

优 必 选
UBTECH

Bring intelligent robots to every household

Distributed by:



Global Top-tier AI & Robotic Tech Hub

200+

Top AI Papers

Selected into prestigious AI conferences and journals including TPAMI, IJCV, CVPR, NeurIPS, ICCV, AAAI, ICDM, ICML

1500+

AI Patents as of 2019.11

High-quality patents and patent application targeting key fields including servos, motion control and navigation.

5

Global Research Institutes



Los Angeles, Sydney, Beijing, Shenzhen, Wuhan

19

AI & robots Standards Building



General security rules and performance test for service robots...

> 20

Prizes at International AI Competitions



Champions of deep image recognition at Robust, visual dialogue at ECCV...

Joint Research with Top Universities



Global Research Centers



UBTECH Sets Industrial Standards

- [China national standardization for service robots](#)
Leading efforts to obtain national level certification of Walking robots
- [International standardization for service robots](#)
Member of the IEC Service Robots Standardization Working Group (IEC TC59 WG16)

UBTECH Robot Industrial Layout

To C



AlphaMini
Intelligent
Animated
Robot



Alpha 1E
Intelligent
Programming
Companion



Iron Man MK50 Robot
IP Robot



Visbot
Scientific Parenting
Assistant



Jimu Robot
STEAM Education and
Programming Robot

To B



Cruzr
Cloud-based Intelligent
Humanoid Service Robot



ADIBOT
UVC
Virus killing robot



AIMBOT
Autonomous Indoor
Monitoring Robot



Walker
Intelligent humanoid
Service Robot

To E



AlphaMini
Preschool & K12 or
Elder Accompany



Yanshee
Raspberry Pi
Open-source
Educational Robot



uKit Series
Easy-to-build
Programming robots



One of Our Smart Factories

机器人智能工厂



Location: Yun Nan, Kun Ming



Scale: Biggest Service Robot Factory in Kun Ming



Equipment: Highly Automated with Robot Arm, AGV Robot, Testing Robot and Automatic Warehousing



Capacity: 30,000 units/Year



Production Line: SPS Material Selection Line + Robot Assembly Line + Base Installation Line + Final Assembly and Testing Line.



Floor Area: 4,000 sqm



Shop Floor Management:
Just-in-Time to maintain the efficiency. Layered Closed-Loop QC Management with real-time tracing by MES and Andon Systems

- Robots making Robots
- Supermatic production line of domestic large robots
- Covering the whole process from warehousing and logistics, complete machine assembly test to packaging and shipment;
- Equipped with complete quality control and perfect after-sales maintenance system



Factory Operation

https://flytech1989-my.sharepoint.com/:v:/g/personal/flytech_flytech_com_hk/EU6Pxy_rFIZAlrPg4bLUodUBejxdwCt0c-rOXoZwdK-8QQ?e=1AmW6N

Global Partner Ecosystem



Carnegie Mellon University



Tsinghua University



Huazhong University of Science and Technology



University of Sydney



East China Normal University



Institute of Electrical and Electronics Engineers



China Association for Science and Technology



National Center for Educational Technology



Tencent



Amazon



Apple



Disney



China National Youth Palace Association



Communist Youth League Committee of China

ADIBOT

UBTECH UVC Disinfection Robot

Life Guardian

“A New Type of Technological Force to Fight
Against the Spread of SARS-CoV-2”

Focus on Human Health
Improve the Living Environment Sanitation



ADIBOT 

UVC Disinfection

Broad-spectrum

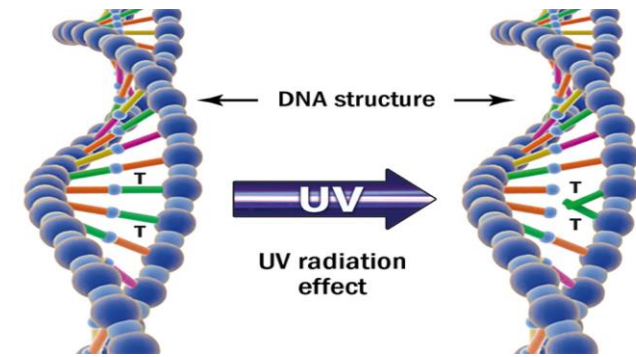
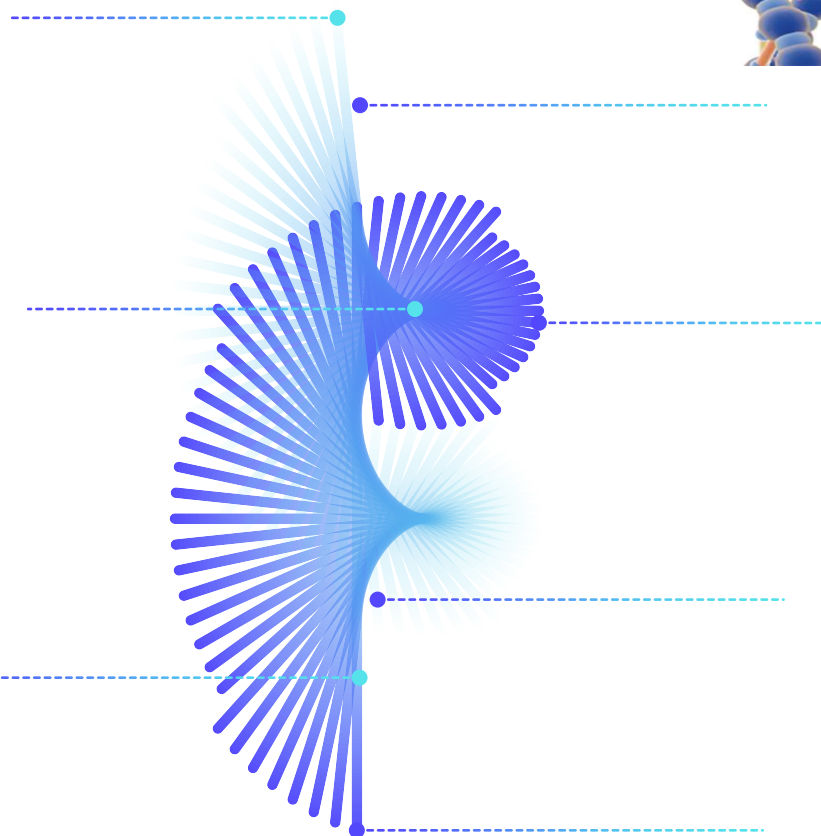
Can inactivate almost all kinds of pathogenic microorganisms.

High Efficient

A higher sterilization efficacy with a shorter sterilization time.

Widely Applicable

Apply to all surfaces disinfection and indoor air disinfection.



