强泰 QOTO

深圳强泰自控阀门科技有限公司

Shenzhen Power-Tomorrow Actuator Valve Co.,Ltd.

Intelligent

wireless irrigation controller



Contact: Jayla
Email: sales01@qotosmart.com
Mob/whatsApp：+86-19982871318
Web：www.qotosmart.com
Skype: lanjie917

Main products: pipeline control valves & intelligent irrigation controllers

Main applications: Agricultural planting, greenhouse, plantation vegetable garden, Flower nurse, city park scenic area, municipal road greening, vertical greening, pipeline control

Who we are：

Shenzhen Power-tomorrow Actuator valve Co., Ltd
** Headquarter / Factory in Zhejiang province, Branch is in Shenzhen
** **12 years experience** in pipeline controller system
** Main product： pipeline control valves & intelligent irrigation controllers
** **15 staff in R&D dep**. , 250 staff in total
** **Applications**: Agricultural planting, greenhouse, plantation vegetable garden, Flower nurse, city park scenic area, municipal road greening, vertical greening, pipeline control
Certifications: **ISO9001, CE, FCC, CCC, RoHS
****Our concept**: people-oriented, establishing an innovative and open-minded enterprise



Our advantages:

** High cost performance compared with traditional products
** **Less labor, water-saving, high efficiency**
** APP remote control, monitoring in real-time
** Powered by solar panel and batteries, installed without electric cables
** Water shortage alarms, low batter alarms, fault alarms
** History record, upload the watering times and capacity
** Motors control valve switch, no water hammer phenomenon, no damages to the pipe and nozzles
** Full port, three times bigger in water flow than traditional ones



Our partners

Product series-----wireless irrigation controllers



Model：

QT-01F-L

QT-01F-N

QT-01F-G



Model：

QT-02F-N

QT-02F-L

QT-02F-G



Model：

QT-05F-N/L/G

QT-10F-N/L/G

QT-15F-N/L/G

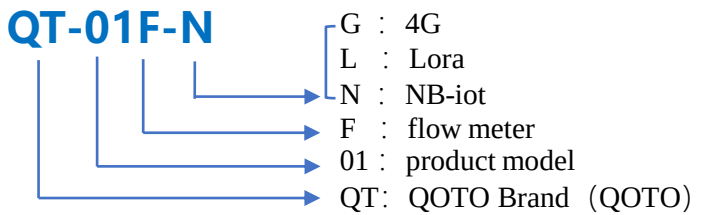


Model：

QT-L01-**
(DN25-80)

（flow meter）

Note： model interpretation





wireless irrigation controller

QT-01F-N/L/G

Model	specification	configuration
QT-01F-N/L/G	Power supply：DC 5V 2A （solar panel+18650 battery 1pcs or 2pcs） Communication protocol：Lora/NB-iot/4G Protection level：IP67 Working Temp：-20~75℃ Media Temp：0~70℃ Valve caliber：DN25	**Standard configuration**: smart valve controller+1 inch valve*1 Flow Meter--DN25 **Optional：** 18650 rechargeable batteries 1pcs or 2pcs

main function

1. Remote control by Mobile phone or PC computer
2. Control the valve position by percentage
3. Irrigation water capacity setting, water consumption can be controlled
4. Fault warning, water shortage warning, low power warning, to provide secure user experience
5. When watering, the real-time feedback of consumption and time will reflect on the App
6. Power supply solution: powered by solar panel+18650 batteries, green and eco-friendly
7. Timing function
8. Circular irrigation
9. Push notification of device
10. When the Internet is cut, the controller will keep watering according to schedule once the timing program is set.
11. Record of each water consumption and duration each month
12. Delay irrigation in rainy and snowy day
13. Lora/NB-iot/4G optional communication protocol
14. Sharing devics function
15. Intelligent interconnect function
16. Signal strength indicate



