



# ADLATUS TRUSTED ROBOTICS

for a cleaner and safer community

ADLATUS Robotics GmbH



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Ulm is not only known for the world's tallest church tower and as the birthplace of Albert Einstein, but also for its innovations and clever minds, like those at ADLATUS Robotics GmbH.

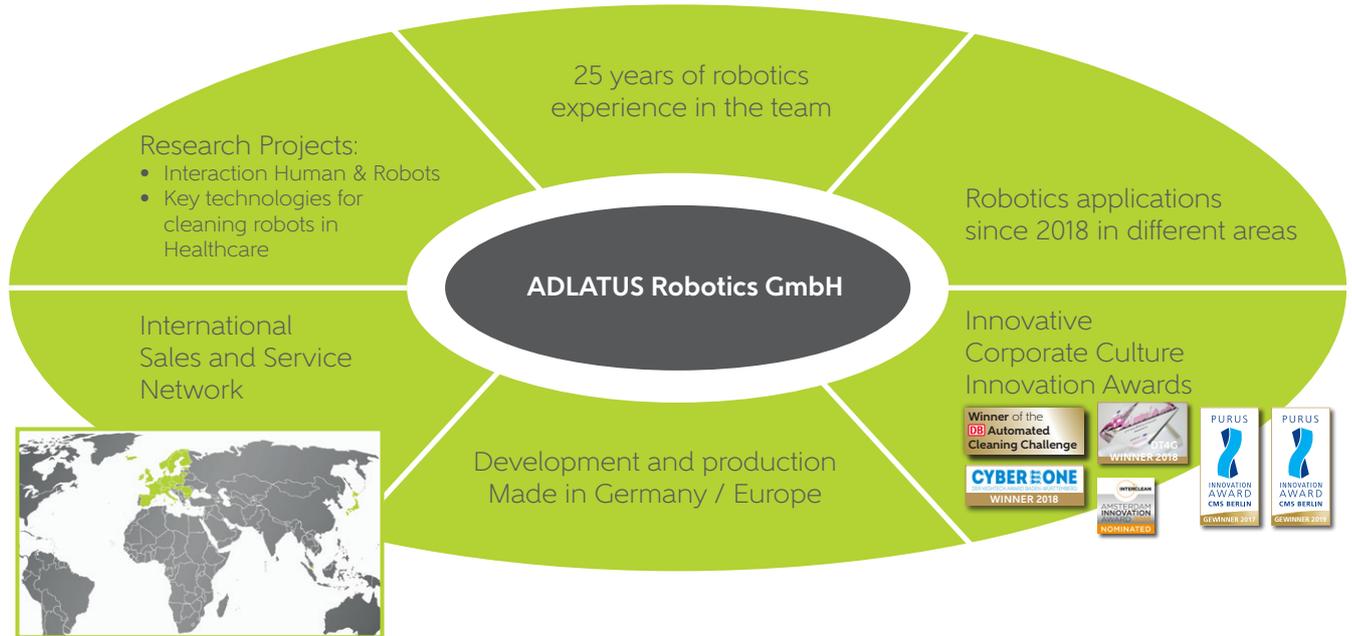
ADLATUS Robotics was founded in 2015 by robotics specialists Matthias Strobel and Dr. Siegfried Hochdorfer and has developed in recent years from a start-up into a young and dynamic company with over 30 employees.

At its Ulm location, ADLATUS Robotics develops, produces and sells autonomous service robots for the cleaning sector and offers complete solutions including consulting, commissioning, training and services. The navigation software, as the core of our robot systems, is developed by ADLATUS Robotics. This makes us independent of third-party suppliers and flexible in implementing new ideas and customer requirements. Internationally, ADLATUS service robot systems and services are offered by qualified sales and service partners.

As a manufacturer of robotic systems, ADLATUS Robotics has established itself in the professional cleaning industry as an innovation leader for service robots and has been rewarded with several awards for the team's achievements in recent years. The robot systems are used in various sectors such as industry, logistics centers, public areas, shopping centers, public transport, clinics and other applications.



# Benefits to work with ADLATUS Robotics



## Your challenges are the driving force for our innovations

Due to the shortage of skilled workers in many areas, the demand for the automation of processes is growing. Pandemics increase the demand for high cleaning quality and cleanliness and at the same time require an increase in cleaning frequencies.

Smart technology supports these trends, but in addition to facilitating the execution and documentation of processes, it also brings challenges of data security and data protection.

These challenges have motivated ADLATUS Robotics from the very beginning to develop new robot system solutions for the professional cleaning of floors with a lot of passion, perseverance and team spirit.