Non-Consumables

No consumables required during use

Non-corrosive

Non-corrosive to surfaces and circumstances.

NO Residual

No chemical residues;
No secondary pollution.

Safe & Atoxic

No chemical disinfectants ;
No disinfection by-products

Disinfection Methods Comparison



Methods	UV-C	Aerosolized Hydrogen Peroxide (aHP)	Spray
Mechanism	Damaging DNA or RNA inside the cell, preventing the microorganism from replication.	Denaturing proteins; attack membrane lipids, DNA, and other essential cell components or inhibition of protein synthesis, etc.	Denaturing proteins; attack membrane lipids, DNA, and other essential cell components or inhibition of protein synthesis, etc.
Disinfectant	None	hydrogen peroxide, peroxyacetic acid, chlorine and chlorine compounds, etc. [needs expertise to formulate and storage]	hydrogen peroxide, peroxyacetic acid, chlorine dioxide, etc. [needs expertise to formulate and storage]
Reaction type	Physical reaction Produce no disinfection by-products.	Chemical reaction Produce disinfection by-products, even toxic and harmful.	Chemical reaction Produce disinfection by-products, even toxic and harmful.
Scope	Air and surface disinfection	Air and surface disinfection	Surface disinfection
Corrosivity	○ ○ ○ ○ ○ None	● ● ● ○ ○ Yes, especially metal and fabric	● ● ● ● ● Yes, especially metal and fabric
Chemical residues	○ ○ ○ ○ ○ None. People can enter the room right after the disinfection is done	● ● ● ○ ○ Yes. Need to be airtight for 4-6h before people can enter	● ● ● ● ○ Yes. Ensure environmental ventilation since there're residues on the surface
Safety	Harmful to human eyes and skins. Can only operate when no one is around (at least far away)	Some disinfectants are skin and mucosa safe at low concentrations, but it is not equivalent to respiratory safe. The hazard can be fatal once inhaled a lot or mistake in dilution. Dangerous when close to power points and/or electrical appliance.	Risks of surface chemical residues. Dangerous when close to power points and/or electrical appliance.
Application scenario	All circumstances of air and surface disinfection as long as no one is around.	Not apply to circumstances of books & files, high precision instruments, metal equipment, fabrics and foods.	Not apply to circumstances of books & files, high precision instruments, metal equipment, fabrics, foods and exits.
Standardise & Verifiability	Standardised via Robot's AI and Sensors. Result can be verified with Dosimeter cards.	Highly variable and affected by air flow, the disinfectant solutions, etc. Verifiable by Bacteria count – require professional service.	Highly variable and affected by air flow, the disinfectant solutions and the workmanship, etc. Verifiable by Bacteria count – require professional service.

Alerts of Fogging/Spraying Disinfection

【韓國殺菌劑事件】殺菌變殺人 母親自責：我親手毀了兒子一生 (Disinfection kills human – Mother Remorse: I ruined my son's life)

“我最怨恨的不是政府，也不是生產商，而是我自己。因為那個加濕器，我親手毀了他的一生，如果我比他早一步離開這個世界的話，誰可以照顧他？”

權美愛

2011年，韓國有近百人死於肺病，後來政府證實大部分死者死因，與由OXY生產的殺菌劑有關，殺菌劑內含有一種對人體有害的化學物質。

美愛在性俊出生不久，為保持空氣清新，購入這部加濕器，沒想到好心做壞事。後來愈來愈多受害人個案曝光，美愛與其它家屬展開了集體訴訟。小市民對戰大財團從來不易，為了找到自己曾使用有關產品的證據，她跑遍從前光顧過的超級市場、雜貨店，不過由於時期相隔太久，無法取得購買產品的收據。

Link: [韓國殺菌劑事件 | 殺菌變殺人 母親自責：我親手毀了兒子一生 | 香港01博評\(hk01.com\)](#)



OXY RB AND HUMIDIFIER SANITIZERS IN KOREA

Oxy launched a Humidifier Sanitizer (HS) product in Korea in 1996. It was one of a number of manufacturers of HS products. In 2001 RB acquired Oxy to become Oxy RB. In 2011 the Korean Centre for Disease Control (KCDC) suggested a link between the HS product and lung injury at which point Oxy RB immediately and voluntarily withdrew the product from the market. Oxy RB have since participated in all investigations to fully understand the issue and bring resolution to the victims and their families.

Link: [Oxy RB and Humidifier Sterilizers in Korea | reckitt.com](#)

Excerpt from US CDC:

“In most cases, fogging, fumigation, and wide-area or electrostatic spraying **is not recommended** as a primary method of surface disinfection and has several safety risks to consider. ([Safety Precautions When Using Electrostatic Sprayers, Foggers, Misters, or Vaporizers for Surface Disinfection During the COVID-19 Pandemic | CDC](#))”

“These devices aerosolize chemicals, or suspend them in the air, **and they can stay in the air for long periods of time, especially if the area is not well ventilated. Aerosolizing any disinfectant can irritate the skin, eyes, or airways and can cause other health issues for people who breathe it in.**”

“In dining and food preparation areas or areas where children spend time, safety risks are greater.”

Link: [US CDC Safety Precautions When Using Electrostatic Sprayers, Foggers, Misters, or Vaporizers for Surface Disinfection During the COVID-19 Pandemic | CDC](#)

**Disinfection robot with spraying or fogging disinfectants function is not recommended as this practice could be harmful and would not reduce the risk of viral transmission. (Centre for Health Protection, Health Advice on Prevention of Coronavirus disease (COVID-19) in Workplace (Interim), 14 April 2021 version)*

不建議使用具有噴灑消毒液功能的消毒機械人。這樣做有害身心，而且並不會降低病毒傳播。(衛生防護中心，預防2019冠狀病毒病給工作場所的健康指引(暫擬)，二零二一年四月十四日版)

↑ Sources: Social Welfare Department.

