

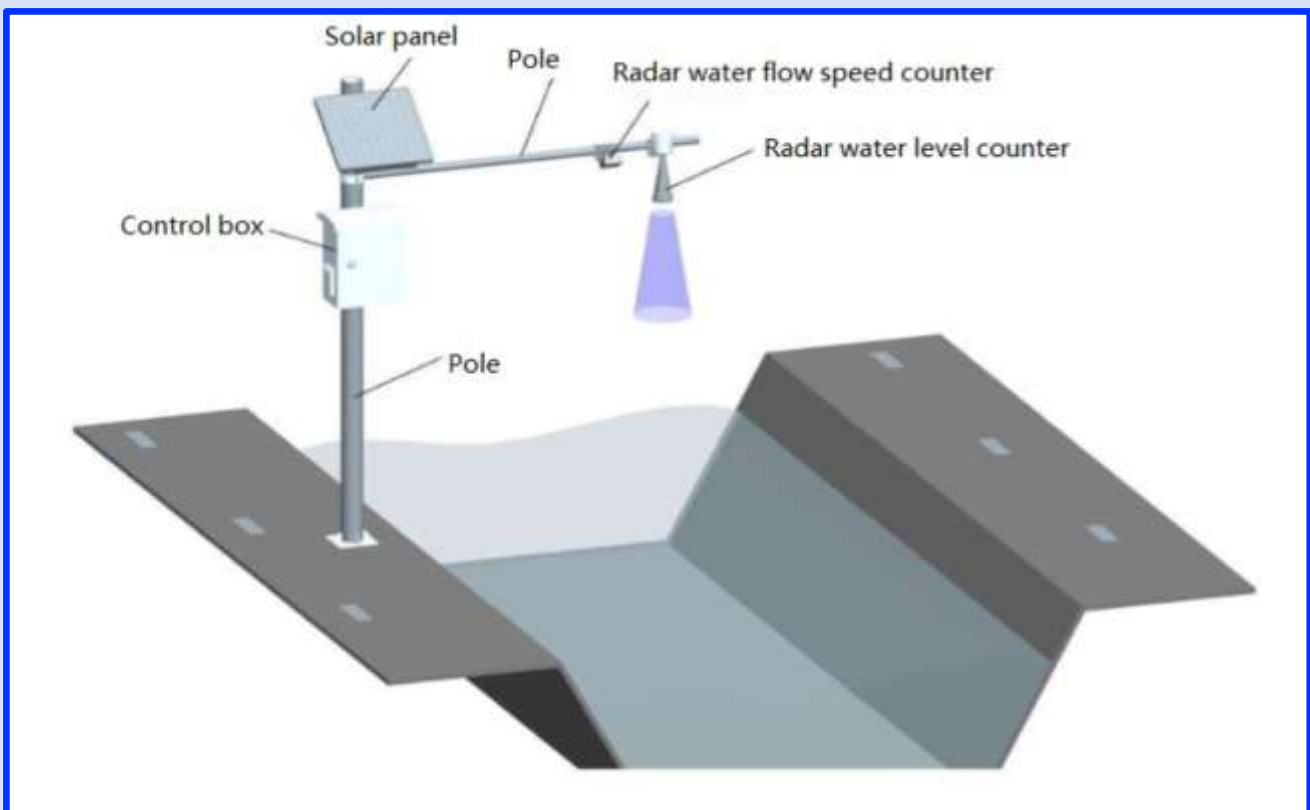
Flash flood early detection warning system

The iways Flash Flood Warning System can detect the increasing speed and volume of water and immediately send a warning to Councils, Civil Defence, Emergency Services, and other Government Agencies.

Measurement of water levels, flow, and velocity of open channels, such as rivers, reservoir gates and pipe networks. This product can effectively monitor the changing status of the water level, velocity, and flow, to provide accurate information from the monitoring unit to the company monitoring the system.