wireless irrigation controller

QT-02F-N/L/G

Model	specification	configuration
QT-02F-N/L/G	Power supply：DC 5V 4A （solar panel+18650 battery 2pcs or 4pcs） Communication protocol：Lora/NB-iot/4G Protection level：IP67 Working Temp：-20~65℃ Media Temp：0~70℃ Valve caliber：DN32~DN65	**Standard configuration：** ① Solar irrigation controller*1 ② Standard antenma*1 **Options：** ① 18650 rechargeable 2 pcs or 4pcs ② Valve ③ Flow meter--（DN32-65） ④ Antenna of different size

main function

1. Remote control by Mobile phone or PC computer
2. Control the valve position by percentage
3. Irrigation water capacity setting, water consumption can be controlled
4. Fault warning, water shortage warning, low power warning, to provide secure user experience
5. When watering, the real-time feedback of consumption and time will reflect on the App
6. Power supply solution: powered by solar panel+18650 batteries, green and eco-friendly
7. Timing function
8. Circular irrigation
9. Push notification of device
10. When the Internet is cut, the controller will keep watering according to schedule once the timing program is set.
11. Record of each water consumption and duration each month
12. Delay irrigation in rainy and snowy day
13. Lora/NB-iot/4G optional communication protocol
14. Sharing devics function
15. Intelligent interconnect function
16. Signal strength indicate



Model	specification	configuration
QT-05F-N/L/G QT-10F-N/L/G QT-15F-N/L/G	Power supply：DC 24V （solar panel+lead acid battery） Communication protocol：Lora/NB-iot/4G Protection level：IP67 Working Temp：-20~65℃ Media Temp：0~70℃ Valve caliber：DN50~DN150	**Standard configuration**： ①smart irrigation controller*1 ②standard antenna*1 **Options：** ①solar panel+lead acid ②valve ③flow meter--（the biggest caliber: DN80） ④different size of antenna

wireless irrigation controller

QT-05F-N/L/G
QT-10-N/L/G
QT-115-N/L/G

main function

1. Remote control by Mobile phone or PC computer
2. Control the valve position by percentage
3. Irrigation water capacity setting, water consumption can be controlled
4. Fault warning, water shortage warning, low power warning, to provide secure user experience
5. When watering, the real-time feedback of consumption and time will reflect on the App
6. Power supply solution: powered by solar panel+18650 batteries, green and eco-friendly
7. Timing function
8. Circular irrigation
9. Push notification of device
10. When the Internet is cut, the controller will keep watering according to schedule once the timing program is set.
11. Record of each water consumption and duration each month
12. Delay irrigation in rainy and snowy day
13. Lora/NB-iot/4G optional communication protocol
14. Sharing devics function
15. Intelligent interconnect function
16. Signal strength indicate



flow meter
QT-L01-65

Model	caliber	flow section
QT-L01-25	DN25	20-280L/min
QT-L01-32	DN32	40-460L/min
QT-L01-40	DN40	50-750L/min
QT-L01-50	DN50	60-1160L/min
QT-L01-65	DN65	80-1980L/min
QT-L01-80	DN80	100-3000L/min

