CM510-11X

Product Introduction

Caimore CM510-11X series DTU is an industrial-grade wireless data transmission equipment that supports different oversea networks. It supports: GPRS/CDMA/WCDMA/ TD-SCDMA/EDGE/FDD-LTE/TDD-LTE; It provides TCP/UDP transparent wireless long-distance data transmission, and supports RS232 interface, the device can be directly connected to the above-mentioned interface devices of the customers, transparently transmit the data of the customer's PLC equipment and industrial control equipment to the customer's data center, and realize the functions of data collection, data transmission, and equipment control of the client equipment .

Adopt ARM7 industrial-grade processor and intelligent three-level protection, passed the 3000V electric shock test, possess patented technology, stable and reliable product performance.

This product has obtained the "Environmental Reliability Test Report" issued by MORLAB. The test items include: high temperature 80℃/humidity 85%, low temperature -30℃ and other tests. And, the high temperature and low temperature tests were used to continuously send and receive data for 4 hours in this environment.

Model No.

Model No.	Interface Type	Network	RS232(8,N,1)	Data Cache
CM510-11F	RS232 DB9 Interface	4G	Support	8K

Technical Parameters

Device Interface Diagram

CM510-11X Accessories

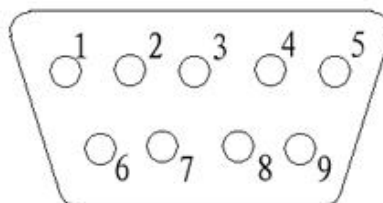|		
Power Connector	RS232 Serial Cable	Antenna

Industrial Design

Industrial wireless module	Using industrial wireless module, with strong anti-interference and stable transmission.
Strengthened circuit board	PCB followed the principles of 20H and 3W, meanwhile all products of circuit boards used high-quality materials to ensure the plate material stable and reliable.
Industrial components	Device components use strictly screened industrial-grade components.