Advantages

- ❖ Low Maintenance - The system components and hardware does not touch the water
- ❖ Easy Installation – DC or Solar Power Supply
- ❖ Pole or Bridge bracket mounting options
- ❖ Water Flow Rate 0.15–20 mtrs/sec
- ❖ Can measure up to 130 meters of river width
- ❖ Prevailing winds, ambient temperature, waves, sand & floating material have no influence on the detection functionality



Characteristics

1. Based on advanced 26GHz high frequency pulse radar water level measurement technology and mature 24GHz plane radar Doppler microwave flow measurement technology, it has high reliability, high precision, and high resolution
2. Due to non-contact measurement, it is not easy to be corroded by sewage or affected by silt, can even be used in complicated water environments with contaminant or sediment
3. Due to ultra-low power consumption, working current and watch current, it is more applicable to the unattended solar energy power supply station
4. Since the directivity of the radar antenna is good, the beam angle is small and the energy can be concentrated with stronger interference immunity, which greatly promotes measurement precision and reliability
5. The dead zone is smaller, and wavelength is shorter with mature pulse working mode and ultra-low transmitted power, which has no harm to both human and environment.
6. With waterproof and lighting protection design, it is applicable to work under different kinds of extreme weather
7. With two working modes, e.g. instruction collection and interval collection, it has historic data and event records and can control flexibly
8. With two Modbus communication protocols in standard configuration, it is compatible with most of the RTU communication protocols both at home and abroad; the communication mode can be customized with convenient networking
9. Due to small appearance, it is convenient for installation and maintenance

Solution Functionality


- ❖ Radar technology for the water flow, speed & level
- ❖ Local Controller for preliminary data acquisition
- ❖ Data Transfer RS232 / RS422 / RS485 interface
- ❖ Supports GPRS / GSM single access and multi access
- ❖ Geo-Redundant IoT Analytics Cloud Based Platform
- ❖ Unique Client Interface Dashboard

Theory of Operation


1. Water Flow Rate Detector positioned downstream of the direction of the water flow
 - Water flow rate is slow - transmit (Tx) frequency is equal to the receive (Rx) frequency
 - Water flow rate is fast - receive (Rx) frequency is faster than the transmit (Tx) frequency
 - As the water flow rate rises, so too does the (Rx) frequency increases in relation to the transmit (Tx) frequency
 - As the water flow rate falls, so too the receive (Rx) frequency reduces in relation to the transmit (Tx) frequency
2. Water Flow Rate Detector positioned upstream of the direction of the water flow
 - Water flow rate is slow - transmit (Tx) frequency is equal to the receive (Rx) frequency
 - Water flow rate rises - receive (Rx) frequency increases remaining slower than the transmit (Tx) frequency
 - Water flow rate falls - receive (Rx) frequency decreases remaining slower than the transmit (Tx) frequency

Product Parameters

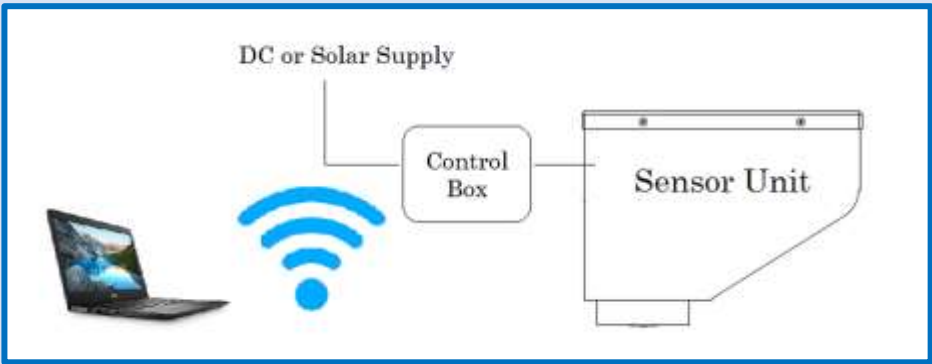
QTFL431

	Characteristics: <ul style="list-style-type: none">(1) Non-contact measurement;(2) Metal shell, simple installation;(3) Independent output for flow and water level signal;
	Flowmeter parameter: <p>Supply current: 50mA (working), < 1mA (dormant) Working temperature: -35~65℃, storage temperature: -40~70℃ Outdoor protection grade: IP68. Speed range: 0.15~21m/s; speed accuracy: ±8.8mm/s Resolution: 1mm/s; Direction distinguish: upstream; Measurement duration: 2~240s; Sampling interval: 0s~5h; Working frequency: 24Ghz Distance to water surface: 0.5~35m Power source: 6~30V DC (it's recommended to use 12V DC) Communication: RS485/Modbus protocol</p>
	Parameters of water level gauge: <p>Max. range: 0.5~30m Precision: ±3mm Environment temperature: -35~65℃ Repeatability: ±1mm Material of antenna: PP Frequency range: 26GHz Signal output: RS485/Modbus protocol 6~30 V DC (it is recommended to use 12V DC)</p>