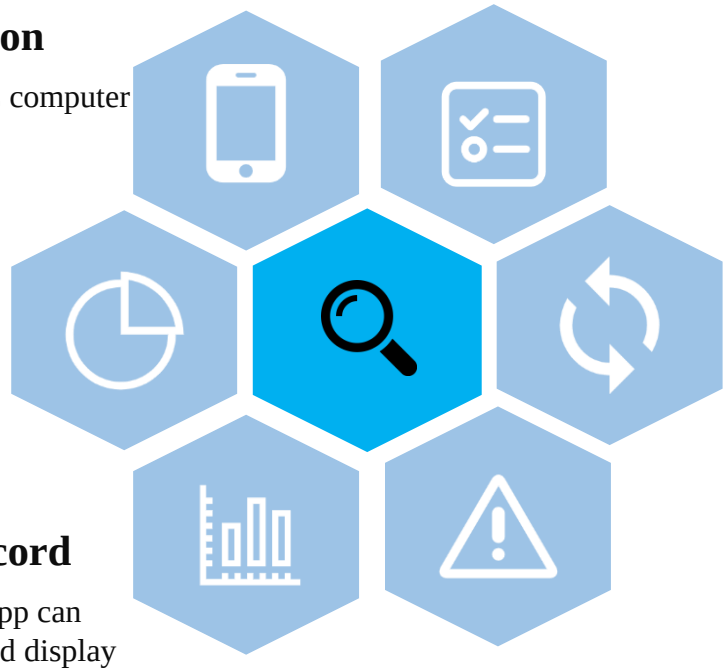
flow meter specification

公称通径 DN (mm)	流速(m/s)									
	0.01	0.10	0.30	0.50	1.00	2.00	3.00	4.00	5.00	10.00
	流量(m^3/h)									
25	0.01767	0.17672	0.53014	0.88357	**1.76715**	3.53429	5.30144	7.06858	8.83573	17.6715
32	0.02895	0.28953	0.86859	1.44765	**2.89529**	5.79058	8.68588	11.5812	14.4765	28.9529
40	0.04524	0.45239	1.35717	2.26195	**4.52389**	9.04779	13.5717	18.0956	22.6195	45.2389
50	0.7069	0.70687	2.12058	3.53429	**7.06858**	14.1372	21.2058	28.2743	35.3429	70.6858
65	0.11945	1.19459	3.58377	5.97295	**11.9459**	23.8919	35.8377	47.7836	59.7295	119.459
80	0.18296	1.80956	5.42867	9.04779	**18.0956**	36.1911	54.2867	72.3823	90.4779	180.956

Funtion Introduction

Intelligent operation

remote control by mobile phone and PC computer



Timing program

The system can set the opening time of controller、watering time/water capacity、the percentage of valve position. 20 timing task can be set for each system

percentage control

open and close the valve by percentage, the adjustment accuracy is 1%

cycle irrigation

User can set the watering time/water capacity, interval of irrigation, times of cycle

flow meter History record

with the help of flow meter, the app can control the water consumption and display single irrigation duration and flow, month irrigation duration and flow statistics