Link: [Reference List \(Sep 2021\) \(swd.gov.hk\) Section 3.1](#)

Link: [醫療環境內對2019冠狀病毒病 \(COVID-19\) 的預防和控制要略\(暫擬\) \(chp.gov.hk\)](#)

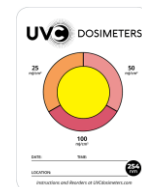
環境清潔及消毒

- 每日以1比49稀釋家用漂白水(把1份5.25%氯酸鈉的家用漂白水與49份清水混和)來消毒環境最少兩次，尤其是經常接觸表面及或當環境有可見污垢時，待15-30分鐘後，再用清水沖洗及抹乾。
- 當處理懷疑/確診個案時，如地方被血液、分泌物、嘔吐物或排泄物污染，應用1比4稀釋家用漂白水(把1份5.25%次氯酸鈉的家用漂白水與4份清水混和)來進行消毒，待10分鐘後，再用清水沖洗及抹乾。
- 金屬表面則可用70%酒精消毒。
- 患者出院後，須進行終期消毒。
- 不建議噴灑消毒液。這樣做有害身心，而且並不會降低病毒傳播。
- 妥善保養排水渠管和定期(約每星期一次)把約半公升的清水注入每一



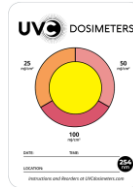
CT Scan/ Operation Theater

- **Effective in Disinfection Task with High power UVC**
- **Autonomous operation according to Schedule**
- **Consistent and reliable for routine disinfection tasks**
- **Verify the Dose with Dosimeter Card**

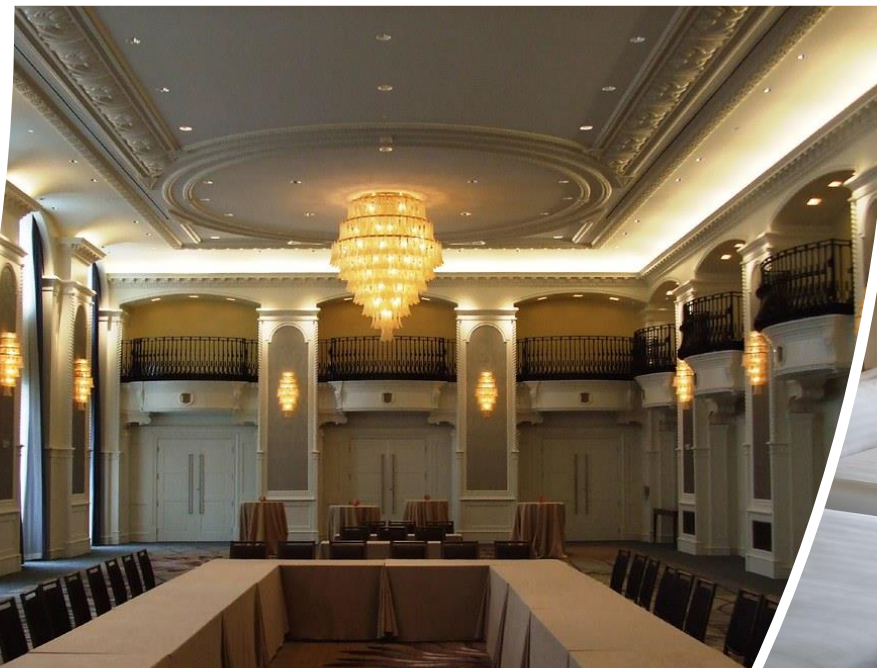


Hotel Facilities

Alleviate your Disinfection Pressure
Autonomous, Efficient, Effective



Dosimeter card –
Verify your work
with confidence!



School Classroom Disinfection



ADIBOT The Outstanding Autonomous UVC Robot with Ai

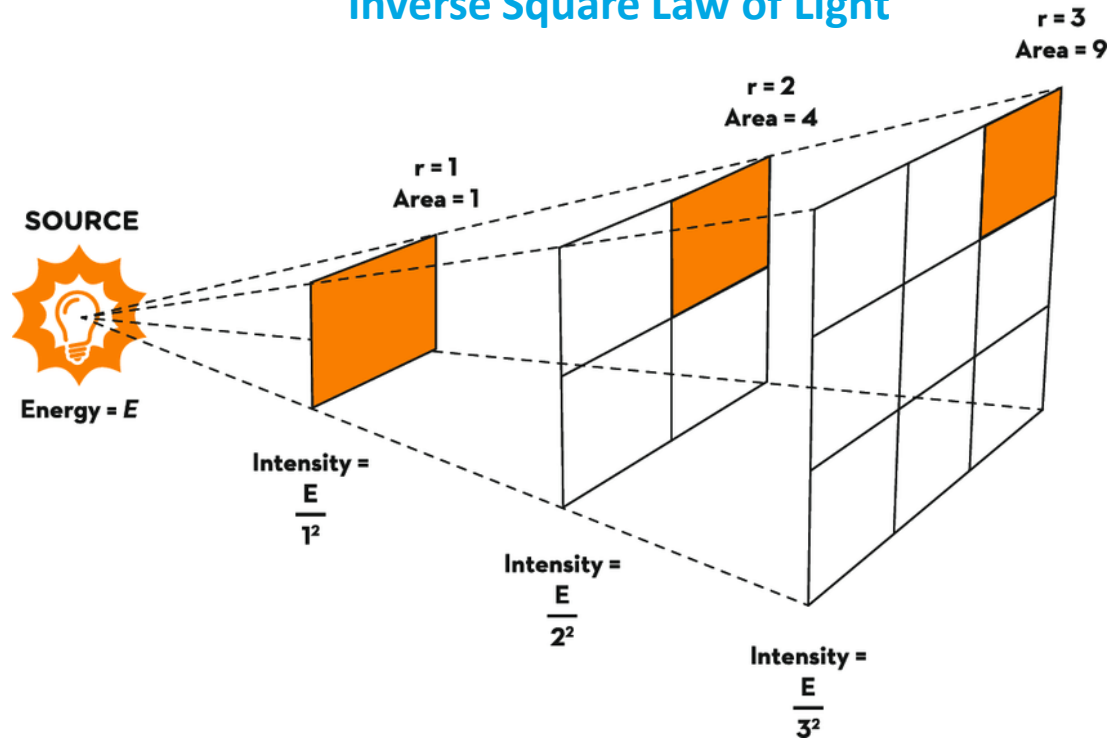
Scientific Design



Sensors & Devices	Uses & Benefits
1. Top Lidar (270° x 25m)	High level obstacles at 165cm above ground avoidance and map building / SLAM .
2. PIR Sensors x4	To turn off the UVC Lamp when a human or animal is detected from 5m distance.
3. Intel 3D Camera & RGB HD Camera	Intel 3D Camera detect obstacles 10m forward with high responsivity while RGB HD Camera to create Video Log .
4. Top UVC Lamp x8*	Provide High UVC power to disinfect high level area upto 2.19m in 360° . All lamps are shatter-proof .
5. Pushing Handle	With the handle, you can push it to the location you want manually and comfortably.
6. High Performance x86 Edge Computer	Unlike other Android system, a high performance x86 Edge Computer provides sufficient power for AI calculations and responsivity to environment changes and safety needs.
7. High Safety High Power LiFePO4 Battery*	This is a type of battery also used in Electrical Vehicle for its high stability and safety (non-toxicity, excellent thermal stability). Also longer cycle life .
8. Bottom UVC Lamp x8*	Provide High UVC power to disinfect low level area. All lamps are shatter-proof .
9. Bottom Lidar (270° x 10m)	Detect obstacles and build map above ground 20cm.
10. Announcing Speakers x2	A high volume warning message and count-down will be announced to alert evacuation before Lamps are on.
11. Safety Edge Sensor	Robot will be stopped if Safety Edge Sensor crashed into objects.
12. Geomagnetism Border Sensor	To work with the Virtual Wall setting in App, it builds the genfencing to restrict the operating area to add additional layer of safety.
13. Ultrasonic Sensors x5 (5 ~ 65cm)	Working with IR Distance Sensors detecting especially Glass-type obstacles where Lidar cannot detect well.
14. Sign Barrier (BlueTooth 20m)	You can put the Sign Barrier 20m away from the Robot's operating area to alert passby people and to stop Robot's UVC if the Barrier is moved.

