanoid service robot from Pudu X-Lab that pairs a delivery chassis with two arms and dexterous hands. It presses elevator buttons, swipes access cards and opens doors, and carries items in an enclosed compartment.

Where it works

- Delivery in an enclosed dual-door compartment.
- Pressing elevator buttons, swiping access cards and opening doors with its hands.
- Crowded environments, with multi-robot collaboration and avoidance.
- Talking with people through AI voice, expressions and gestures.

A day on the job

FlashBot Arm runs 8 hours with no load and charges in 4 hours. It carries 15 kg. Each arm has 7 degrees of freedom and each hand has 6 active and 5 passive, and both arms reach 1600 x 2000 x 1600 mm. It navigates with VSLAM and LiDAR SLAM, fits a 65 cm path, and returns to its charging station on its own when the battery is low.

Specifications

Dimensions	539 x 515 x 1440 mm (21.2 x 20.3 x 56.7 in)
Maximum load	15 kg (33 lb)
Charging time	4 h
Run time	8 h, no load
Navigation	VSLAM plus LiDAR SLAM
Minimum path	65 cm (25.6 in)
Screens	10.1-inch touch screen
Perception	RGBD cameras, LiDAR, panoramic cameras, pressure-sensitive skin
Arm and hand degrees of freedom	Arm: 7; hand: 6 active and 5 passive (per side)
Maximum reach	1600 x 2000 x 1600 mm, both arms (63 x 78.7 x 63 in)

Source: pudurobotics.com/en/products/flashbot-arm

5 units, pages 23 to 27

Industrial carrying robots



PUDU T300

Autonomous mobile robot, 300 kg payload

Page 23



PUDU T600

Autonomous mobile robot, 600 kg payload

Page 24



PUDU T600 Underride

Low-profile heavy-payload industrial delivery robot

Page 25



PUDU T150

Light-payload industrial delivery robot

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PUDU MP2000

Autonomous pallet handling robot

Page 27

Autonomous mobile robot, 300 kg payload

PUDU T300



An autonomous mobile robot that carries up to 300 kg to a set destination. This is the lifting version, which raises its load 60 mm. It can ride elevators and pass gates that are connected to PUDU's controls.

Where it works

- Linen and supply carts in hospitals and clinics, between floors by elevator.
- Moving supply carts between a warehouse and its loading bays.
- Parts and materials around a plant, up to 300 kg.
- Custodial and maintenance supplies between floors, by elevator.

A day on the job

The T300 runs 12 hours empty and 8 hours at full load, and charges from 0 to 90 percent in 2 hours. The battery can also be swapped. The path it needs depends on the size of its load. It crosses 20 mm thresholds and 35 mm grooves, and sees low and overhanging obstacles and yellow floor lines. It meets ISO 3691-4, the safety standard for driverless industrial trucks. A power-assist mode lets a person push it by hand when needed.

Specifications

Model	T300 Lifting, WTIDL1
Dimensions	835 x 500 x 1350 mm (32.9 x 19.7 x 53.1 in)
Weight	81 kg (178.6 lb)
Maximum load	300 kg (661 lb)
Lifting height	60 mm (2.36 in)
Run time	12 h no load, 8 h full load
Charging time	2 h, 0 to 90 percent
Cruise speed	Up to 1.2 m/s (3.94 ft/s)
Maximum step height	20 mm threshold (0.79 in)
Gap crossing	35 mm (1.38 in)
Navigation	VSLAM and LiDAR SLAM
Minimum path	Set by the size of the load

Source: pudurobotics.com/en/products/pudut300

Autonomous mobile robot, 600 kg payload

PUDU T600



Carries up to 600 kg per trip, twice the T300's load. This is the upright version, with a touch screen, a handle and a 60 mm lift, run without a central control system.

Where it works

- Furniture and equipment moves between buildings.
- Loads of up to 600 kg from a warehouse to a loading dock.
- Heavy maintenance stock between floors, calling an idle elevator first.
- Moving heavy racks and carts in bulk.

A day on the job

The T600 runs 12 hours empty and charges from 0 to 90 percent in 2 hours; the battery can also be swapped. It needs a 70 cm path, crosses 10 mm thresholds and 35 mm gaps, and works between 0 and 40 °C. It projects a warning line on the floor ahead of it, and when it receives a fire alarm or earthquake signal it drives to a safe area or stops somewhere safe. It speaks VDA5050, a standard protocol for scheduling robots from different makers together.

