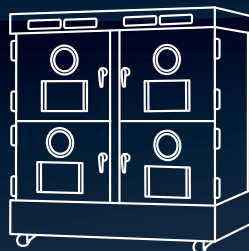
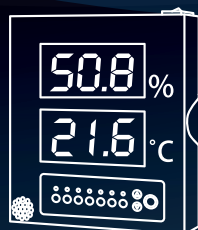
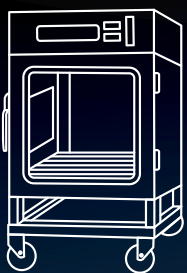


GREEN • ENERGY-SAVING

Semiconductor, PCB, Electronics Industry Humidity-Control & Clean System



BOSSMEN PATENTS

PARTNERS IN GROWTH AND INNOVATION

- 1994 Upgraded spring hook: Energy efficient humidity control valve design.
- 1995 Dry cabinet dehumidifier: Ultra dehumidification system.
- 1996 Dehumidification cabinet with drawers: High loading capacity tracks with adjustable shelving with safe mark.
- 1997 Drybox with dehumidification structure design: Efficient dehumidification design without heat.
- 1998 Movable suspension parts for tapes storage: Suspension parts for valuable tape storage.
- 1998 Shelving with adjustable tracks: Supporting structure for adjustable tracks for video tape storage.
- 1999 Power converter with radiation elimination: Antistatic earthing system.
- 2000 Fireproof and anti-theft concealed wiring: Prevent fire spread into cabinet from power supply.
- 2001 Safebox with dehumidification: Unique anti-theft and dehumidification design.
- 2002 Dehumidification system design: Sustainable dehumidification system design.
- 2003 Dehumidification cabinet with both fixed and push-pull mechanism: Dual structural positioning design.
- 2003 Drybox: Unique and portable drybox design.
- 2003 Japan patent – Upgraded dehumidification system with low failure rate.
- 2003 Drybox No. 1: Unique and portable drybox design.
- 2006 Rapid dehumidification system. Humidity and oxygen concentration energy saving monitoring system with nitrogen.
- 2007 Dry air system – Taiwan (ROC) 20 years patent.
- 2009 Dry air system – China (PROC) 20 years patent.
- 2009 Dry air system – The U.S. 20 years patent.
- 2010 Humidity monitoring system with low oxygen concentration.
- 2016 Double door dehumidification system – 20 years patent.
- 2017 Thermoelectric cooling chip with high heat exchange rate – 20 years patent.
- 2017 Humidification system with nitrogen – 20 years patent.
- 2017 Humidification and moisture absorption system via alternate exchange – 20 years patent.
- 2017 Paintings storage rack system – 20 years patent.
- 2018 Display cabinet with vertical opening device.
- 2018 Airtight display cabinet with openable device.
- 2018 Caster with anti-dirt protective cover.
- 2018 Closed dehumidification box.
- 2018 Display cabinet with sliding opening system.
- 2018 Display cabinet with flip-up opening system.
- 2019 Airtight spaces with movable threshold – 20 years patent.
- 2022 Upgraded wafer and mask pod storage cabinet – 10 years patent.



PRODUCT LIABILITY
EUROPE CE CERTIFICATE INSURANCE CERTIFICATE



APEA FAST ENTERPRISE CATEGORY



APEA INSPIRATIONAL BRAND CATEGORY

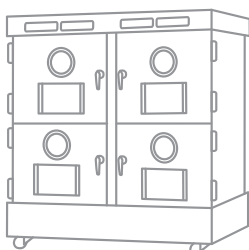
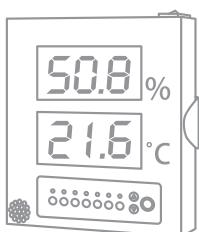
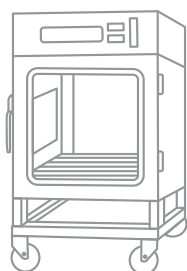


NATIONAL BRAND YUSHAN AWARD



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- 07** Polypropylene (PP) Thermal Equilibrium Cabinet
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Central Monitoring System