Disinfection Capability

Inverse Square Law of Light



The irradiation intensity decreases with square of distance R's variation, and when the radius increases to 2 times, the radiation area increases to 4 times, and the radiation intensity drops to 1/4

Source:

• Role of Ultraviolet Disinfection in the Prevention of Surgical Site Infections, November 2017, [Advances in Experimental Medicine and Biology](#)

Disinfection Time for different Areas(SARS-CoV-2) Sterilization rate up to 99.99%

Area (m ²)	ADIBOT-A(mm:ss)	ADIBOT-S(mm:ss)
10	1:48	0:34
25	4:45	1:24
30	6:01	1:41
40	8:27	2:15
50	11:06	2:48
80	18:36	4:29
90	21:53	5:03
100	25:22	5:36

Remark:

1. UVC radiation intensity of ADIBOT-S =1600uw/cm²@1m; (Test)
2. UVC radiation intensity of ADIBOT-A =500uw/cm²@1m; (Test)
3. Disinfection area is square where robot locates;
4. If the room is too larger, please set more disinfection positions to save time

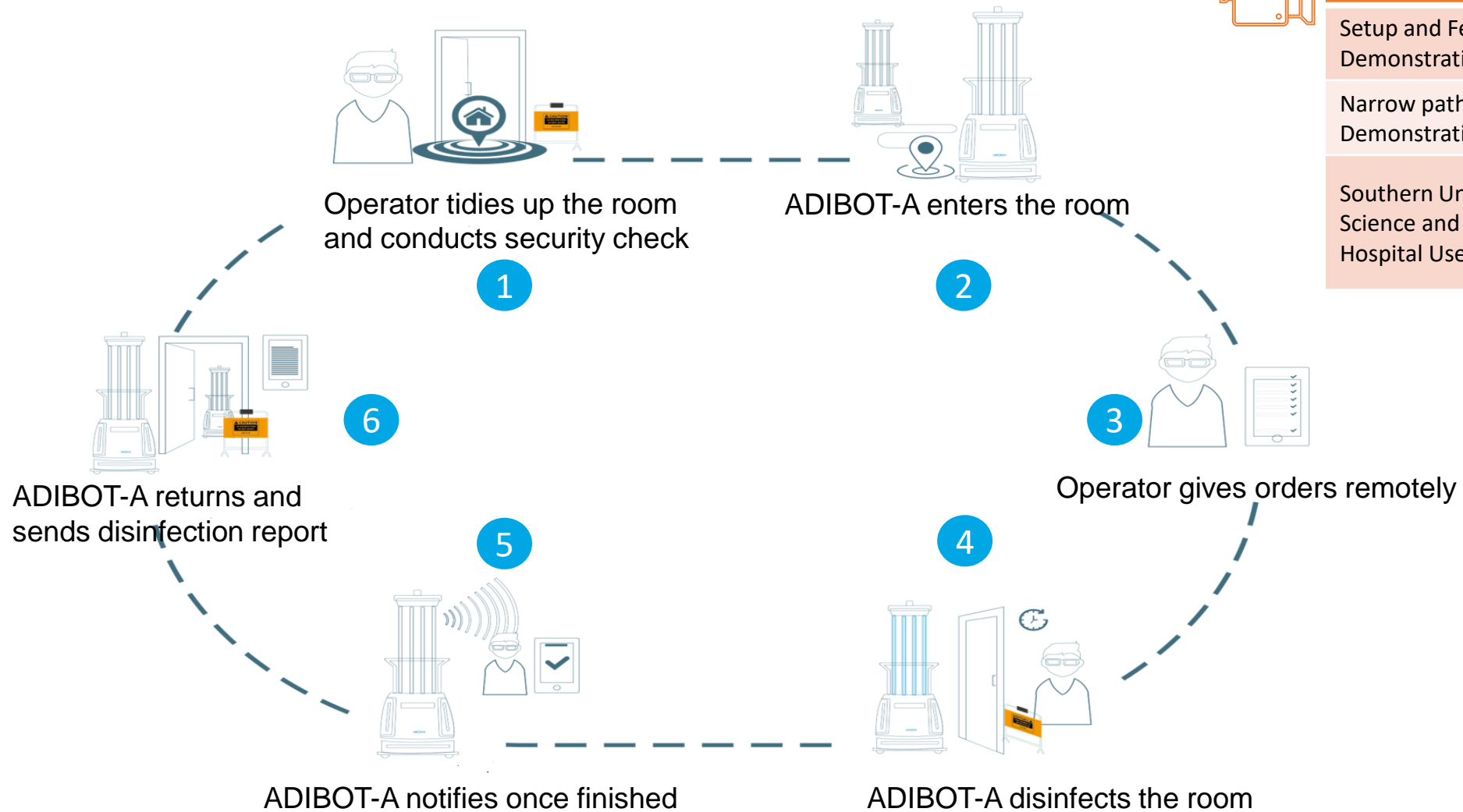
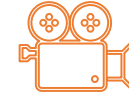
Source:

1. UV-C Irradiation is highly effective in inactivating and inhibiting SARS-CoV-2 replication, Andrea Bianco et.al., 2020
2. Determination of Ultraviolet Light Doses Needed to Inactivate Bacteria and Viruses on Hard, Sifuentes.
3. Fluence (UV Dose) Required to Achieve Incremental Log Inactivation of Bacteria, Protozoa, Viruses and Algae, Adel Haji Malayeri

