



The Unique Multi-Condition & Multi-Network Environmental Monitoring System in this Industry

The image shows a network diagram on a dark blue background. It consists of several circular nodes of different colors (blue, red, green, yellow) connected by dotted lines. Each node contains a white icon representing a person or a group of people. The nodes are arranged in a non-linear, interconnected pattern. Below the diagram, the text "Intelligent Environment System" is written in a white, sans-serif font. At the bottom of the image, there is a dark grey horizontal bar containing the text "The unique multi-condition & multi-network environmental monitoring system in this industry" in a white, sans-serif font.

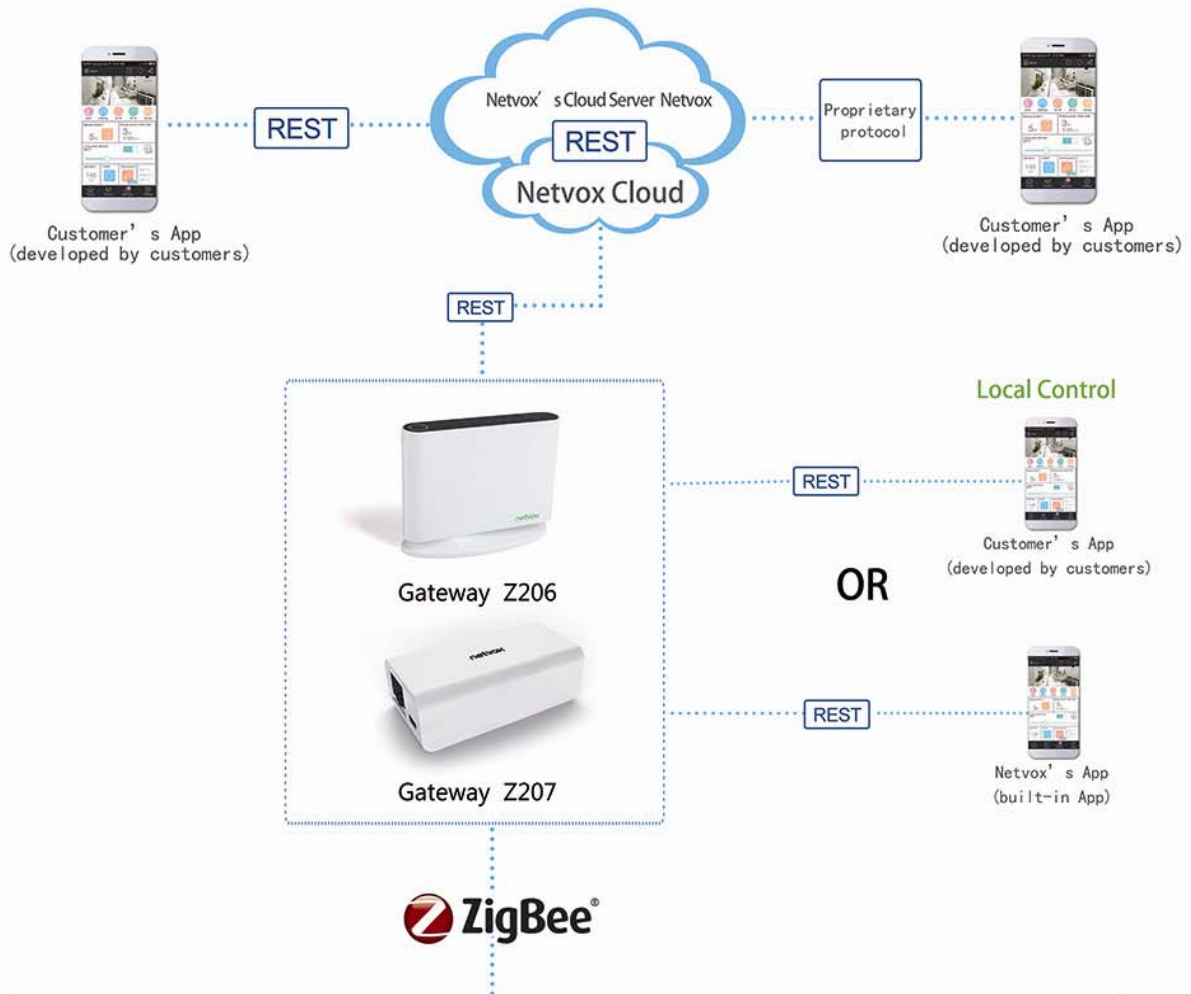
Netvox is developing a multi-condition and multi-network environmental monitoring system currently. This system can be used for environmental monitoring and controlling of smart agriculture, network room, communication station, power substation, data room, warehouse, archives and so on, then bringing more convenience for the production and management of the enterprises.