Mask Pod Nitrogen Cabinet

BM1296-2

There are 2 main compartments for the mask pod storage – upper and lower shelving – suitable for pod with various sizes. The upper enclosed nitrogen cabinet stores up to 60 mask pods with temperature and humidity monitoring. The lower open shelves provide individual nitrogen supply to larger mask pods. The display panel indicates the nitrogen supply rate for individual pod for monitoring. Nitrogen supply will pause for vacant pod space and resume once the pod is placed in.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W1500 H1901 D700	Mask Pods	Upper level: Mask pod x 60 pcs Lower level: Mask pod x 15 pcs	- Nitrogen flow rate. - Temperature and humidity monitoring software.	Yes. Option to add external alarm	110/220V	Nitrogen-saving monitoring device – FN2HT

Nanoscale Mask Pod Nitrogen Cabinet

BM1238

The cabinet provides EUV mask pod storage, suitable for EUV POD/ RSP 200/ mask pod. Individual monitoring and supplying of clean and dry nitrogen to respective mask pod. The cabinet saves more than 80% of the nitrogen consumption with higher accuracy as compared to the traditional nitrogen cabinet.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W2800 H2150 D750	RSP200 or EVU POD	40 pcs	- RFID Reader - Monitoring software - Access control	Yes. Option to add external alarm	220V	- Fan Filter Unit (FFU) - CPU - Nitrogen purifier - Digital flow meter - Chemical filter - Monitor screen and mouse

Mask Pod Open-Shelf Storage Management

Mask pod management via UHF tag on the mask / mask pod to position to the dedicated storage shelf. Tags are scanned to retrieve information and begin monitoring of the in / out of respective masks.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
Customisable	Mask Pods	Customisable	- UHF Tag Reader - Monitoring software	Yes.	110/220V	- CPU - Monitor screen and mouse

Nitrogen Cabinet - For Probe Card

BM1159-2

Smart temperature and humidity management with functions of record, alarm, calibration, setting, etc. Adjustable humidity control between 5% to 60%RH. The alarm is designed to alert operators in the events of prolonged period of opened doors and humidity exceeded the desired range. Customisation available.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W1416 H1757 D600	IC Substrate, probe card, mask pod, FOUP, dry film, drills	Probe card storage: 144 Pcs	Temperature and humidity monitoring software	Yes. Option to add external alarm	110/220V	Nitrogen monitoring device

Particle-Free Nitrogen Cabinet

- For Wafer

CM1001

The requirements for cleanliness for preservation of semiconductor manufacturing materials ranging from bare wafers, masks, probe cards, wafers are rising constantly. Bossmen has innovated a Particle-Free Nitrogen Cabinet of up to Class 1 Cleanroom standard that meets static control and nitrogen-saving design requirements.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W1240 H245 D850	Wafer		• ULPA Filter • Remote Monitoring • Individual Management and Monitoring for Each Storage Space	Yes.	110/220V	

Particle-Free Nitrogen Cabinet

- For Mask Pods

BM1324-2

The nitrogen cabinet provides an airtight environment for mask pod storage with temperature and humidity monitoring. Equipped with FFU and ULPA filter at nitrogen gas inlet to class 1 cleanliness standard. Logistics management via barcode scanning and registration.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W1800 H2071 D550	Mask Pods	88 pcs	• Temperature, humidity and particle monitoring software • Barcode Reader	Yes. Option to add external alarm	220V	• Fan Filter Unit (FFU) • Ion eliminator

Copper Foil Storage Cabinet

BM1300-2

Designed with 304 stainless steels, the cabinet has 16 high loading capacity shelves with 100mm height clearance individually. 2 packs of copper foil (40kg) can be loaded on each shelf. Smart management of copper foil storage monitoring with anode lock on all doors.

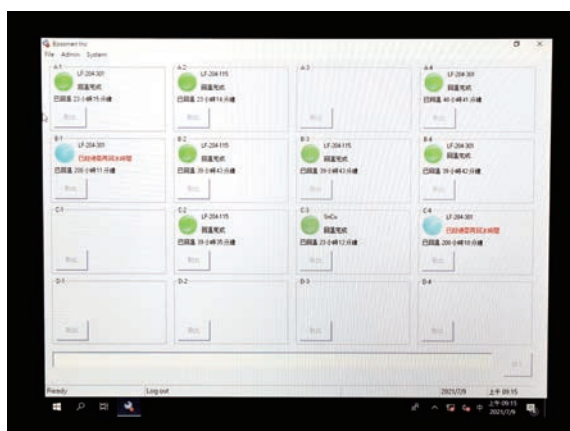


Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W1795 H1690 D830	Copper foil	32 packs	- Barcode reader - Monitoring software	Yes.	110/220V	- Barcode scanner - Monitor screen and mouse - CPU