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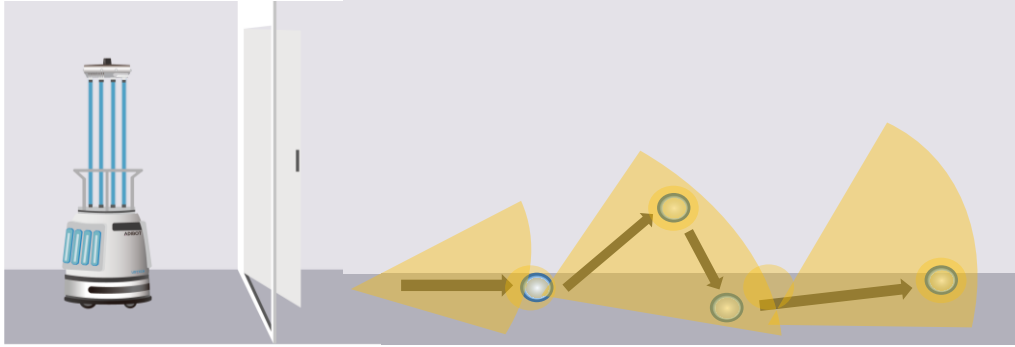
*The result is calculated according to 16.9mJ/cm², the dose required to inactivate SARS-CoV-2

ADIBOT-A Standard Operation Procedure



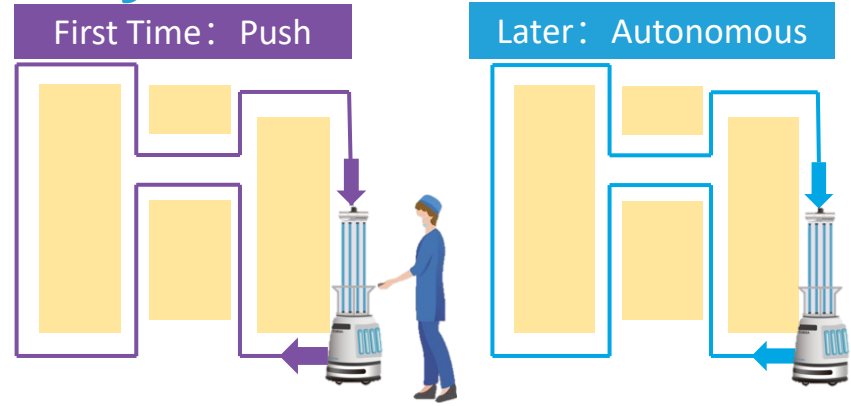
Descriptions	YouTube Links
Setup and Features Demonstration	UBTECH ADIBOT-A: UVC Disinfection Robot
Narrow path Operation Demonstration	Daily Office Disinfection with ADIBOT-A
Southern University of Science and Technology Hospital Use Case	Autonomous Disinfection Robot On-boarding to Fight Spread of Virus in Hospital

Highlight 1 - Rapid Deployment Ability



- ✓ No need to build maps in advance.
- ✓ Work immediately in totally unfamiliar surroundings.

Automatic Exploration Disinfection



- ✓ Pushing robot to realize rapid mapping.
- ✓ Set disinfection points while pushing.

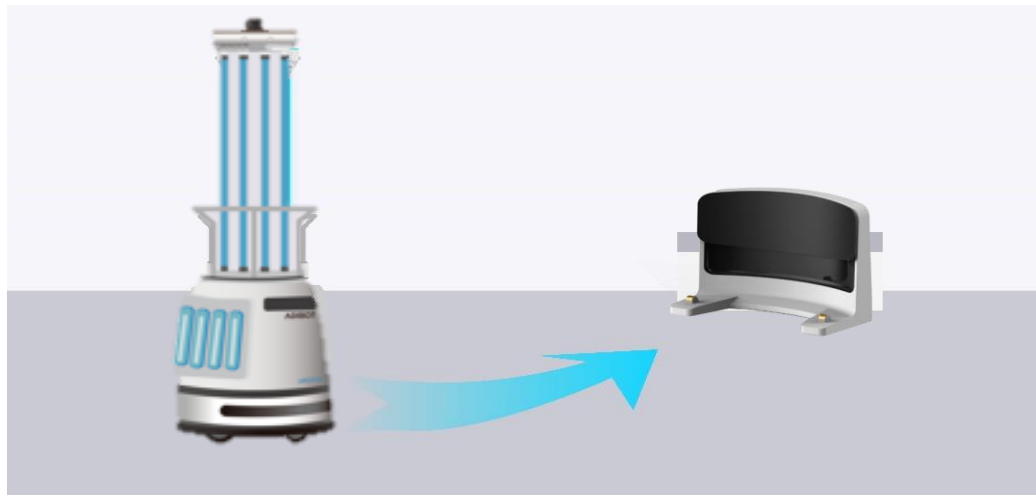
Route Following Disinfection



Standalone

Dedicated Dispatcher

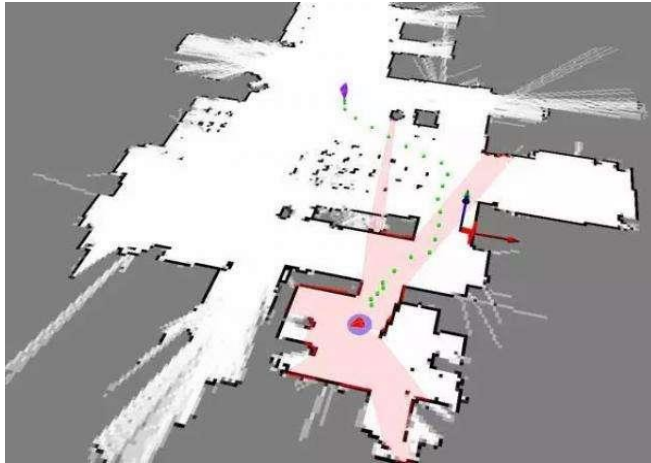
Flexible Networking



Automatic Recharging

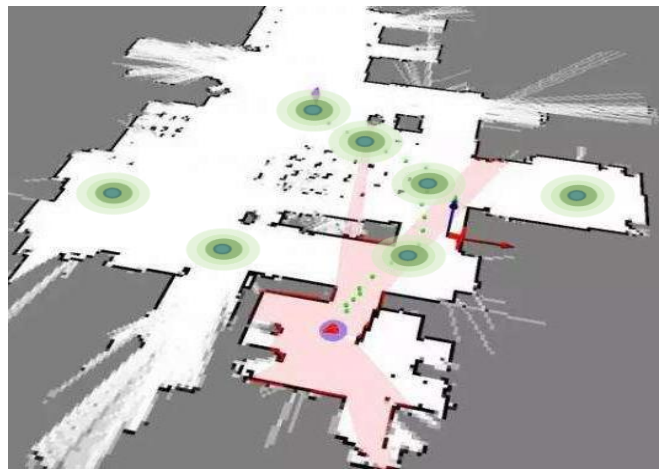
Highlight 2 - Smart Disinfection Management