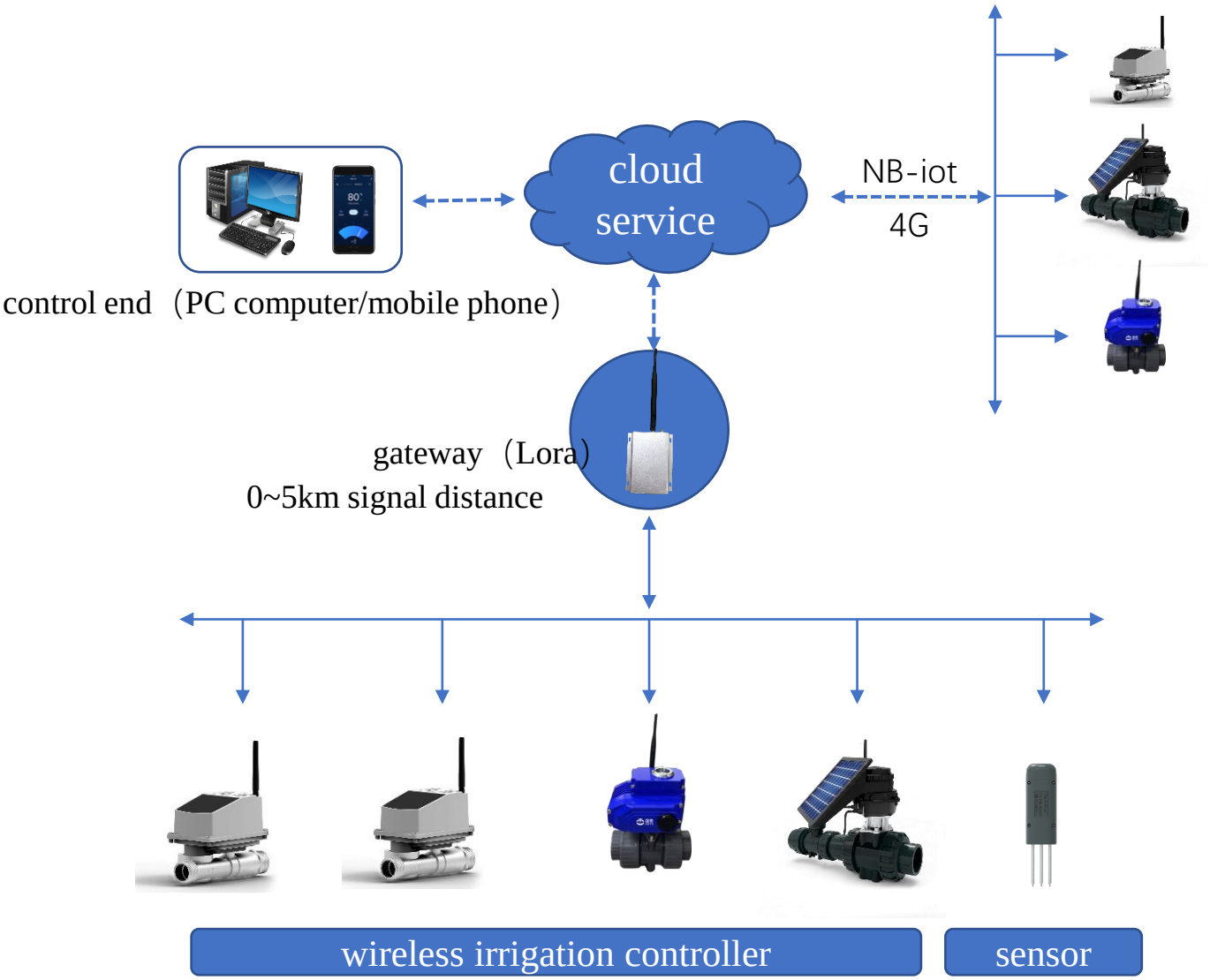
Secure irrigation

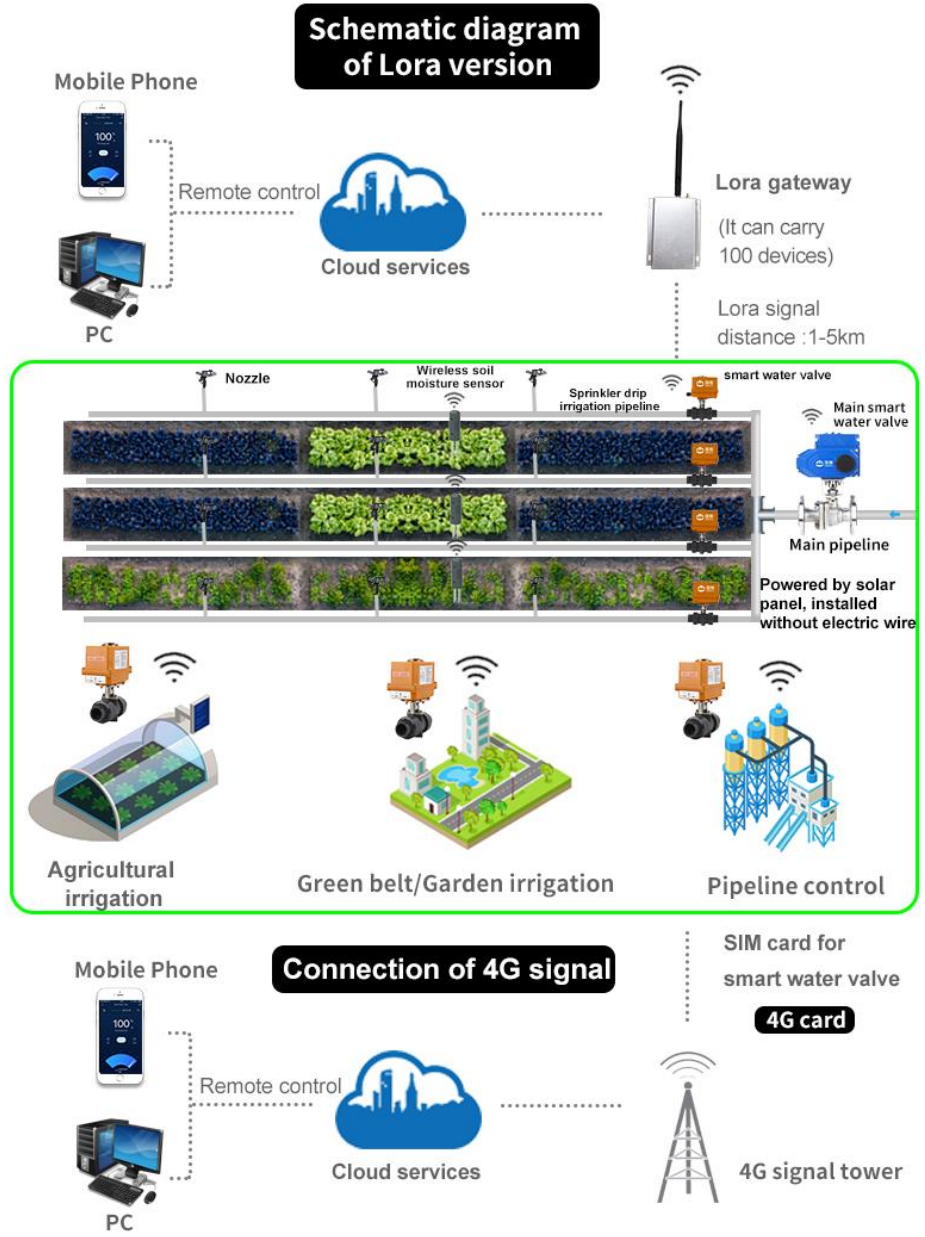
Automatic malfunction detection and alarm: the pipe cracks(zero pressure)、sensor breakdown, motor breakdown will be reported and be transfered into alarm in mobile App and PC computer