With the ADLATUS **Trusted Robotics** platform, in addition to full autonomy and high safety performance, ADLATUS Robotics focuses on the data protection and data security of its users when developing its robot systems.



**Quality**

**Cleanliness**

**Skills shortage**

**Automation**

**Digitalization**

**Data protection**

# ADLATUS TRUSTED ROBOTICS

## Fully autonomous cleaning with safety performance level

How smart should a cleaning robot be today? ADLATUS Robotics has asked itself this question from the very beginning when developing its cleaning robot systems and service stations and chose the approach of full autonomy. This concept was expanded with the platform technology **Trusted Robotics**.

Our intelligent robot systems already offer great benefits to users today, and the trend towards digitalization and automation has increased the demand for solutions. With **Trusted Robotics**, the intelligent autonomy of a service robot is supported and offers, in addition to the highest process stability in navigation, an economical use of smart features and security in the handling of our customers' data.





### ADLATUS SOFTWARE PLATFORM

ADLATUS cleaning robot systems are operated on specially developed software which, in combination with powerful sensor technology, ensures high stability in navigation. The software is continuously optimized by findings from the field and customer requirements.



### FULL AUTONOMY WITH SERVICE STATION

A fully automatic service station increases the degree of automation of the autonomous cleaning systems and minimizes the amount of supervision required by staff. In addition to battery charging, cleaning programs are started automatically and robot-specific emptying (wastewater or dirt tank) and filling (fresh water) is carried out.



### SMART FEATURES

Intelligent functions that are easy and intuitive to operate on the touch display. Communication and integration in IoT and building management systems. Certified documentation of processes that are data protection compliant.



### HIGH SAFETY PERFORMANCE LEVEL

An interplay of different intelligent sensors ensures stability in navigation and brings collision avoidance to a performance level that meets global standards. This increases the independence and autonomy of the ADLATUS robot systems and allows work to be carried out almost 100% autonomously.



### DSGVO\* CONFORM

Privacy by design and default - data protection by design and definition of standards. The ADLATUS data protection concept does not record any personalized or environment-related data. The operation of the autonomous robot systems is completely self-sufficient and no connection to a WLAN network or even a continuous internet connection is required. ADLATUS Robotics thus minimizes security risks in companies.

\* European Data Protection Regulation

# CREATE CLEANING EFFICIENT ...

## ADLATUS CR700 + S700

### Autonomous cleaning robot system

The ADLATUS **CR700** is a professional cleaning robot that cleans smooth floors independently and does not require any personnel during the cleaning operation. The cleaning robot system is quickly set up through a simple and user-friendly user interface. The desired cleaning areas are scanned with a teach and repeat function and stored on a building plan. This is stored on the robot system and can be started easily via various options. Be it via a fully automated service station, on the device itself or via a mobile terminal that connects to the robot system.

The navigation is based on a specially developed software system that has already proven itself over several years and applications in the field and has a high level of stability. Its powerful sensor technology and the intelligent processing of the sensor data enable reliable navigation even in complex environments and offer safe detection even of difficult-to-see objects according to the highest safety standards.

The fields of application of the ADLATUS **CR700** cleaning robot system are industrial companies, logistical centers, public areas such as airports, car parks, arcades, railway stations, shopping malls, in hospitals and other applications.





### AUTONOMOUS OR MANUAL OPERATION

The ADLATUS **CR700** can perform cleaning tasks completely independently. In addition, it offers the possibility of manual operation. If, for example, a spot needs to be cleaned spontaneously, it can be operated very easily in manual mode. The user guides the **CR700** manually and comfortably to any desired cleaning position.



### SERVICE STATION

If the battery power of the ADLATUS **CR700** is running low, its dirty water tank is full or it needs fresh water, the ADLATUS **CR700** moves independently to its service station **S700** and is supplied with everything it needs there. Stored cleaning tasks are automatically started via the service station, which enables fully autonomous operation over a longer period of time, e.g. a night shift.



### INDUSTRIAL SUITABILITY

Our service robots have already proven their industrial suitability many times over and are characterized by a quality-conscious, robust construction that is designed to withstand permanent loads. High-quality components and parts are used, such as stainless-steel elements or maintenance-free brushless motors.