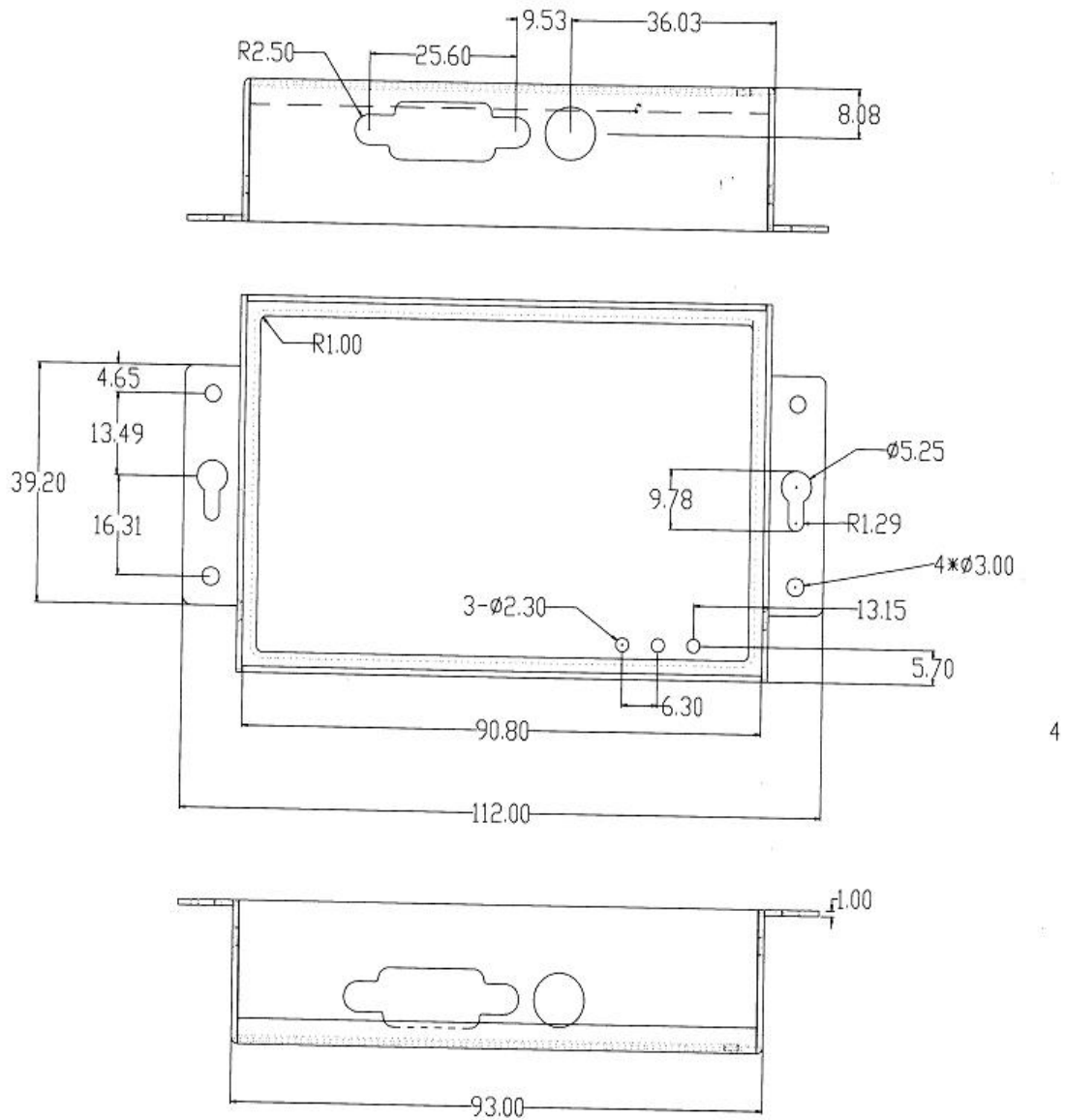| Model NO.	CM510-11X
Cellular Parameters	
Network	LTE-FDD/HSPA+/UMTS/HSDPA/HSUPA/WCDMA/EDGE/GSM
Standards and Frequency Bands	EGSM 900 Power Class 4 2 W, 33 dBm
	GSM 1800 / 1900 Power Class 1 1 W, 30 dBm
	EDGE Power Class for 900MHz Class E21 27 dBm, 0.5 W
	EDGE Power Class for 1800 / 1900MHz Class E21 26 dBm, 0.4 W
	Others. (It depends on area and country.)
Coding Scheme	HSPA+/ DC-HSPA+ / GPRS / EDGE
Communication Bandwidth	100 Mbps DL within 20 MHz bandwidth

	(Peak DL data rate in 10 MHz bandwidth: 70 Mbps (approx.) for Cat 3 device)
Transmit Power	50 Mbps UL within 20 MHz bandwidth
Receiver Sensitivity	<24dBm
Serial Port Parameters	
Data Bit	8
Stop Bit	1/2
Parity Bit	no parity, odd parity, even parity, SPACE and MARK parity
Serial Speed	110bps ~ 115200bps
Flow Control	None flow control, RTS/CTS hard flow control or XON/XOFF soft flow control
Interface	1*RS232 DB9
Interface	
Indicator	Power / ACT / Online
Antenna Interface	Standard SMA female interface,50ohm; optional 3M/5M/10M/15M antenna extension cable, meet the different needs of customers.
UIM Interface	1.8V/3V/5V standard putter user card interface, built-in 15KV ESD protection.
Power Interface	Standard 3-pin power jack.
Enable Pin	Support customer to control power up and down of equipment.
Power Supply	
Supply Voltage	DC6V to 32V. Over-voltage protection. Power reverse protection.
Standard Power Supply	DC9V/1330mA
Average Communication Current	60mA@+9VDC
Standby Current	<25mA@+ 9VDC
Operation System	
OS	Linux
Physical Features	
Shell	Metal shell: metal case, anti-radiation, anti-interference; shell and system security isolation, lightning protection design; meet the power requirements of safety regulations; protection rating IP41; particularly suit for harsh industrial control environments.
Product Dimension	100*62*24 mm(Antenna and fixer are not included)
Package Size	298*226*60mm
Weight	0.41kg
Other Parameters	
Operating Temperature	-25ºC ~ +65ºC
Extended Operating Temperature	-35ºC ~ +75ºC
Storage Temperature	-40ºC ~ +85ºC
Relative Humidity	95%(No condensation)
Interface Definition	