automatic irrigation

User can set up the automatic irrigation task. With the help of sensor, the automatic will be triggered once meeting certain conditions

Diagram


cloud service
NB-iot
4G
control end （PC computer/mobile phone）
gateway （Lora）
0~5km signal distance
wireless irrigation controller
sensor


Schematic diagram of Lora version
Mobile Phone
Remote control
Cloud services
PC
Lora gateway
(It can carry 100 devices)
Lora signal distance :1-5km
Nozzle
Wireless soil moisture sensor
Sprinkler drip irrigation pipeline
smart water valve
Main smart water valve
Main pipeline
Powered by solar panel, installed without electric wire
Agricultural irrigation
Green belt/Garden irrigation
Pipeline control
Connection of 4G signal
Mobile Phone
Remote control
Cloud services
PC
SIM card for smart water valve
4G card
4G signal tower

Project advantage – What you will have is an intelligent irrigation system

QOTO wireless irrigation controller		Traditional products
High cost performance compared with traditional similar products	VS	High price and high cost
Mobile phone control remote, App feedbacks the watering situation in real time.		System control,need manual tracking
History is viewed at will, and counts watering times and water usage can be reported.		Unable to view the watering record, only the current watering time
Watering on demand, you can control how much watering		Only the switch on/off function, can only be watered according to the time
powered by solar panel+batteries， installed without electric power cable, free from labor.		Need to pull wires specifically for the valve, which increases the cost of manpower and material resources.
Water shortage alarms, low battery alarms, make users feel safer.		The water shortage can only be checked manually on-site, and the water shortage and power shortage cannot be judged
Motor control valve switch, no water hammer phenomenon, pipes,sprinkler will not cause damage.		A momentary switch, there is water hammer phenomenon, it is necessary to install a pressure reducing valve behind the controller to reduce the harm caused by water hammer
Full port, big flow, have a bigger water flow than similar solenoid valve with same caliber by triple times, not easy to be blocked with a long life span.		The water outlet is smaller than the actual size, easy to block and break

Cooperation Case



Irrigation project of cotton planting land in Bayingolin Mongolian Autonomous area , Xinjiang

Planting area of more than 2000 mu, a total of more than 280 QOTO intelligent wireless irrigation controller installed, for fine irrigation management.