The system will be introduced by using “smart agriculture” as an example:

The Framework of IoT Smart Agricultural Solution

This system uses Z206 / Z207 gateway as a chief control center. It includes sunlight, temperature, humidity, ultraviolet, soil moisture and many other multi-conditional sensors; and outdoor IP cameras; wireless relay switches; RS485 adapter and other devices. By operating with Netvox’s cloud service, it can accomplish the monitoring of the agricultural environments / greenhouse located in different cities/areas and carry out the relevant data

The Framework of IoT Smart Agricultural Solution

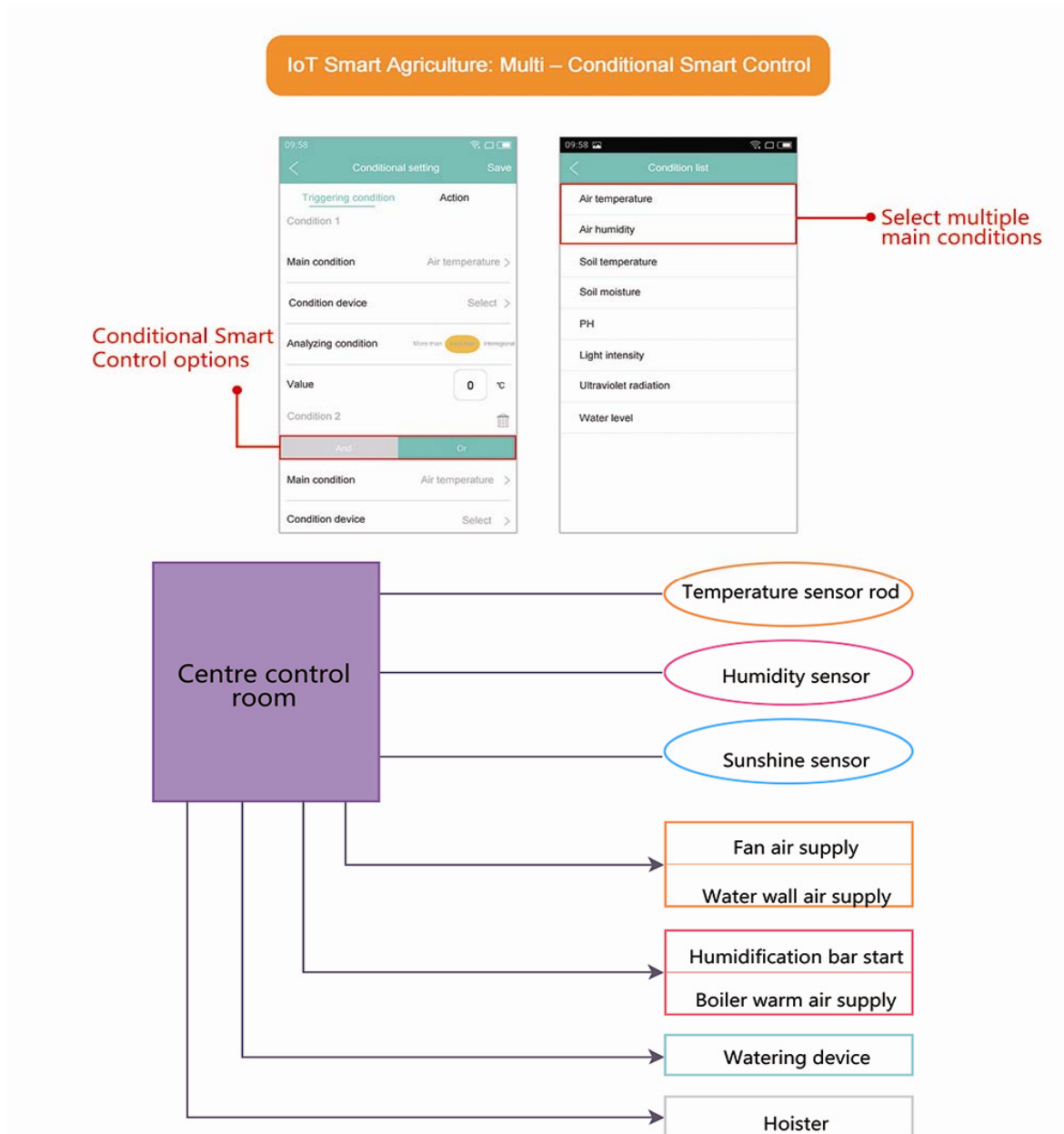


 Z713H Sunlight, temperature & humidity sensor	 Z713GC ultraviolet, & H/T & soil moisture sensor	 Z725CD H/T & soil moisture sensor	 Z721C soil moisture sensor	 RS485 Adapter
 WFCS outdoor IP cameras	 The camera catches on-site pictures and uploads photos or videos	 Z831 wireless relay switch	 Solar insect trap	 humidity salinity pH