### USER-FRIENDLY

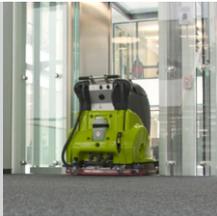
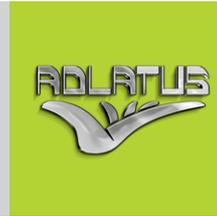
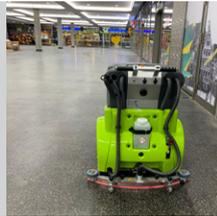
Thanks to the simple and user-friendly user interface for visualization, the ADLATUS **CR700** can be started easily by the cleaning staff. This can be done directly on the robot's touch display or remotely via a mobile device such as a tablet or smartphone.

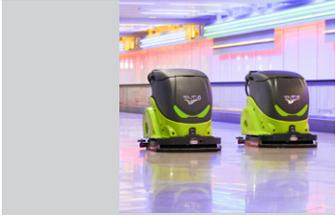
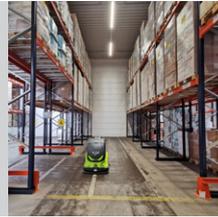
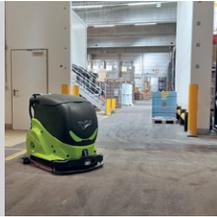


### CONNECTIVITY

The ADLATUS **CR700** has a wide range of options for individual communication with technical systems and operators. It can be integrated into the building infrastructure and can communicate with fire alarms or alarm systems, operate automatic doors and gates or, for example, send out the fully automatically generated documentation of the cleaning process as a protocol by e-mail.

# Flexible use in most diverse fields of application





# CREATE ALSO SWEEPING EFFICIENT ...

## ADLATUS SR1300

### Autonomous vacuum sweeping robot system

The ADLATUS robotic sweeper system is a fully autonomous sweeper equipped with a service station where the battery is automatically charged. In addition, the system offers fully automatic emptying of the swept-up waste, which can be tipped into a provided container and disposed of.

The fully autonomous sweeper is built on the ADLATUS **Trusted Robotics** Platform, which provides maximum stability in navigation, economical use of smart features and security in handling our customers data. An interaction of different intelligent sensors increases the stability in navigation and brings collision avoidance to a very high performance level.

The vacuum sweeping robot system was specially developed for logistical and industrial areas to efficiently remove coarse dirt in large halls and aisles. With an autonomous steering drive, the system is driven via a front wheel, which enables maximum angular rotation when steering. This allows the sweeper to rotate around itself and be used for cleaning in the tightest spaces. The system can negotiate ramps with a gradient of up to 20%.

Automatic emptying of the waste container increases the degree of automation of the autonomous sweeper and reduces manual supervision to a minimum.





### **SERVICE STATION**

Automatic disposal of swept up waste and coarse dirt into a provided container as well as automatic charging of the batteries.



### **INDUSTRIAL SUITABILITY**

The construction of the robot system is based on high-quality materials that ensure stability, durability and industrial suitability of the robot. The changing of the main brush and side brush is designed to be maintenance-friendly. A simple battery change can also be carried out from the side. In addition, the system is equipped with flashing signals and can be optionally expanded with a Blue Spot and rotating beacon, especially in an industrial environment.



### **USER-FRIENDLY**

Thanks to the simple and user-friendly user interface, the ADLATUS SR1300 can be started easily by the cleaning staff. This can be done directly on the robot's touch display or remotely via a mobile device such as a tablet or smartphone.



### **CONNECTIVITY**

The ADLATUS **SR1300** has a wide range of options for individual communication with technical systems and with operators. It can be integrated into the building infrastructure and communicate with fire alarms or alarm systems, operate automatic doors and gates or, for example, send out the fully automatically generated documentation of the cleaning process as a protocol by e-mail.

## The benefits of automated cleaning ...



Efficient design of cleaning processes individually adapted to buildings



Communication with automatic doors and gates, as well as other IoT systems / Integration into building management systems.



Cleaning frequencies can be flexibly increased without additional costs



Cleaning times can be flexibly adjusted according to traffic frequencies, even outside working hours.



Transparent and certified cleaning reports for verification and proof of performance



Previously tied-up staff can be deployed for other activities that are less stressful on the body or more efficient.



Increase in cleaning quality through efficient regular maintenance cleaning increases occupational safety



# ADLATUS Aftersales & Customer Service

## TELEPHONE- AND ONLINE-SUPPORT

ADLATUS Robotics offers its customers accessibility and reliable telephone support from experts during normal business hours on working days and, individually for contract customers, even beyond these hours.

## ON-SITE SERVICE

Thanks to a comprehensive international service network with ADLATUS Robotics partners and dealers, we are on-site with our customers. This saves long and expensive journeys and downtimes.