Interface Drawing					

| NO.	Name	Function	Default Function	Input / Output	Electrical Characteristics
1	Online	Online Alert	Online prompt pin(after DTU connecting data center, this pin output high level +5V, after disconnecting data center, this pin input low level -5v) （Pls remind if need this function）	Output	Output voltage range: -5V ~ +5V
2	RX	RS232	RS232 interface, receiver pin(if DTU connected to computer ,the date flow is: DTU<-computer)	Input	Standard RS232 voltage
3	TX		RS232 interface, sender pin(if DTU connected to computer ,the date flow is: DTU->computer)	Output	Standard RS232 voltage
4	NC		NC(Free pin)	-	
5	GND		RS232 ground lead	-	GND
6	NC				
7	SW	Enable Pin	IO port power switch (the power supply of the entire DTU can be switched on and off through this pin level, and DTU can be turned on when -10~0V voltage is connected or the pin is suspended. When the voltage is between 3.3 and 30V, the DTU is shut down). （Pls remind if need this function）	Input	For SW function, input voltage range: -10V~30V
8	NC				
9	NC				

Installation Dimension
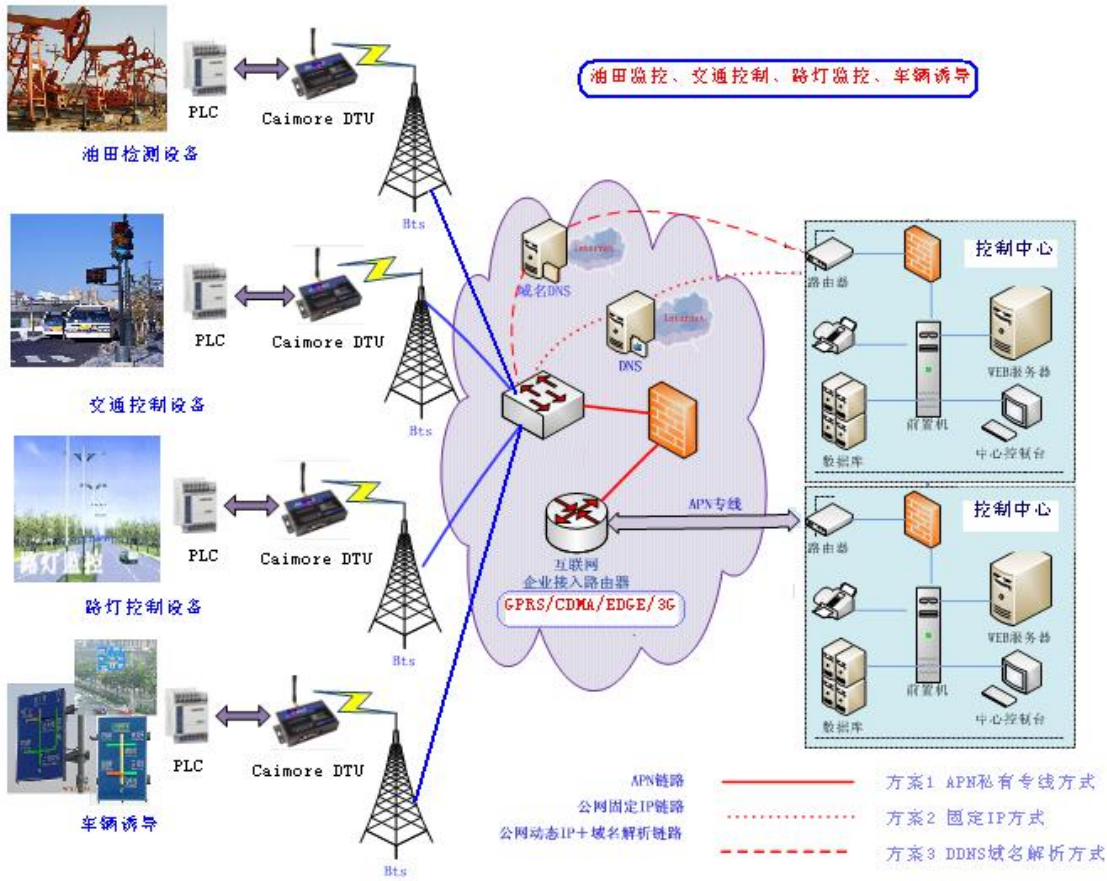
Product Application