Smart Solder Paste Thermal Equilibrium Cabinet

BM1149

Solder paste management is according to the removal sequence of the paste from fridge. The smart management monitors the duration to reach thermal equilibrium, first-in-first-out, usage period, scrapping alert, etc. Individual solder paste information is retrieved via barcode scanning for monitoring and recording to avoid confusion.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W610 H885 D200	- Solder pastes in tins - Resin	16 pcs	- Barcode reader - Monitoring software	Yes.	110/220V	- Barcode scanner - Monitor screen and mouse - CPU

Dry Film Thermal Equilibrium Cabinet

– For Dry Film Box

BM1151

The monitoring device consists of location service to locate individual dry film box to ensure sufficient thermal equilibrium time is fulfilled for each box and avoid confusion with the others. The equilibrated record data and information are retrieved from the RFID tag on the dry film box. Dehumidification system is incorporated to provide a dry environment for the film.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W1430 H1745 D841	Dry Film	20 pcs	- RFID reader - Management software	Yes.	110/220V	- Nitrogen monitoring device - Monitor screen and mouse - CPU

Dry Film Thermal Equilibrium Cabinet

– For Dry Film Roll

BM1113-4

The thermal equilibrated record and information are retrieved from the QR code on the individual dry film roll. Operator can place multiple dry film rolls into cabinet via QR code scanning and click on 'Place' button. Data is uploaded to web service via 'query' button for thermal equilibrium management.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W1300 H1972 D800	Dry Film	16 pcs	- Barcode reader - Management software	Yes.	110/220V	- Nitrogen monitoring device - Monitor screen and mouse - CPU

Film Waste Rewinder

BM3002

A sustainable solution to separate the film waste from rod for recycling. Designed with stainless steel, the machine operation is effortless with start and stop (pause) buttons. Rewinder stops automatically upon rewind completion and film waste can be easily removed for disposal.



Exterior Dimensions (mm)	Application	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W690 H1150 D910	Film Waste	Single film roll	Continuous rewinding and automatic stop upon rewind completion	Yes.	110/220V	

Humidity Controlled Glove Box

BM2004-14

Full acrylic glove box with silicone foam strips and pressurised door handles to ensure airtightness. Designed for particle-free with adjustable temperature and humidity control range. Glove box is customisable for single or multiple users, and various filters selections are available.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W900 H630 D940	Equipment and parts requiring a controlled environment	Customisable	Temperature and monitoring software	Yes.	110/220V	Temperature and monitoring device · Humidifier (optional)

Polypropylene (PP) Thermal Equilibrium Cabinet BM1309

36 trays with mistake-proof electromagnetic valves and latches only allow retrieval of PP when the thermal equilibrium is reached. Indicator lights inform operators on the status of the equilibrium. The fan filter unit locates at the top of the cabinet for fresh air intake. The humid air is removed from the cabinet via air pressure difference. The grille-design of the tray reduces the interfaced surface area and facilitates dehumidification.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W1580 H2135 D850	Polypropylene (PP)	36	- Barcode reader - Management software	Yes.	220V	- Barcode scanner - Fan Filter Unit (FFU) - Monitor screen and mouse - CPU

Polypropylene (PP) Chilling Cabinet Dry Film Chiller/Freezer

The cabinet is insulated with 60mm thick polyurethane (PU) foam and 16 high load capacity trays which can withstand 30kg of PP weight for each tray. Temperature monitoring via RS232 communication platform to connect with the computer software.