IoT Smart Agriculture: Multi - Conditional Smart Control

For Example, a greenhouse, five temperature and humidity sensors distributed around, the same conditions, optional to choose three sensors to achieve the conditions to start the fan; all does not to achieve, just turn off the fan.

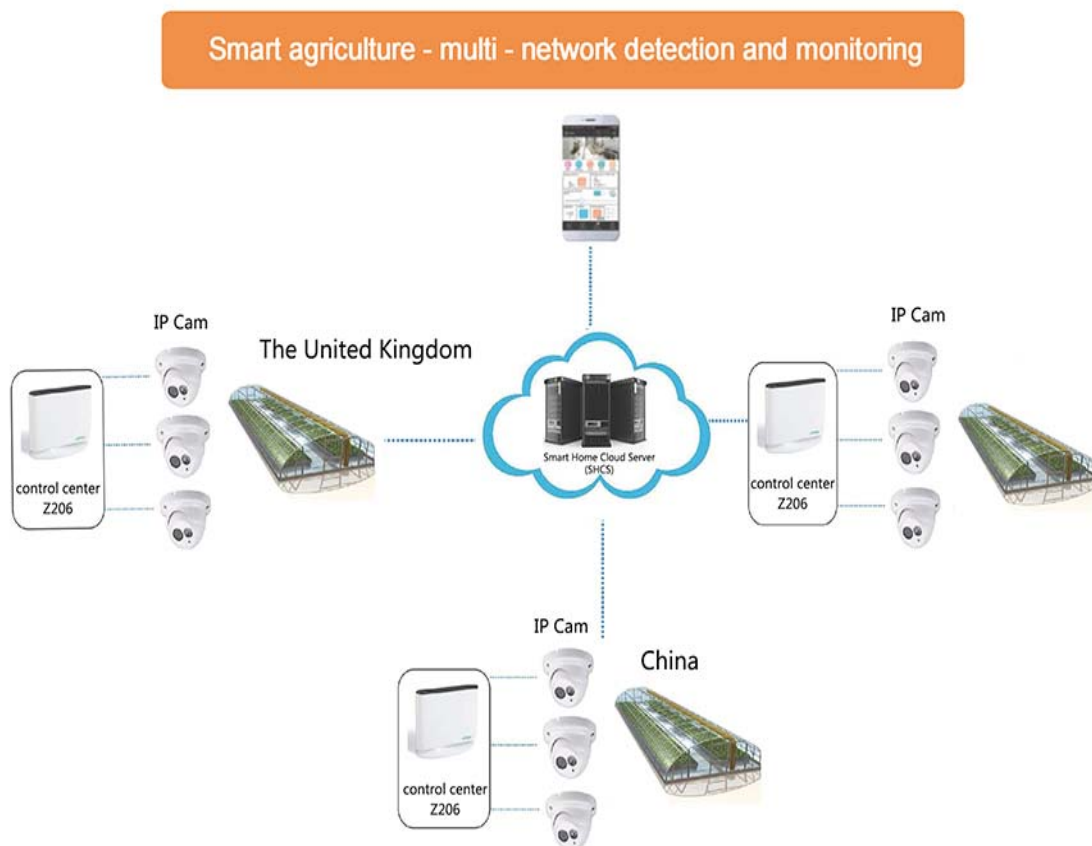
- Temperature and humidity sensor: to transmit the temperature / humidity state to the central control box through wireless, then decide to start fan, water wall air supply, heating rods, boiler warm air supply by the central control box.
- Sunshine sensor: to detect on the sunshine, if it is too high then to start shutter device to do sunshade action, too low then to turn off the shutter device to do light action.
- Inside and outside hoister: to control at any time by the environment, climate, growth conditions.
- Situation adjustment: According to the season, climate, special factors (flood season, drought), adapt to different environments to make self-adjustment.