The installation of intelligent wireless irrigation controller is more scattered, using solar energy and battery power supply, to solve the problem of power supply difficulties.

The communication protocol adopts LORA scheme, after debugging, irrigation can be controlled remotely by mobile phone APP and on the computer side.

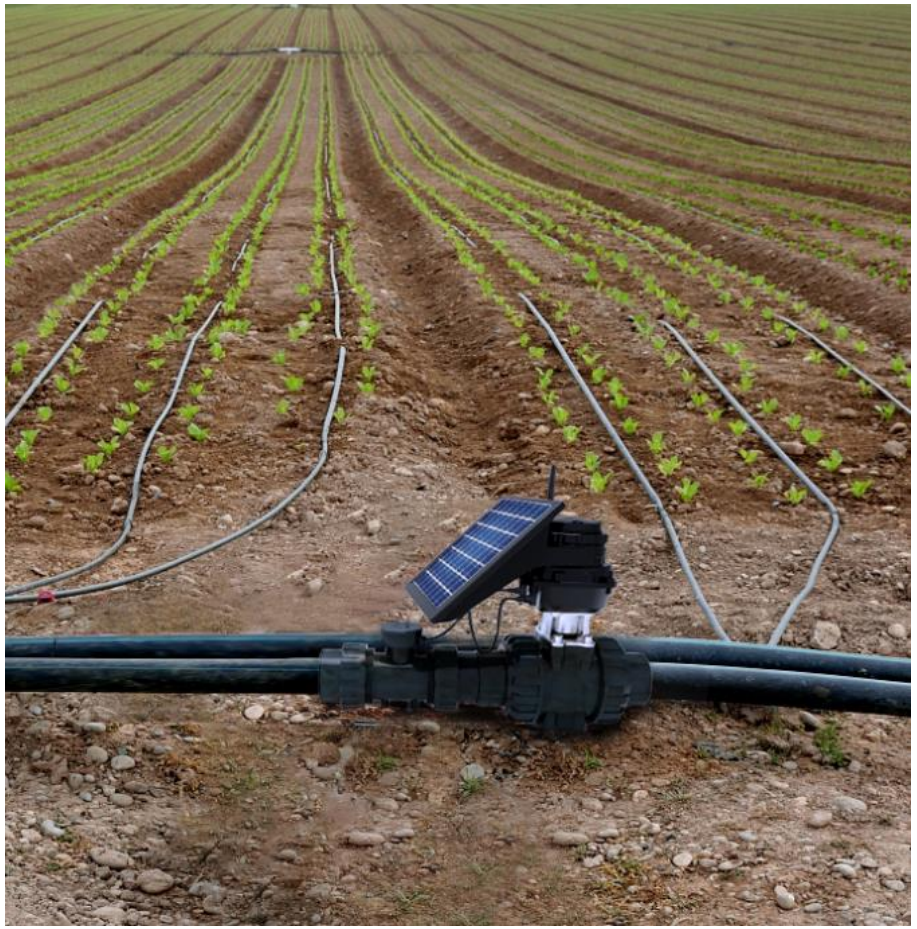
Effect with QOTO's intelligent wireless irrigation controller:

1, water-saving energy-saving projects using intelligent wireless irrigation controller, integrated flow sensors, can be real-time monitoring of the flow of each pile, for optimizing the wheel irrigation group, adjust irrigation time provides an important data support. Can also be found in real time irrigation pipe water situation, no water, control will prompt water shortage alarm. After the use of automated control technology, water conservation is achieved 20-30%, the operating costs of farmland per acre decreased more than 10%, irrigation water utilization rate is increased from 40% to 70%.

2, save artificial, intelligent irrigation system, so that farmers save labor costs, more than 50% more than in previous years, through app and PC side control irrigation, and intelligent irrigation system to know irrigation conditions and water consumption, water shortage has water shortage alarm, no need for more manual inspection has been turned on irrigation. Failure has an alarm prompt and know the exact location of the fault equipment, timely notify maintenance personnel for repair. Put into use to create a good economic and social benefits.