QTFL432

	Characteristics: (1) Non-contact measurement; (2) Simple and convenient installation; (3) Integrated flow output;
	Supply voltage: 12V DC Quiescent current: $\leq 1\text{mA}$ (12V) Working current: $\leq 100\text{mA}$ (12V) Water level range: 0-30m Water level accuracy: $\pm 3\text{mm}$ Water level resolution: 1mm Frequency of water level radar: 26GHz Antenna type of water level radar: plane micro-strip array antenna Antenna structure of water level radar: sealed antenna, anti-exposure and anti-condensation structure Beam angle of water level radar: 10° $\times 10^0$ Flow measurement range: 0.15~21m/S Flow accuracy: $\pm 8.8\text{mm/S}$ Flow resolution: 1mm/S Flow radar emission frequency: 24GHz Antenna type of water level radar: plane micro-strip array antenna Antenna structure of water level radar: sealed antenna, anti-exposure, and anti-condensation structure Beam angle of water level radar: $12^\circ \times 12^\circ$ Water surface distance: 0.5~35m Working temperature: $-35\sim 65^\circ\text{C}$ Storage temperature: $-40\sim 70^\circ\text{C}$ Working humidity: $\leq 95\%$ Application: both stagnant water and flowing water Collection interval: 5s~24h can be set Digital interface: RS485 (standard configuration Modbus) Wire inlet: M20 \times 1.5 2 PCS.