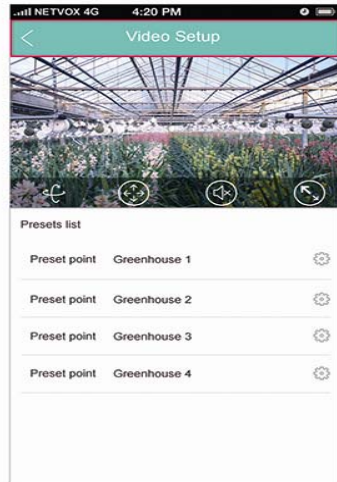
Smart agriculture: Multi - Network Detection and Monitoring

A mobile APP can monitor greenhouses and farms all over the world. Manage multiple IP Cameras to process images, upload photos or images of production history, as well as do farm safety management.

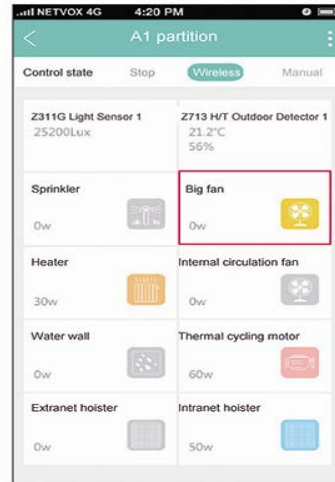
A mobile APP monitoring all the different local network environment data and all the conditions set to start, can choose to push the notification to the administrator's mobile phone, and from the phone can identify whether the device works normally or not.