3, increase production and efficiency, wireless intelligent irrigation valve applications, especially for each out-of-the-pile flow, pressure monitoring, optimize the irrigation system, improve irrigation uniformity, cotton average yield increased by more than 10%, the average annual increase of more than 10%. Realize wireless automatic control of irrigation process, real-time monitoring and early warning of irrigation data, centralized management and analysis of irrigation information, promote the informationization, digitalization and intelligent development of agricultural irrigation, so that irrigation workers more happy, farmers more assured, the government more at ease.

Cooperation Case



Vegetable Planting Project in Xinye-HeNan

Xinye is the national pollution-free vegetable production base demonstration county, perennial vegetable planting area of about 350,000 mu, with 2 million kilograms of daily vegetables in the county wholesale vegetable market, here is also the largest vegetable garden and one of the largest vegetable market in the Central Plains. On vegetable growing bases, we use the Smart Agricultural Irrigation Automation Communication Protocol using the NB-iot solution without human intervention. Minimize the randomness of manual operation, while significantly reducing the on-site labor occupation, to help users achieve automated control of on-site agriculture equipment implementation of precise control, and standardized management of production processes

1. In addition, users do not need to route 220V wires to the planting base, (QOTO solar powered and lead-acid batteries) to solve the power supply
2. Vegetable picking 12-24 hours before no irrigation and fertilization (QOTO Internet automation through the mobile phone terminal, computer side in advance set irrigation time, can be very good to prevent users due to the planting area of large operating errors resulting in the quality of vegetables)
3. Users do not need to install a separate control system control solenoid valve, high cost, irrigation need manual inspection, equipment has no work, flow is small, water hammer phenomenon is serious, external solenoid wire supplies, high maintenance costs later (Strong Tai Internet irrigation through the mobile phone terminal, computer-side linkage equipment on-site real-time information feedback, flow monitoring, hydraulic monitoring to solve the heart, motor drive percentage control water flow size)

Cooperation Case



Urban Greening Construction Project

In recent years, with the increase of urban motor vehicles, traffic pollution is becoming more and more serious, the use of road greening to improve the road environment, has become an urgent task. The rapid development of urban road construction, in order to make road greening play a better greening function, coordinate the relationship between road greening and related municipal facilities, is conducive to driving safety, it is necessary to manage urban road greening to meet the needs of urban modernization. In the municipal greening project, I Division in cooperation with the construction unit, the introduction of intelligent road greening solutions, intended to improve the efficiency of road greening management, promote ecological environment improvement and green high-quality development, to help road garden intelligent irrigation equipment.

Programs and products around (QOTO) independent research and development of intelligent irrigation equipment, platform based on the cloud, Internet of Things, artificial intelligence, 4G, intelligent automation control, according to soil temperature and humidity sensors to collect data, set up the corresponding water needs, automated irrigation. Realize the digital management and precision control of road gardens, and achieve the effect of saving water, time and labor



Irrigation system is the top priority of plant wall, related to plant survival, the project used our QT-01F-N intelligent water valve controller.

Division I this smart water valve not only perfectly solve the watering problem of plant walls, safe water is also the focus of this project. The road on the outer wall is often constructed, if the water pipe breaks, the water pipe has no water, it looks like the waterer regularly switches every day, but in fact there is no watering, resulting in the plant wall plant water shortage withering. Division I intelligent water valve controller has the function of water shortage alarm, water pipe no water, APP remind water shortage alarm, maintenance personnel can timely view the status quo, to avoid losses

Cooperation Case

Los Angeles agricultural greenhouse planting project and water tower water injection project