Disinfection Points Generating



Operation Demo Video (6mins)
[UBTECH ADIBOT-A: UVC Disinfection Robot](#)

- ✓ Mapping
- ✓ Smart Calculating
- ✓ Automatic Disinfection
- ✓ Points Generating



Cloud Management System



- ✓ Multi-Robot Management
- ✓ Disinfection Task Deployment
- ✓ Remote Control
- ✓ Disinfection Result Reports
- ✓ Video Recording

Highlight 3 | Smart Safe Disinfection

3 Primary Safety Defense Line

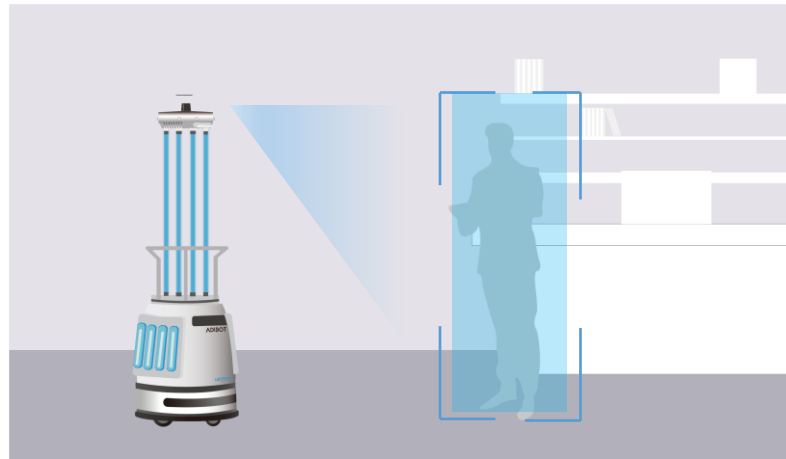
1st Defense Line (20m)



Safety Signage Sensing

- The lamps will shut down immediately once the robot senses the movement of the safety signage.

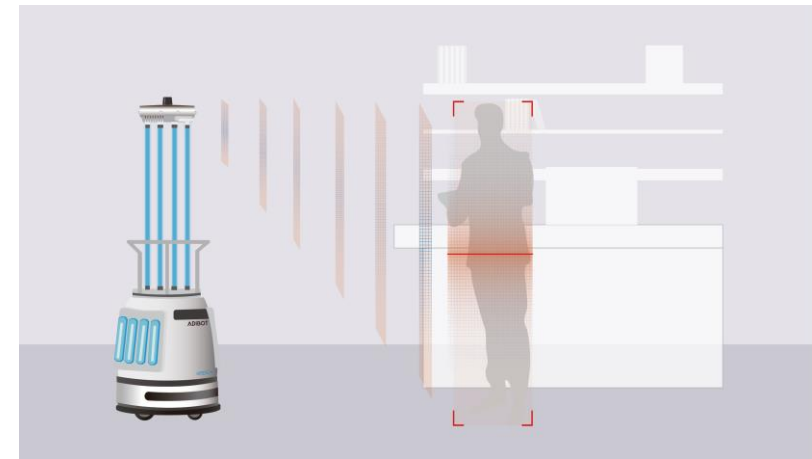
2nd Defense Line (10m)



Human Body Recognition

- The lamps will shut down immediately once the robot recognizes a human body.

3rd Defense Line (5m)



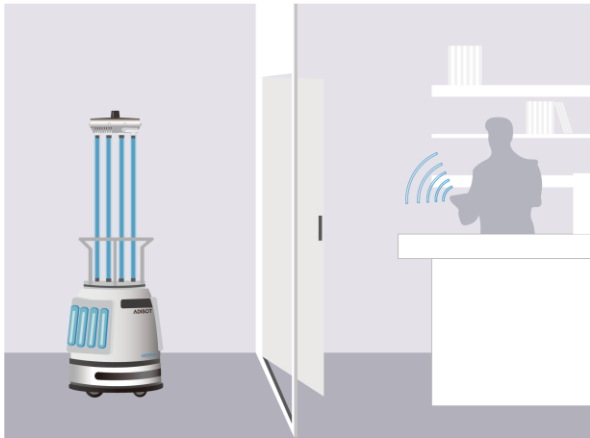
Human Motion Detection

- The lamps will shut down immediately once the robot detects human motion.

The lights turn out under the three primary safety defense lines. After the person leaves, **the robot restarts disinfection within the set time** and completes the sterilizing task.

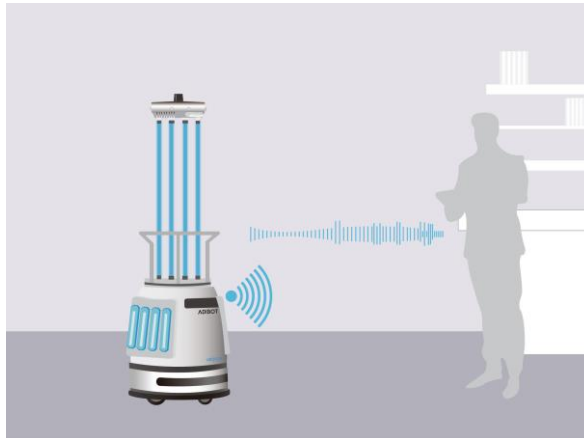
Highlight 4 | Smart Safe Disinfection

4 Complementary Safety Measures



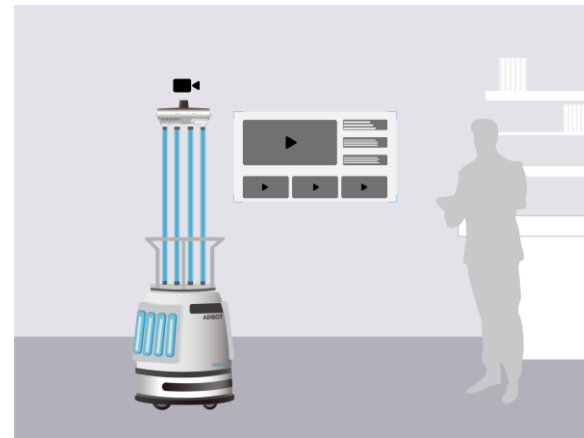
Remote Control

- 2 different ways of remote control to ensure operator safety – Tablet via WiFi or Cloud via WiFi/4G



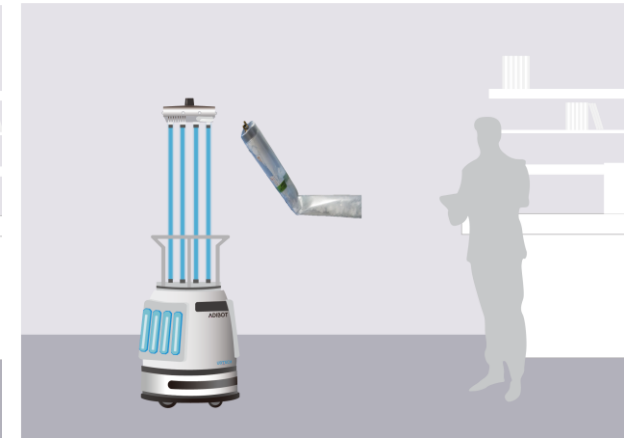
Audio Notification

- A 20-second countdown (configurable) to remind people to evacuate before the lamps are on



Video Recording

- In addition to the Disinfection Activity Log. There are Video Records as traceable disinfection process documented for risk mitigation.