RFID Tag
Dry film box (customisable)

Dry Film Chiller/Freezer

Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W1500 H2400 D920	Polypropylene (PP)	48 packs	- Barcode reader - Management software	Yes.	110/220V	

Polypropylene (PP) Chilling Cabinet

Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W1500 H2000 D920	Dry Film	20pcs	- RFID reader - Management software	Yes.	220V	- Monitor screen and mouse - CPU

Professional Rack Lifting Trolley

BM3005

The trolley has 8 pre-set heights programmed into the memory for dedicated usage. The rack and rollers are designed with drop guards to ensure straight-in-straight-out of the rack. The retractable sticks next to the rollers are to bridge the gaps between the oven and the rack, thus reduce the risk of manual transport and increase efficiency.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W610 H1390 D1355	Rack	Individual rack	Lift positioning software	Yes.	110/220V	

Automatic Waste Disposal Lifting Trolley

BM3008

The stainless steel trolley is fully automated with high precision for lifting and disposing of waste. The automated bucket rotates up to 135° and returns to original position upon disposal. The trolley is equipped with built-in lithium battery for its mobility.



Exterior Dimensions (mm)	Storage Content	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W610 H1480 D1035	Waste	Per bucket	Lift positioning software	Yes.	110/220V	· Waste bucket

Exhaust Gas Extraction Mobile Filter

The mobile filter features an articulated arm which is extendable at various angles for accessibility and does not require exhaust outlet. The filter is customisable for treatment of different exhaust gases. The timer provided indicates the filter usage for operator to replace the filter when necessary. The noise level of the mobile filter is less than 75dB and can be easily installed.



Air Extraction Mobile Filter – Type 1

Exterior Dimensions (mm)	Application	Fan speed	Noise Level	Alarm System	Power Supply	Accessories
W400 H450 D570	Exhaust gas released from operation	17CMM (1020m ³ /hr)	· Around 70dB	Timer indicates usage for replacement	110V 60HZ	3 tiers of filter – customisable for type of exhaust gas to be filtered.

Air Extraction Mobile Filter – Type2

W650 H500 D850	Exhaust gas released from operation	25CMM (1500m ³ /hr)	· Around 73dB	Timer indicates usage for replacement	1 Φ 220V 60HZ	3 tiers of filter – customisable for type of exhaust gas to be filtered.
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Air Extraction Mobile Filter – Type3

W800 H650 D1100	Exhaust gas released from operation	30CMM (1800m ³ /hr)	· Around 76dB	Timer indicates usage for replacement	3 Φ 220V 60HZ	3 tiers of filter – customisable for type of exhaust gas to be filtered.
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Polypropylene (PP) Smoke Exhaust Cabinet

The cabinet features a 1.2mm power-coated galvanised zinc steel plate on the exterior and a 6mm thick anti-corrosion solid board on the interior. The work handling surface area is made of polypropylene to ensure workplace safety.



Exterior Dimensions (mm)	Application	Noise	Alarm System	Power Supply	Accessories
W1200 H2350 D800	Operation which produces toxic gases	Around 70dB	No.	110/220V	· Anti-corrosion PP board · Lighting 8" or 10" gas outlet (optional)

Industrial Height Adjustable Desk

The heavy-duty height adjustable desk features a 20mm thick high density polyethylene desktop with rounded corner which is acid / alkali resistance and anti-shock. The desk is height adjustable from 66cm to 110cm via the monitoring panel. The desk comes with 4 anti-shock levelling panels and 4 high load capacity casters with stopper.



Exterior Dimensions (mm)	Storage Quantity	Smart Management	Alarm System	Power Supply	Accessories
W1500 H660.5 D800	3 drawers	Lift positioning software	Yes.	110/220V	- Anti-shock levelling pads - Casters with high load capacity

Temperature and Humidity Environment Control Panel



2HTDP



4HTDP



7HTDP

Model	2HTDP	4HTDP	7HTDP
Dimensions (mm)	W236xH266xD60	W404xH419xD60	W739xH705xD60
Display Font Size	2.3Inch	4Inch	7Inch
Power Consumption	20W	40W	65W
Mounting Type	Standalone / Wall Mount	Standalone / Wall Mount	Suspension / Wall mount
Humidity Display	0.0% RH ~ 99.9% RH ; ±3% RH tolerance		
Temperature Display	-9.9 ° C ~ 99.9 ° C ; ±1% ° C tolerance		
Power Supply	110V ~ 240V ; 50/60 Hz		

■ Model ending with -NT are web version. Option of temperature/humidity display only with no record.