Specifications

Model	T600 Upright, WTIDL2
Dimensions	960 x 500 x 1350 mm (37.8 x 19.7 x 53.1 in)
Weight	112 kg (247 lb)
Maximum load	600 kg (1,322 lb)
Lifting height	60 mm (2.36 in)
Battery	30 Ah
Run time	12 h, no load
Charging time	2 h, 0 to 90 percent
Cruise speed	0.2 to 1.2 m/s (0.66 to 3.94 ft/s)
Maximum step height	10 mm (0.39 in)
Gap crossing	35 mm (1.38 in)
Operating temperature	0°C to 40°C (32°F to 104°F)
Navigation	VSLAM plus LiDAR SLAM
Minimum path	70 cm (27.6 in)

Source: pudurobotics.com/en/products/pudut600

Low-profile heavy-payload industrial delivery robot

PUDU T600 Underride



The underride version of the PUDU T600 heavy-payload industrial delivery robot. It carries up to 600 kg, lifts 60 mm, stands 255 mm tall and navigates on LiDAR SLAM only.

Where it works

- Heavy-payload material transport, up to 600 kg.
- Warehouse operations, with rack pick-and-place.
- Cross-floor delivery, with idle-elevator priority scheduling.
- Narrow aisles, using single-lane or dual-lane traffic by load size.

A day on the job

The T600 Underride runs 12 hours with no load and charges to 90 percent in 2 hours. It has a 30 Ah battery and supports automatic recharging or battery replacement. It cruises at 0.2 to 1.2 m/s, fits a 65 cm path, and operates between 0 and 40°C. Ground projection and the power-assist switch are not supported on this version.

Specifications

Model	WTIDU2
Dimensions	845 x 500 x 255 mm (33.3 x 19.7 x 10.0 in)
Weight	94 kg (207 lb)
Maximum load	600 kg (1,322 lb)
Lifting height	60 mm (2.36 in)
Battery	30 Ah
Charging time	2 h from 0% to 90%
Run time	12 h, no load
Cruise speed	0.2 to 1.2 m/s (0.66 to 3.94 ft/s)
Navigation	LiDAR SLAM only
Minimum path	65 cm (25.6 in)
Maximum step height	10 mm (0.39 in)
Gap crossing	35 mm (1.38 in)
Operating temperature	0°C to 40°C (32°F to 104°F)

Source: pudurobotics.com/en/products/pudut600

Light-payload industrial delivery robot

PUDU T150



A light-payload industrial delivery robot that carries up to 150 kg, in a Standard version and a Lifting version that raises loads 60 mm. PUDU says it needs no site modification and can be set up in 60 minutes or less.

Where it works

- Intralogistics loop delivery.
- Material replenishment and retrieval.
- Inter-line material handling.
- Component and parts delivery.

A day on the job

The T150 runs 12 hours with no load and charges to 90 percent in 2 hours. It has a 30 Ah battery and supports rapid battery swapping, automatic charging and wired charging. It navigates with VSLAM and LiDAR SLAM, fits a 60 cm path and runs at 0.2 to 1.2 m/s. PUDU says it meets ISO 3691-4 and holds an industrial-specific CE certification.

Specifications

Model	WTID00 (Standard); WTIDL0 (Lifting)
Dimensions	835 x 500 x 1350 mm (32.9 x 19.7 x 53.1 in)
Weight	Standard 65 kg (143 lb); Lifting 81 kg (179 lb)
Maximum load	150 kg (331 lb)
Lifting height	60 mm (2.36 in), Lifting version
Battery	30 Ah
Charging time	2 h from 0% to 90%
Operating time	12 h, no load
Cruise speed	0.2 to 1.2 m/s (0.66 to 3.94 ft/s)
Navigation	VSLAM plus LiDAR SLAM
Minimum path	60 cm (23.6 in)
Maximum step height	20 mm (0.79 in)
Gap crossing	35 mm (1.38 in)
Operating temperature	0°C to 40°C (32°F to 104°F)

Source: pudurobotics.com/en/products/puduT150

Autonomous pallet handling robot

PUDU MP2000



A pallet handling robot that lifts and moves pallets up to 2,000 kg. PUDU lists its core applications as line-side material delivery in manufacturing, pallet handling in warehousing, and distribution center transfer in logistics.

Where it works

- Line-side material delivery in manufacturing.
- Pallet handling in warehousing.
- Distribution center transfer in logistics.
- Narrow aisles as tight as 2 m, with 90 degree pallet pickup.