Shatterproof Lamps

- Provided by international renowned manufacturer
- Protects workers, products, and workplace against glass fragments and mercury contamination.

Product Specs

	Items	ADIBOT-A
UV-C	Radiance Angle	360°
	Top UV-C	8
	Bottom UV-C	8
	UV-C Total Power	440W
Control	WiFi	●
	Remote Controller	●
Auto	Autonomous (LiDAR/RGBD)	●
	Self-recharge (Docking Station)	●
	Battery Capacity	2560WH
Safety	Camera Recorder	2MP
	Audio Notification	●
	Emergency Button	●
	PIR Sensor	●
Others	Dimensions	1650(H)*610(W)*550(D)(mm)
	Weight	75kg
	Certification	CE, FCC, ROHS, UL



Media Report

Reuters' Report



https://flytech1989-my.sharepoint.com/:v:/g/personal/flytech_flytech_com_hk/EQ6gZNfbrHpEn9ecSfUb508BHSnGu_ynsvGsx2HFY1lhvQ?e=hM7Xk7

TVB Report



https://flytech1989-my.sharepoint.com/:v:/g/personal/flytech_flytech_com_hk/Eb7_L1vvTcNPhzvPi4S-n_oB-aFExgh0v8ZYheWd4y1gtA?e=8NS7bi

Media Report



Advanced UV-C Robot Deployed to Disinfect AI Center in Vietnam

The Artificial Intelligence Center (AIC), a pioneering AI education and training facility in Ho Chi Minh City, Vietnam, has taken the initiative to introduce the ADIBOT-S robot in a bid to ensure the health and safety of its staff and students amid recurring waves and outbreaks of COVID-19.

The hospital-grade disinfection robotic system can be used to sterilize various areas in the center, including demo zone, hallway, lab rooms, after every working day.

UBTECH

Dream With Robots



Holland School Uses UV-C Robot to Fight Covid-19

The exam room of the HET Rijk's (VMBO) school in Nijmegen, Holland, has been made virus-free by an ultraviolet disinfection robot. The ADIBOT-S robot kills viruses and bacteria on surfaces and in the air with powerful UVC light.

It is the first school community in Europe where this kind of robot has been deployed. "We are always thinking about how we can innovate, that's how we came into this new sterilization solution," says Director Mariet van de Ven.

For the exam room, ADIBOT-S has taken about half an hour to thoroughly clean the space. Combining the robotics and AI expertise from UBTECH with UV-C technology, the robot can effectively and safely disinfect 99.9 percent of targeted areas.



UBTECH

Dream With Robots



US Schools Deploy UV-C Disinfection System to Combat COVID-19 Spread

The Christina School District (CSD) has officially become the first school district in the United States to launch a cutting-edge disinfection system in the fight against COVID-19 spread across district schools. Thanks to a generous donation from Friends of Christina School District (FOCSD), made possible through a grant, CSD purchased seven UBTECH ADIBOT-S Disinfecting Robots to use in its locations.

"We can now clean and sterilize immediately after a confirmed COVID-19 case using the most advanced technology available, allowing our students and staff to safely return to class without fear or hesitation," said Dr. Dan Shelton, Superintendent of Schools.



Kanagawa, Japan

UBTECH

Japan Hospital Uses AI Robot to Enhance Cleaning Process amid Covid-19

General Sagami Kosei Hospital, one of the few hospitals that can treat Covid-19 patients in Japan, has introduced UV-C disinfection robot "ADIBOT" to perform more thorough virus sterilization and reduce work for staff. With strong ultra-violet irradiation and multi-layer security designs, the AI robot can be highly effective in inactivating viruses in wards and operation rooms after being used by patients confirmed or suspected of Covid-19.