Connectivity

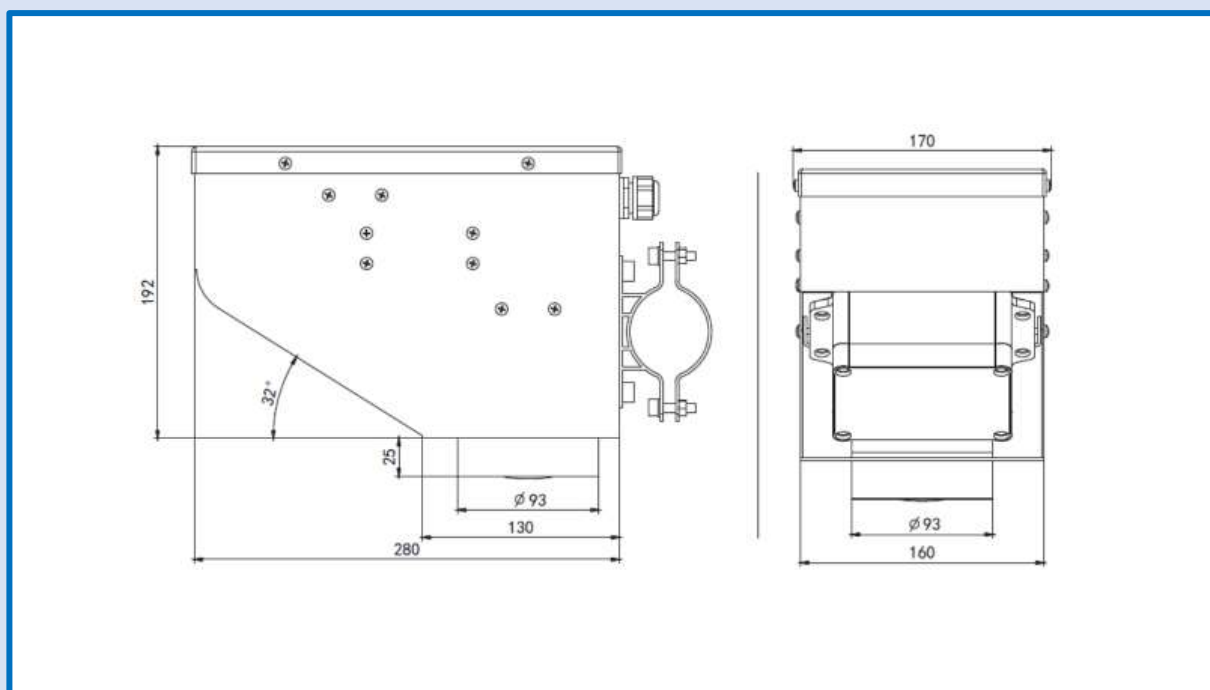


* Communication: RS485/Modbus protocol

Unit images



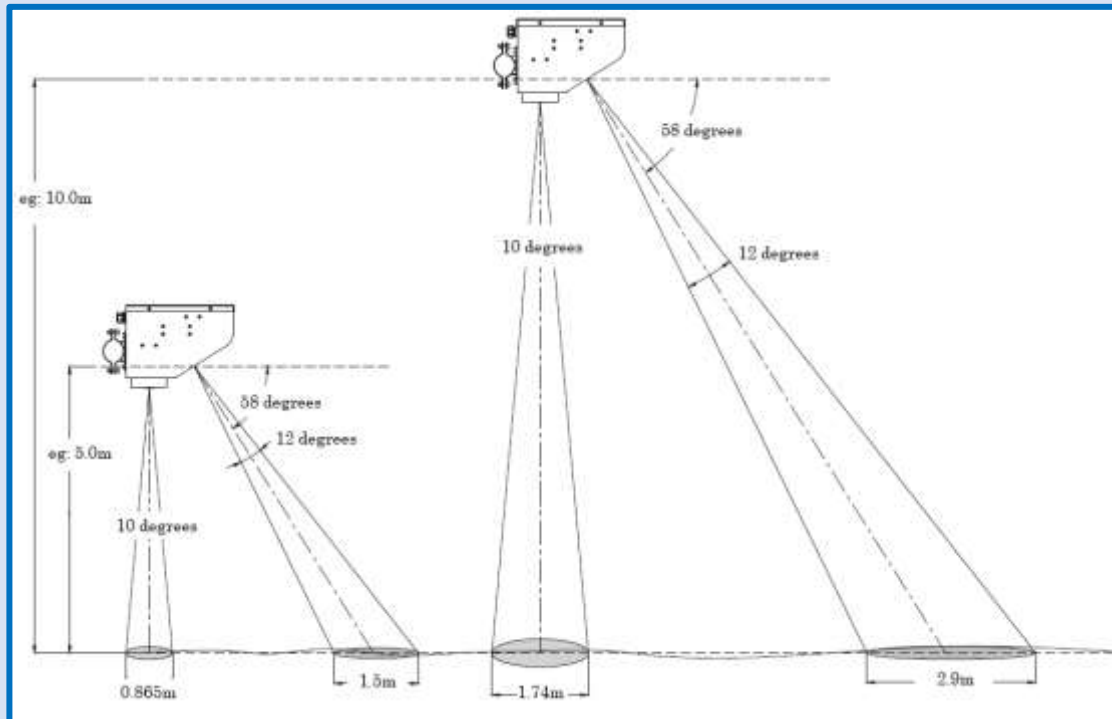
Unit Dimensions



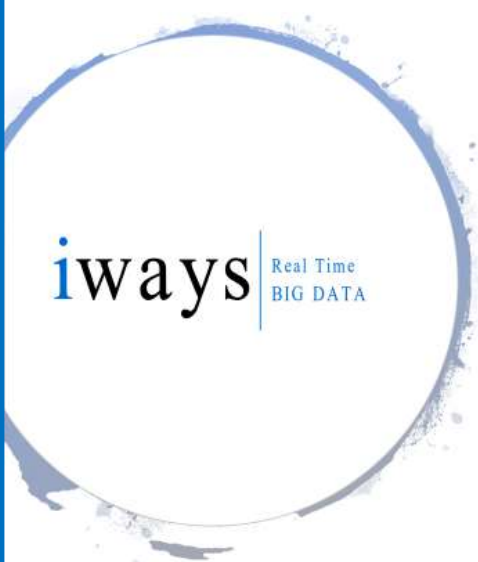
eg: Sensor Heights

Measurement Point for Sensor

It is important to put the sensor in a representative position of the waterway, and not affected by leaves or other plants moving with the wind.



Contact:



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