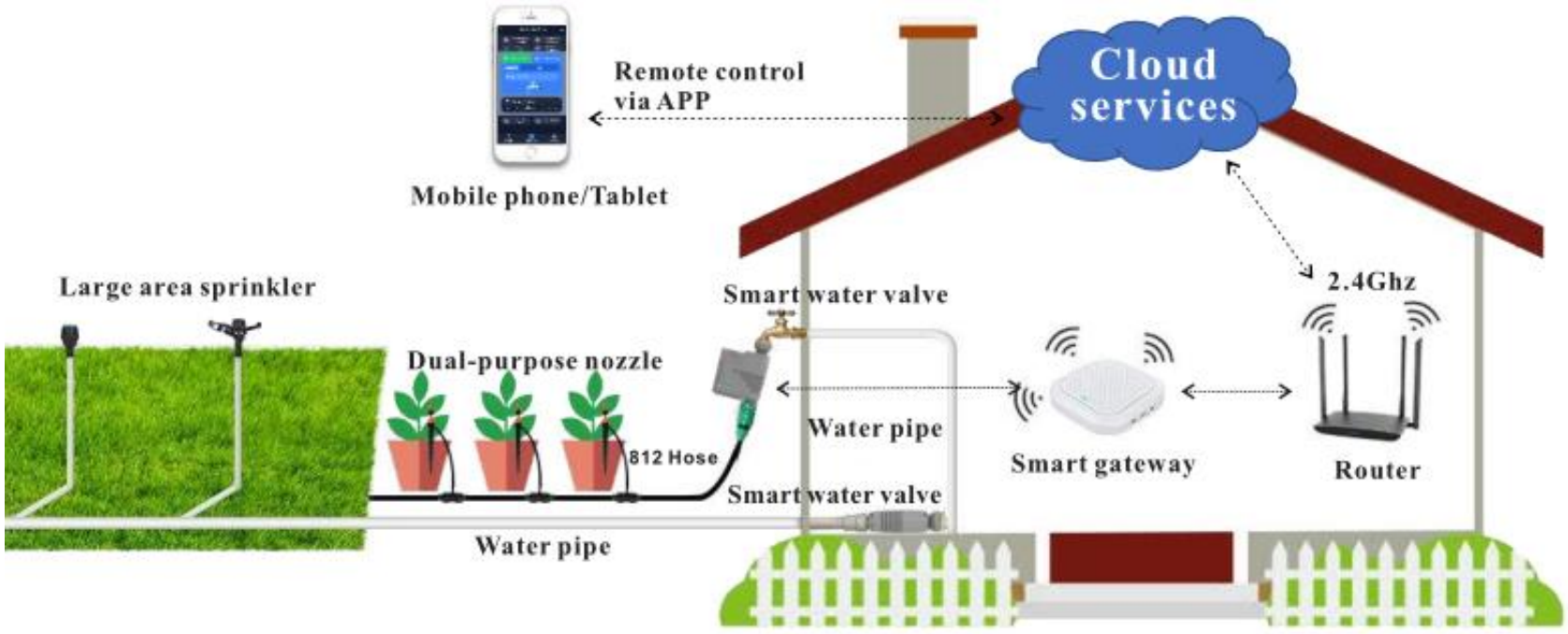
More than 150 planting sheds, each shed area of about 1 mu, the project uses a total of 155pcs QOTO QT-02F-DN50 models of intelligent wireless irrigation equipment.
Using the Lora protocol technology scheme, the site uses only two gateways to connect the entire irrigation system.
The use of spray irrigation in the shed, because of the characteristics of plant cultivation, early water frequency is higher, the use of equipment recycling irrigation function, no need for hands to open watering valves frequently.
Water consumption control, water consumption of each shed can be accurately controlled, how much water is needed, how much water is poured, can solve the requirements of different stages of plant growth water demand.
Intelligent automation control, according to the soil temperature and humidity sensor to collect data, set the corresponding water needs, automated irrigation



Each shed water tower water every time to run out of water to fill, installed QOTO QT-01F type of intelligent water valve controller, according to the water tower storage and how much water needs to be injected each time, directly set how much water consumption to control water injection, and no longer worry about filling the overflow situation.

Thank you for your watching

More new products will come….



Contact: Jayla
Email: sales01@qotosmart.com
Mob/whatsApp： +86-19982871318
Web： www.qotosmart.com
Skype: lanjie917

Main products: pipeline control valves & intelligent irrigation controllers

Main applications: Agricultural planting, greenhouse, plantation vegetable garden, Flower nurse, city park scenic area, municipal road greening, vertical greening, pipeline control