Flytech
2021
Company
Profile

FLYTECH

Version 20210318



Corporate Snapshot

FLYTECH



1984

Founded



600+

Employees



6206

Public listed in Taiwan



6

Subsidiaries



197K

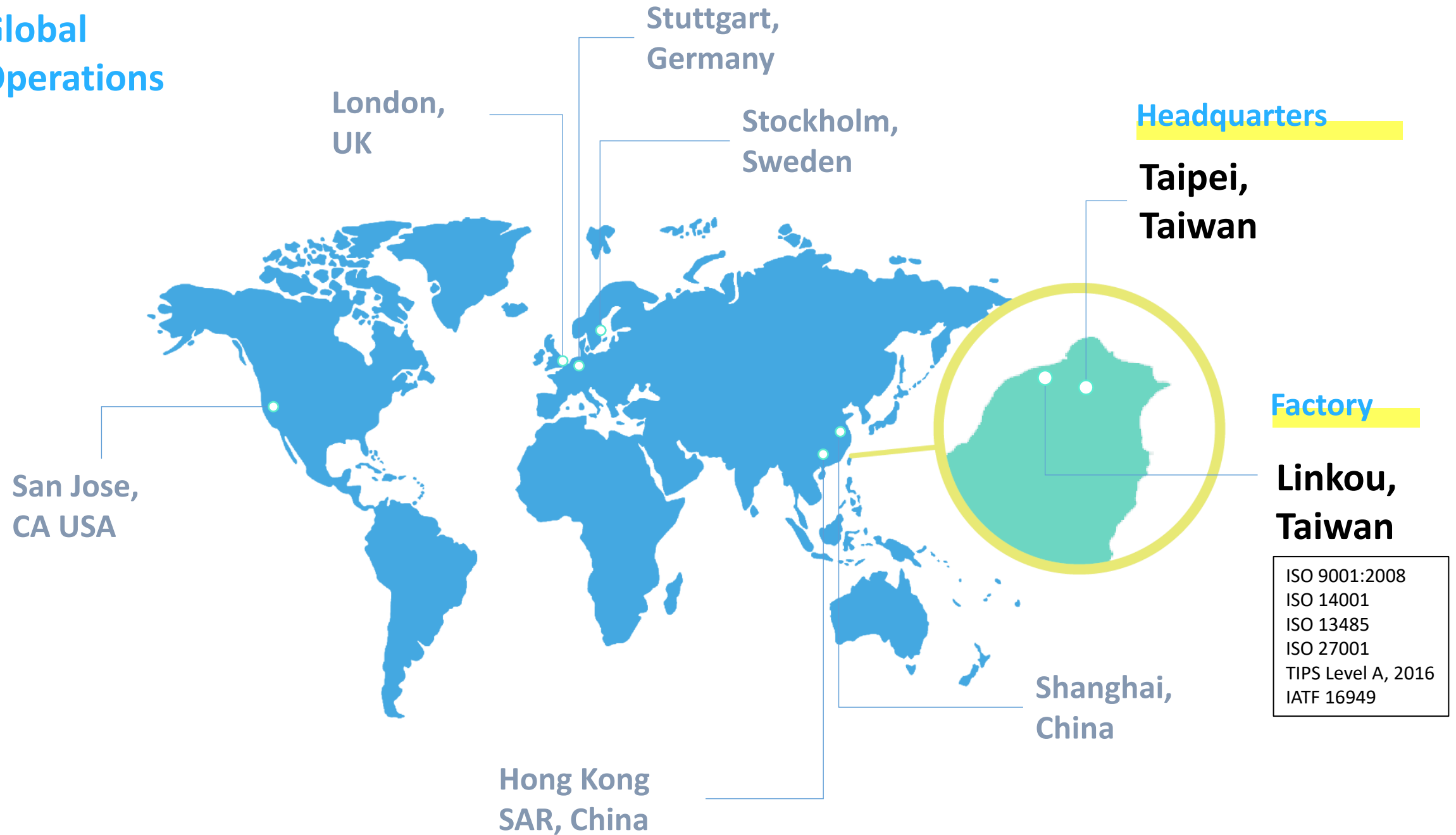
Systems Produced in
2020



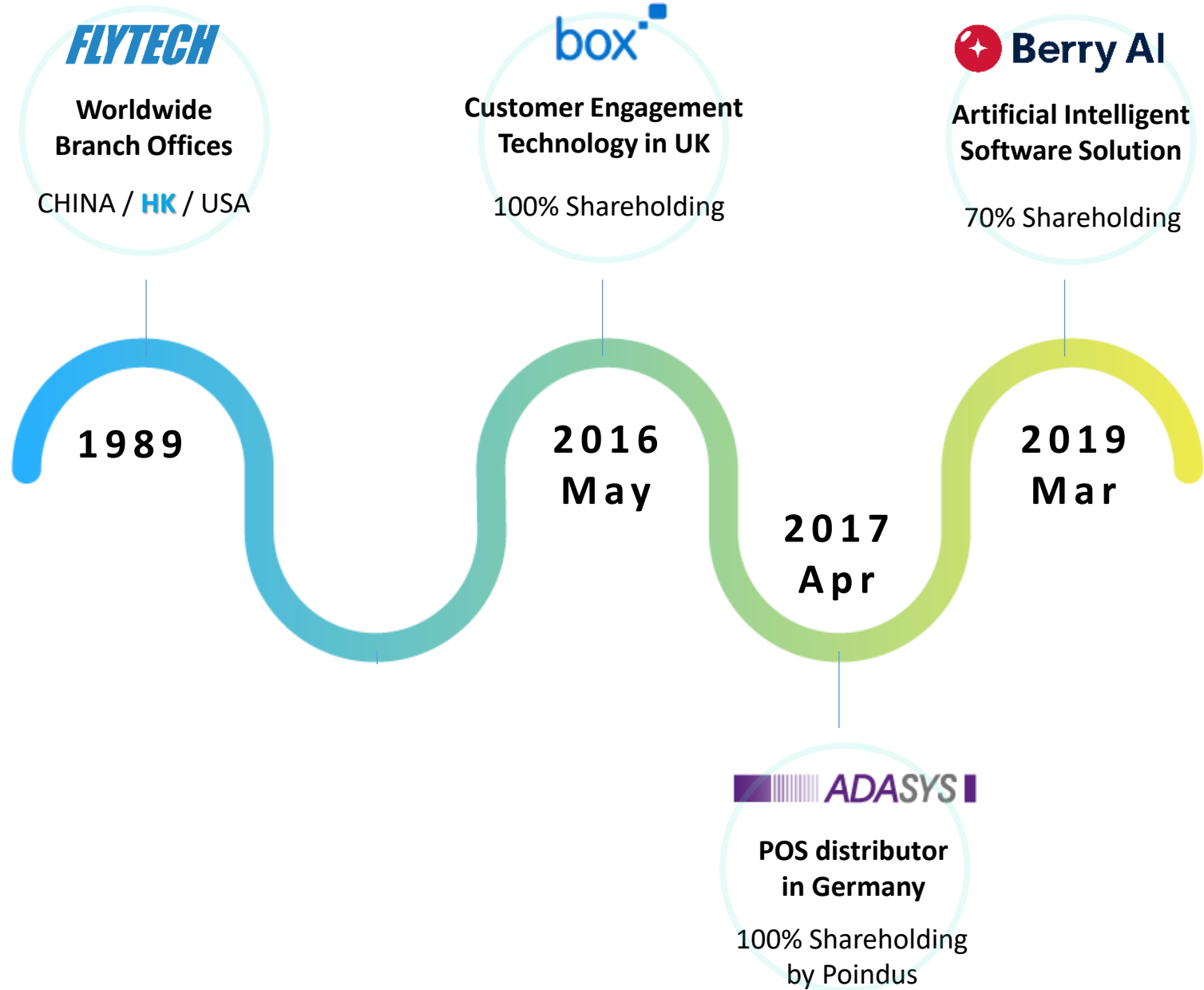
320M USD

Market Cap as of Feb
2021

Global Operations



Worldwide Branch Offices & Subsidiaries



THE POWER OF TEAM WORK

Coming together is a beginning;
keeping together is progress; working
together is success.

- Henry Ford



Panel PC



Mobile POS

Box PC



FLYTECH PRODUCTS



POS



Hybrid
POS



Kiosk

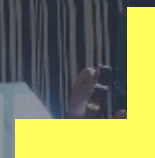


HK Customer References

- MTR
- Circle K
- Saint Honore
- Kee Wah
- Wing Wah
- Hospital Authority
- CafeDeCoral
- Yoshinoya
- Harvey Nichols

- Hung Fook Tong
- Tai Hing
- Honeymoon
- Fairwood
- CafeDeCoral
- Maxim's
- Aji Ichiban
- PrizeMart
- Kai Bo

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