## SPARE PARTS SERVICE

Thanks to the highest spare parts availability on the market and the design of the ADLATUS Robotics service robots, fast replacement and availability of spare parts can be guaranteed.



## **MAINTENANCE**

With preventive maintenance management, you as our customer benefit from maximum availability. The individual structure of ADLATUS Robotics service and maintenance contracts ensures that our customers receive service support that exactly meets their wishes and needs.

## **TRAINING**

For users and operators, ADLATUS Robotics offers a comprehensive range of training courses for the operation and maintenance of the service robot systems. We qualify your team for the perfect handling of the autonomous cleaning systems in case of service as well as in daily use. The correct setting of the systems and the correct handling during operation and handling bring an optimal cleaning result and maximum efficiency during use. Depending on the customer's requirements, we offer a training package tailored to the company.

## **CLEANING ADVICE**

Tell us your use case and your application. With our many years of experience, together we will find the optimal solution for handling our service robots.

## **COMMISSIONING / PRODUCTION SUPPORT**

Experienced ADLATUS Robotics specialists are on hand during all phases of commissioning. This begins with the first application steps and continues with the efficient integration of the ADLATUS cleaning robots. From the start-up phase during commissioning to optimization during operation, ADLATUS Robotics will be happy to assist you. Together with you, we pursue the goal of securing and increasing the efficiency and productivity of maintenance cleaning.

## **CONVERSIONS / CONVERSION / RELOCATION**

Use the support of ADLATUS Robotics for conversions, retrofitting or the complete relocation of your maintenance cleaning to a new company area.

# What you always wanted to know about **service robotics** ...

## **SAFETY PERFORMANCE LEVEL**

The performance level (PL) is a measure of the reliability of a safety function. It is measured on a scale from a (lowest PL) to e (highest PL).

## **IOT SYSTEMS**

IoT means „Internet of Things“ and stands for technologies of a global infrastructure that enable physical and virtual objects to be networked and to work together through information and communication technologies.

## **AUTONOMOUS**

Autonomous, means something like „under its own power“ and in robotics stands for robots that can move and act independently in their environment.

## **TRUSTED ROBOTICS**

At ADLATUS, **Trusted Robotics** stands for security in the handling of data, security in the use of smart features and security in relation to the navigation of the robots.

## **SMART FEATURES**

Smart functions or objects are devices that can be digitally networked and can receive and transmit data. They can communicate with each other as well as with their environment.

## **GDPR**

The General Data Protection Regulation, or GDPR, is a European Union regulation that harmonizes the rules for processing personal data, both private and public, across the EU.

## **USER INTERFACE**

A user interface, also called „HMI“, is a graphical user interface on which the functions and results of a program are displayed graphically and intuitively so that the user can work with the respective device as easily as possible.

## **CONNECTIVITY**

Connectivity means „ability to connect“. In the field of robotics, connectivity often means that devices can be integrated into an already existing infrastructure.

## COBOT

Cobot is a combination of „collaborative“ and „robotics“. A cobot is a robot that supports humans in work steps, for example by assisting with a task or a process or by taking over dangerous steps of a process for the human. Unlike autonomous robots, cobots are designed and programmed to depend on human instructions or to respond to actions. ADLATUS Robotics relies on the full autonomy of its service robots and creates a fully automated process independent of the operator/user.

## TEACH AND REPEAT

With „teach and repeat“, a path is drawn into an existing map of the respective environment. This path is drawn in as a route by manually operating the robot (teach), which the robot can then follow independently in the next step (repeat).

## NAVIGATION OR LOCALISATION

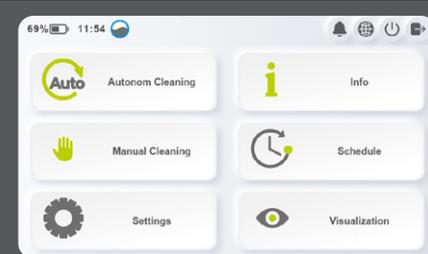
Navigation, or rather localization, helps the robot to find its way around its environment. Through localisation, the robot knows where it is.

## LASER SCANNER

Laser scanning is a measurement method that records and evaluates data over a wide area. A distinction is made between 2D and 3D lasers. While the 2D laser can recognize contours and distances, the 3D laser obtains an overall picture of its field of vision. Both laser scanners are used to localize the robot.

## SENSORS

A sensor is a technical component that can detect different characteristics of its environment. In the field of robotics, ultrasonic sensors are often used that can recognize the contours of their environment.





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