- ✓ System memory – document 11,900 strokes of temperature and humidity record.
- ✓ Adjustable recording interval – between 1 to 240 minutes.
- ✓ Downloadable data from RS232 to local computer in Excel/PDF format.
- ✓ Concurrent display of curve diagram and data table. Adjustable temperature and humidity upper/lower limit to activate warning signal. Option of flashing light or buzzer for alarm.
- ✓ Monitoring range of sensor up to 150m radius of the space's temperature and humidity. Separate detectors for the sensor and main panel.
- ✓ Provide up to 4 number of signal interfaces and additional 4 external connections to environment control equipment.

20%~60%RH Dehumidification Cabinet



Option to upgrade to record display panel with system settings, record, download, alarm and calibration functions.



Dehumidification cabinet with drawers.



Vertical storage for space saving.

Model	No. of Litre	No. of Shelves	Shelves Loading Capacity	Humidity Control Range	Power Supply	External Dimensions (mm)	Internal Cabinet (mm)	Remarks
SMR186(A)	169	Up to 150kg of high-density steel shelves	3	1%~40%RH	110V/220V 50/60Hz	W440 x H950 x D450	W438 x H872 x D449	Option- 1.Change cabinet to anti-static or stainless-steel. 2.Upgrade to record display panel.
SMR386(A)	340		3	•Stepless		W880 x H950 x D450	W878 x H872 x D449	
SMR686(A)	620		3	adjustment		W880 x H950 x D800	W878 x H872 x D799	
SMR516(A)	495		3	available.		W1000 x H1118 x D480	W998 x H1032 x D479	
SMR490(A)	460		3	•Option to		W600 x H1364 x D700	W598 x H1141 x D698	
SMR740(A)	726		5	upgrade to		W600 x H1951 x D700	W598 x H1795 x D698	
SMR1520(A)	1452		5	display with 1		W1200 x H1951 x D700	W1198 x H1795 x D698	
SMR1530(A)	1452		5	decimal.		W1200 x H1951 x D700	W1198 x H1795 x D698	

■ Customisable for all cabinets.

■ SMR1520(A) and SMR1530(A) include 6 and 4 door panels respectively.

1%~40%RH Extreme Dehumidification Cabinet



SMR386(A)L



SMR186(A)L



SMR490(A)L



SMR1530(A)L

Model	No. of Litre	No. of Shelves	Shelves Loading Capacity	Humidity Control Range	Power Supply	External Dimensions (mm)	Internal Cabinet (mm)	Remarks
SMR186(A)L	169	Up to 150kg of high-density steel shelves	3	1%~40%RH	110V/220V 50/60Hz	W440 x H950 x D450	W438 x H872 x D449	Option- Change cabinet to anti-static or stainless-steel.
SMR386(A)L	340		3	•Stepless		W880 x H950 x D450	W878 x H872 x D449	
SMR686(A)L	620		3	adjustment		W880 x H950 x D800	W878 x H872 x D799	
SMR516(A)L	495		3	available.		W1000 x H1118 x D480	W998 x H1032 x D479	
SMR490(A)L	460		3	•Option to		W600 x H1364 x D700	W598 x H1141 x D698	
SMR740(A)L	726		5	upgrade to		W600 x H1951 x D700	W598 x H1795 x D698	
SMR1520(A)L	1452		5	display with 1		W1200 x H1951 x D700	W1198 x H1795 x D698	
SMR1530(A)L	1452		5	decimal.		W1200 x H1951 x D700	W1198 x H1795 x D698	

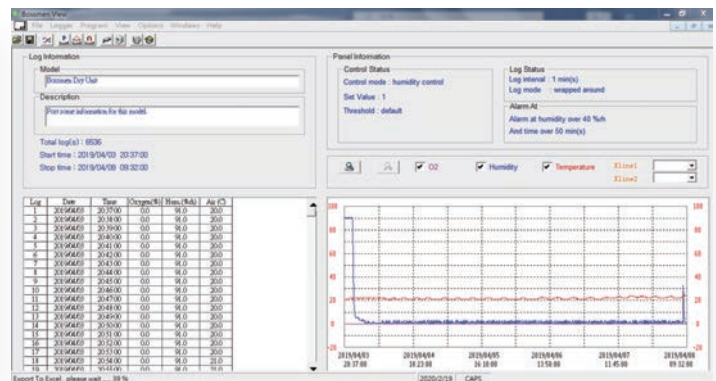
■ Customisable for all cabinets.