A day on the job

The MP2000 runs 12 hours with no load and 6 hours at maximum load. A charge takes about 2 hours on 200 to 240 V, or about 3.2 hours on 100 to 120 V. It travels up to 1.6 m/s unloaded and 1.2 m/s loaded, and inserts its forks in 20 seconds. It navigates with 3D LiDAR-SLAM and VSLAM, and recognizes standard three-runner and perimeter-base pallets.

Specifications

Model	MPID01-M (Standard); MPID01-N (Narrow Fork)
Dimensions	1585 x 910 x 1870 mm (62.4 x 35.8 x 73.6 in)
Maximum load	2000 kg (4,409 lb)
Lifting height	200 ±5 mm (7.9 in); lowered fork height 80 ±5 mm (3.1 in)
Fork outer width	620 mm Standard, 550 mm Narrow Fork (24.4 in, 21.7 in)
Stacking aisle width	2000 mm or less with a 1200 x 1000 mm pallet; 1960 mm or less with a 1200 x 800 mm pallet (78.7 in, 77.2 in)
Run time	12 h no load; 6 h maximum load
Charging time	About 2 h at 200 to 240 V AC; about 3.2 h at 100 to 120 V AC
Cruise speed	Up to 1.6 m/s unloaded, 1.2 m/s loaded
Navigation	3D LiDAR-SLAM and VSLAM
Maximum step height	10 mm (0.39 in)
Gap crossing	35 mm (1.38 in)
Slope	3° full load; 8° unloaded

Source: pudurobotics.com/en/products/mp2000

3 units, pages 29 to 31

Quadruped and humanoid robots



PUDU D5-W

Wheeled quadruped for patrol and inspection

Page 29



PUDU D7

Industrial semi-humanoid robot

Page 30



PUDU D9

Full-size biped humanoid robot

Page 31

Wheeled quadruped for patrol and inspection

PUDU D5-W



A wheeled quadruped that patrols paved areas, lots and large facilities on a set route, carries up to 30 kg, and runs in rain or heat.

Where it works

- Perimeter and parking-lot patrol on a repeating route after hours.
- Inspection rounds of large outdoor facilities such as stadiums and athletic fields.
- Carrying tools or supplies alongside a grounds crew, following a person.
- Checking a site after a storm before staff walk it.

A day on the job

The D5-W runs 2 to 3 hours per charge on a 1,000 Wh battery, climbs 25 cm steps and 45 degree slopes, and is rated IP67 against dust and water. It navigates on its own with dual 3D LiDAR and four fisheye cameras, or follows a person. The inspection kit and charging dock are optional and sold separately.