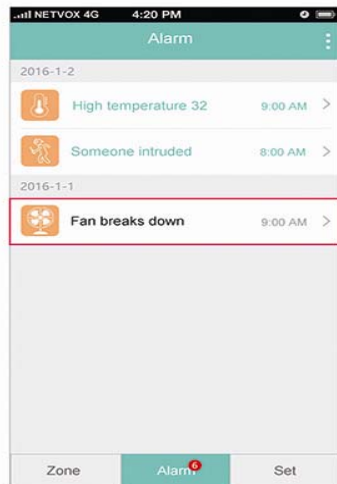
Multi - Zone & Network Monitoring



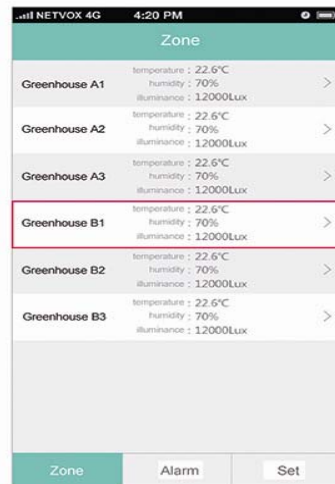
Video Setup



Partition



Area

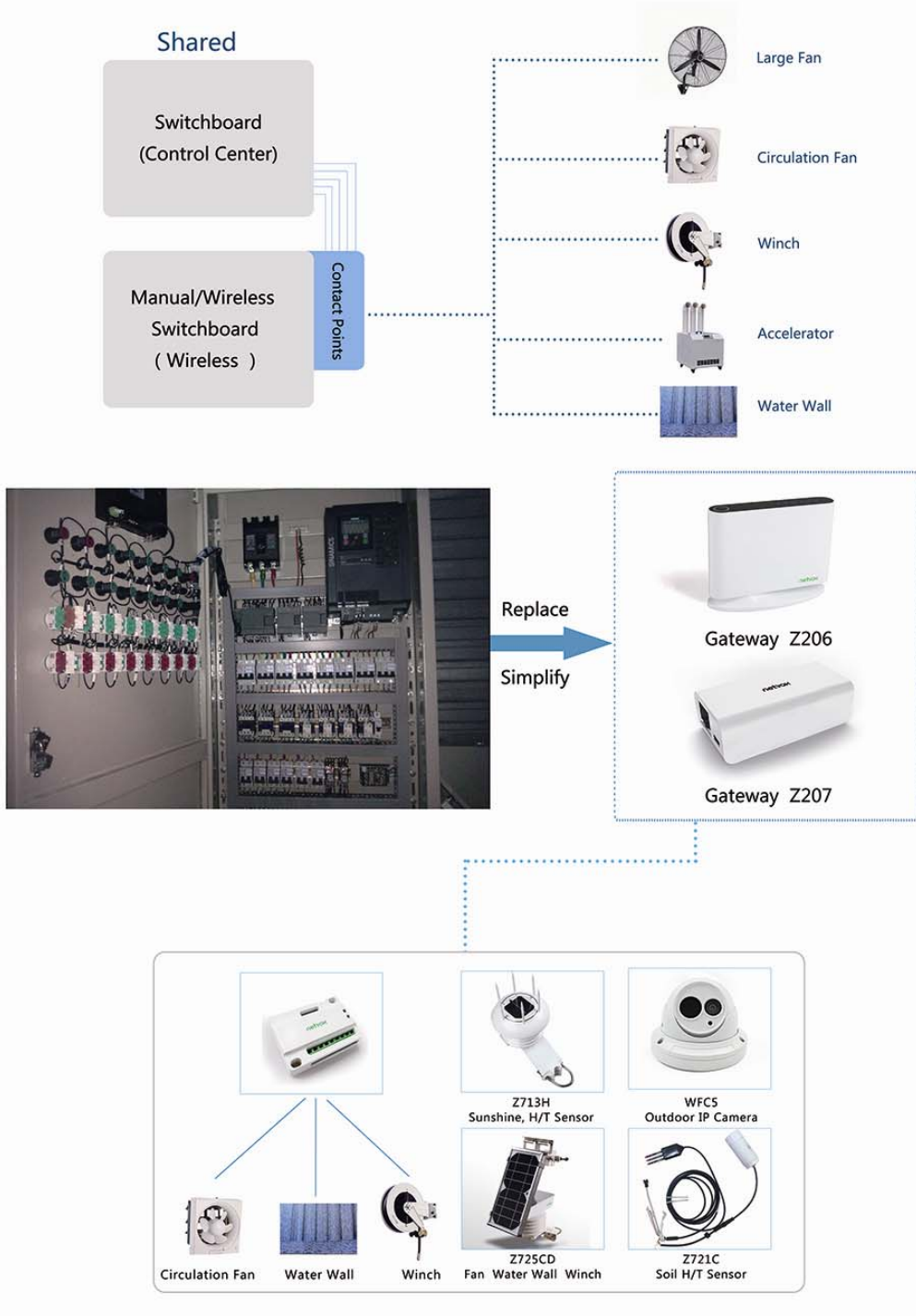


Alarm

Wireless-Control System can Replace/Share/Simplify Traditional Switchboard

- Reduce problems of timing on the electronic translation control
- Multi-conditional setting control APP
- Multiple devices/sensors linkage
- Integrate monitoring control of several farms
- Detection of large-scale equipment feedback

Wireless-Control System can Replace/ Share/Simplify Traditional Switchboard



Intelligent IoT System - Plant Factory

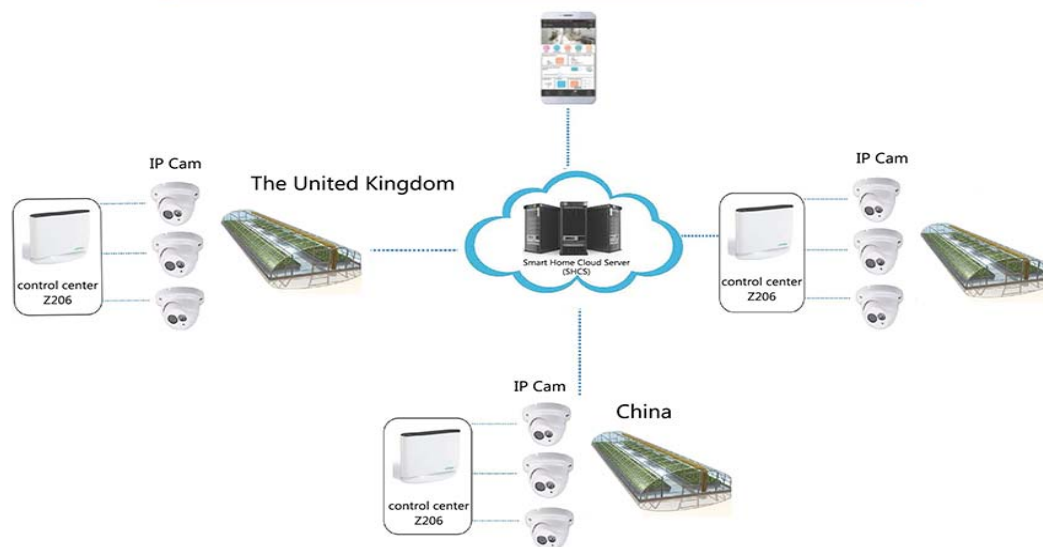
This system adapts ZL01G Wireless RGB LED Controller to create suitable color of light for plants. ◦

- ZL01G is a wireless RGB LED Controller working with RGB light or light strip and can communicate with ZigBee End Devices on base of IEEE802.15.4.
- There are two power supplies of ZL01G: DC12V and 24V. It can work with any RGB

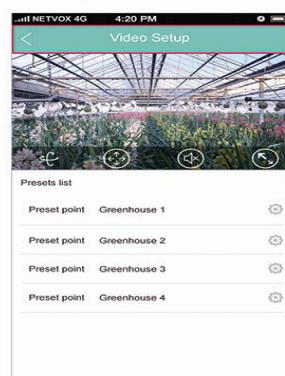
Control

- Achieve real-time data collection and recording of temperature, humidity, soil pH, CO2 concentration, light intensity and other parameters.
- Set alarm thresholds and upload the alarm log for local and remote monitoring to notify different staff on duty.
- Switch on correlated devices e.g. fans and heaters when the value exceeds the normal threshold and raises an alarm.
- Achieve instant data collection and communication.