■ SMR1520(A)L and SMR1530(A)L include 6 and 4 door panels respectively.

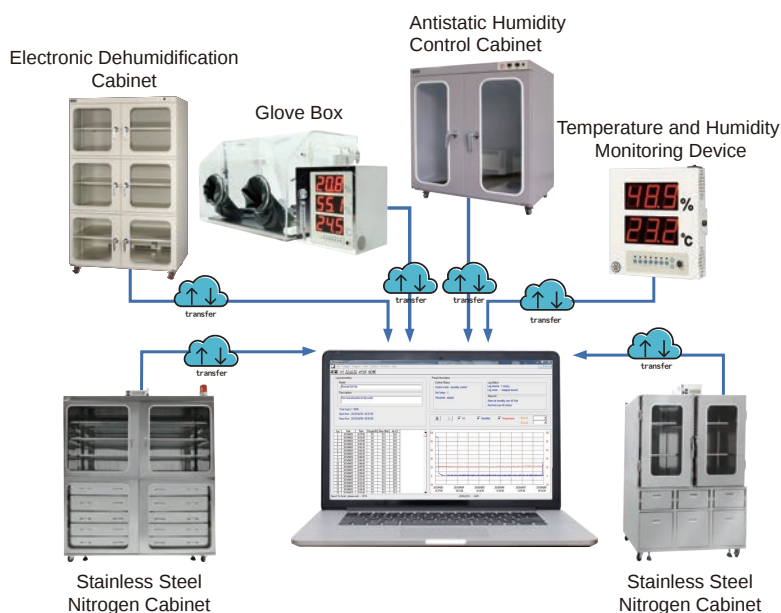
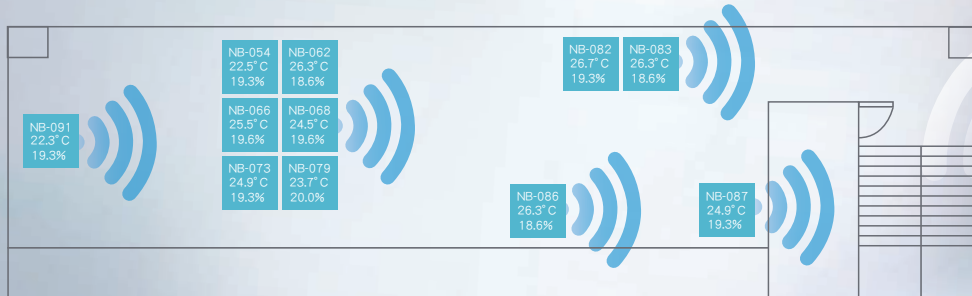
Internet Of Things (IOT) Temperature and Humidity Central Monitoring System



Overall map showing respective floor plans with exact sensors' locations.



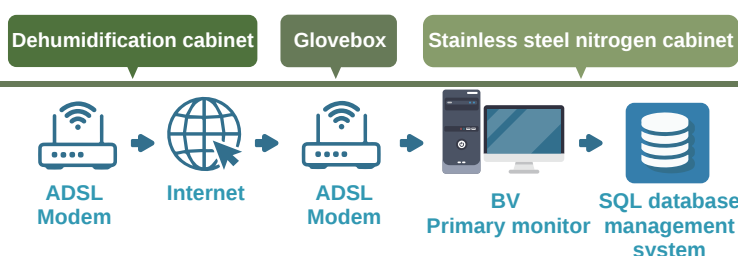
Easy extraction of the individual sensor's recorded data.



Remote monitoring of unlimited number of equipment concurrently. Instant information on the temperature and humidity value of each component.

Bossmen IoT central monitoring system consolidates data from all Bossmen's equipment, ie, Nitrogen cabinet, dry cabinet, glove box and temperature and monitoring system, etc. Instant remote monitoring of each equipment's status with data extraction and alarm function via connecting to enterprise's internal network system. Quick installation of system with no interruption to the existing functioning equipment. Bossmen IoT central monitoring system is an indispensable system for efficient production management.

Central Monitoring System Ethernet



Remote and instant monitoring and recording. Accessible instant information.



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