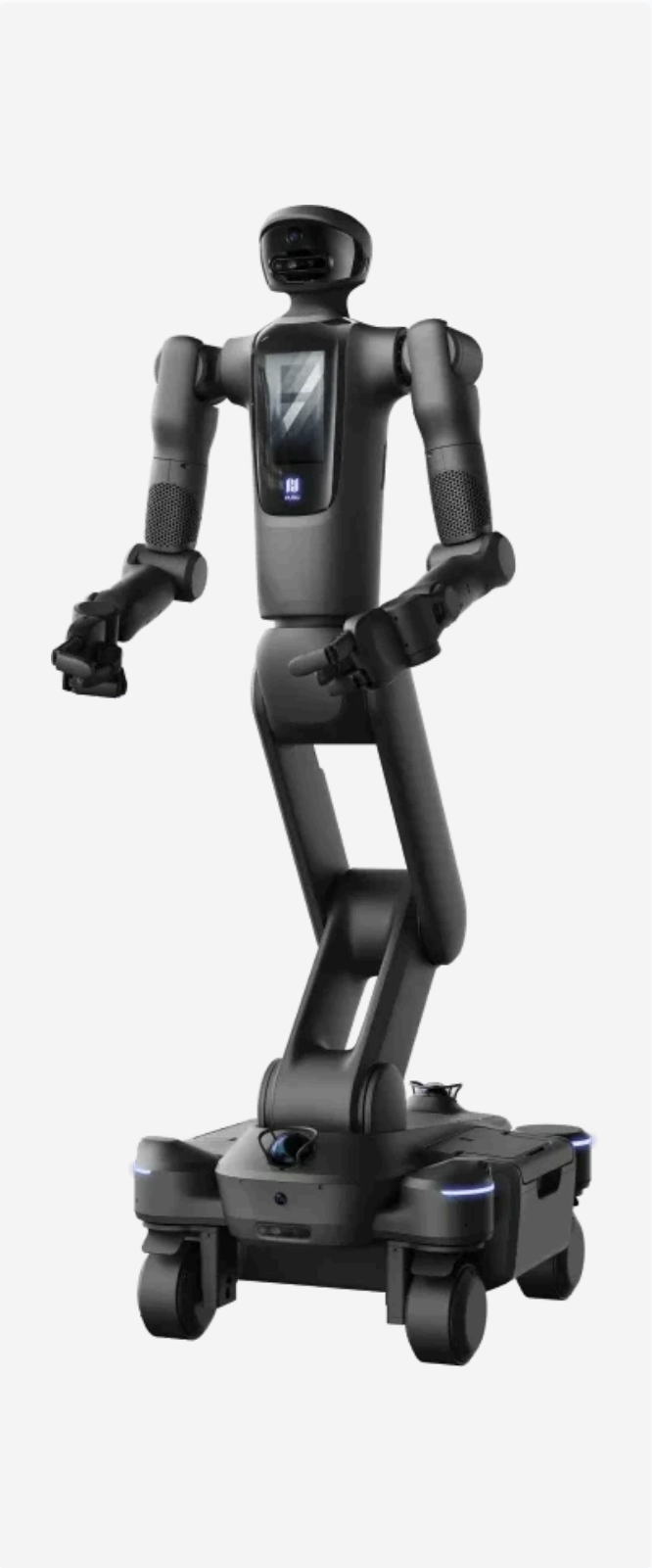
Specifications

Standing dimensions	900 x 543 x 572 mm (35.4 x 21.4 x 22.5 in)
Weight with battery	56 kg (123 lb)
Computing	NVIDIA Jetson Orin AGX 64GB plus RK3588
Perception	Dual 3D LiDAR plus four fisheye cameras
Maximum joint torque	165 Nm (121.7 lb ft)
Battery	1,000 Wh
Operating time	2 to 3 h
Continuous payload	20 to 30 kg (44 to 66 lb)
Climbing	Up to 80 cm (31.5 in)
Maximum step height	25 cm (9.8 in)
Slope	45° ascent and descent
Operating temperature	-20°C to 55°C (-4°F to 131°F)
Ingress protection	IP67
Autonomous navigation and following	Supported
Voice interaction	Supported

Source: pudurobotics.com/en/products/d5

Industrial semi-humanoid robot

PUDU D7



Specifications

Maximum load	Up to 14 kg (31 lb)
Working height	Up to 2 m (6.6 ft)
Perception	Dual front and rear LiDAR; tactile sensors that read contact force and pressure
Force control	Dual-arm precision force control, with millimeter-level force-control accuracy
Battery swapping	Fully autonomous: removes, replaces and recharges batteries without human intervention
AI model	PuduFM 1.0

Ask Apollo about availability.

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Source: pudurobotics.com/en/news/pudu-d7-industrial-humanoid-robot-launch

Full-size biped humanoid robot

PUDU D9



Specifications

Standing dimensions	Height 170 cm (66.9 in)
Weight	65 kg (143 lb)
Limb lengths	Thigh 325 mm, calf 383 mm, arm 580 mm, hand 220 mm (12.8 in, 15.1 in, 22.8 in, 8.7 in)
Degrees of freedom	42 total; 6 per leg
Arm and hand degrees of freedom	Arm: 7; hand: 6 active and 5 passive (per side)
Maximum joint torque	352 Nm (259.6 lb ft)
Maximum load	20 kg total, 10 kg per arm, test environment (44 lb, 22 lb)
Cruise speed	Maximum walking speed 2 m/s (6.56 ft/s)
Dexterous hand	PUDU DH11: 11 degrees of freedom (6 motors), 500 g (1.1 lb), 12 tactile sensing regions, 1018 tactile sensor pixels
Hand grip and lift	Maximum palm finger grip 30 N (6.7 lbf); maximum lifting load 40 kg (88 lb)
Battery	15 Ah (0.72 kWh)
Computing	275 TOPS
Perception	RGB and RGBD cameras, tactile sensors, IMU
Speaker	Stereo

Ask Apollo about availability.

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Source: pudurobotics.com/en/products/d9

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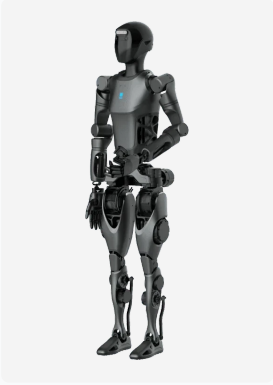
Talk to Apollo about your robots

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Specifications in this catalog are PUDU's published figures. Each unit page lists its source on pudurobotics.com.