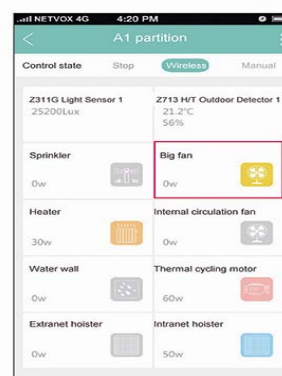
Smart agriculture - multi - network detection and monitoring



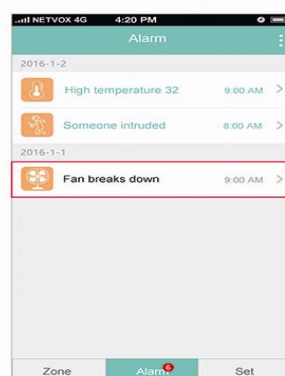
Multi - Zone & Network Monitoring



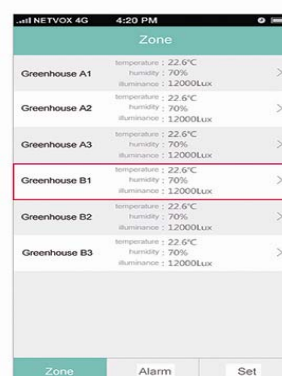
Video Setup



Partition







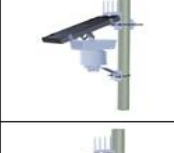





Area



Alarm

IES (Intelligent Environmental Control System) device list:

Model name	Product name	Picture	Feature	Sensor
Z713C	Soil moisture sensor		Z713C is a soil moisture sensor that detects soil moisture. It is solar powered.	EC-5 soil moisture sensor
Z713E	Water temperature & PH sensor		Z713E is a water temperature and PH sensor that detects water temperature and PH value. It is solar powered.	Water quality sensor
Z713G	UV/Temp./humidity sensor		Z713G is an ambient temperature and humidity sensor and UV detector that detects the intensity of ultraviolet radiation, ambient temperature and humidity. It is solar powered.	UV sensor Temp./humidity sensor
Z713GC	UV/Temp./humidity/soil moisture sensor		Z713GC detects ambient UV intensity, temperature, humidity and soil moisture. It is solar powered.	UV sensor Temp./humidity sensor EC-5 Soil moisture sensor
Z713H	Sunlight/Temp./humidity sensor		Z713H detects the intensity of sunlight and ambient temperature/humidity. It is solar powered.	Sunlight sensor Temp./humidity sensor
Model name	Product name	Picture	Function	Sensor
Z725A	Outdoor Temperature and Humidity Sensor		Z725A is an outdoor temperature and humidity sensor with solar panel and waterproof housing. It detects ambient temperature and humidity	Temperature and humidity sensor
Z725C	Soil Moisture Sensor		Z725C is a soil moisture sensor that detects soil moisture. It is solar powered.	Soil moisture sensor
Z725CD	Wireless H/T and Soil Moisture Detector		Z725CD is an ambient H/T and Soil Moisture Detector, used on data acquisition of ambient air humidity, temperature and soil moisture and send over the collected data to the target display device.	H/T Sensor / Soil Moisture Sensor
Z801TXB	Wireless Sensor Signal Tx Module		NETVOX Z801TXB is an alarm event reporting device. It allows you to attach up to five security zone sensors. When signal from the sensor is detected, the device sends a warning message to its enrolled security center (CIE device) and then WD will make warning sound to notify the user.	Dry Contact Input Sensor
Z721X	Wireless Soil H/T Sensor (Indoor) Wireless Soil Electrical Conductivity Sensor (Indoor) Wireless Soil Moisture Sensor (Indoor)		Z721X is Soil Humidity/Temperature/Moisture Sensor for Indoor Use, Powered by 3 AAA Batteries	Liquid Level/ Soil Moisture/ Soil Temperature/ Rainfall Sensors

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Netvox Smart Butler



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