1. Application in detection industry (pollution, weather, watermark, water conservancy, earthquake, etc.)
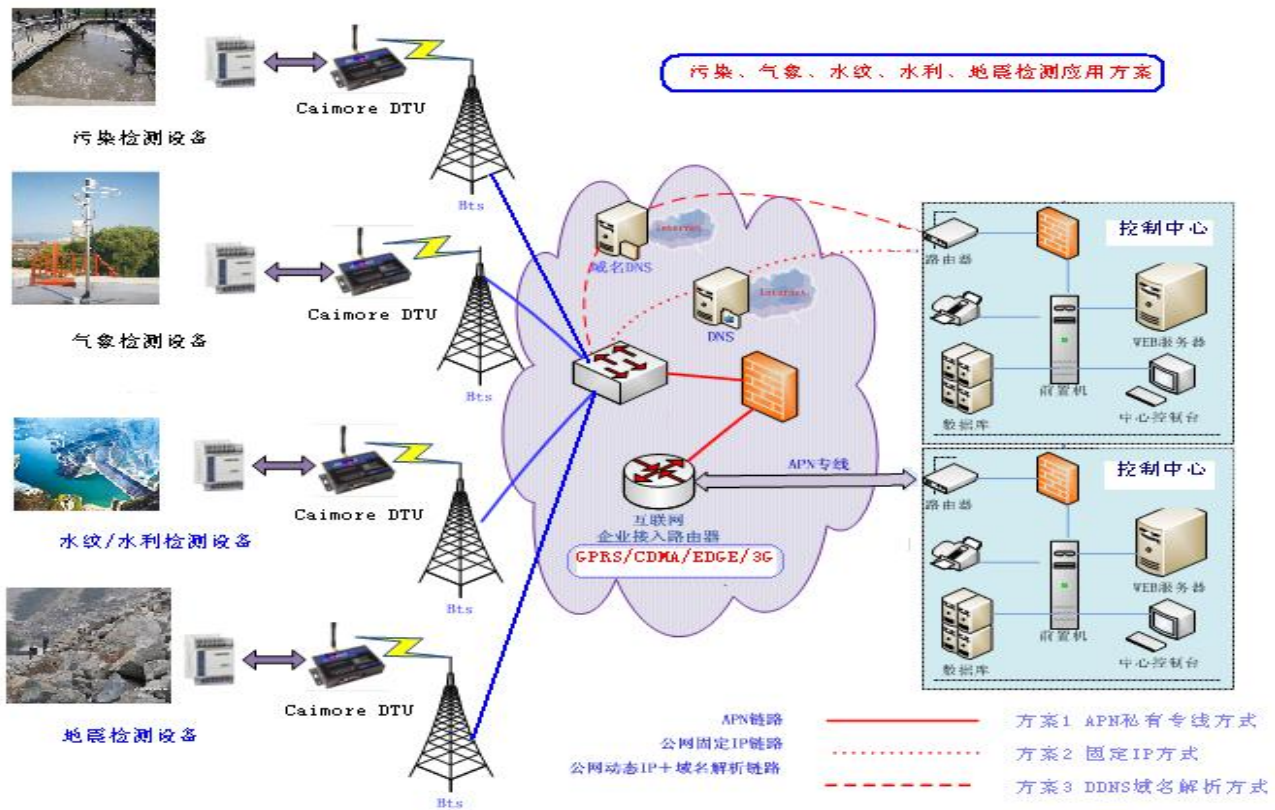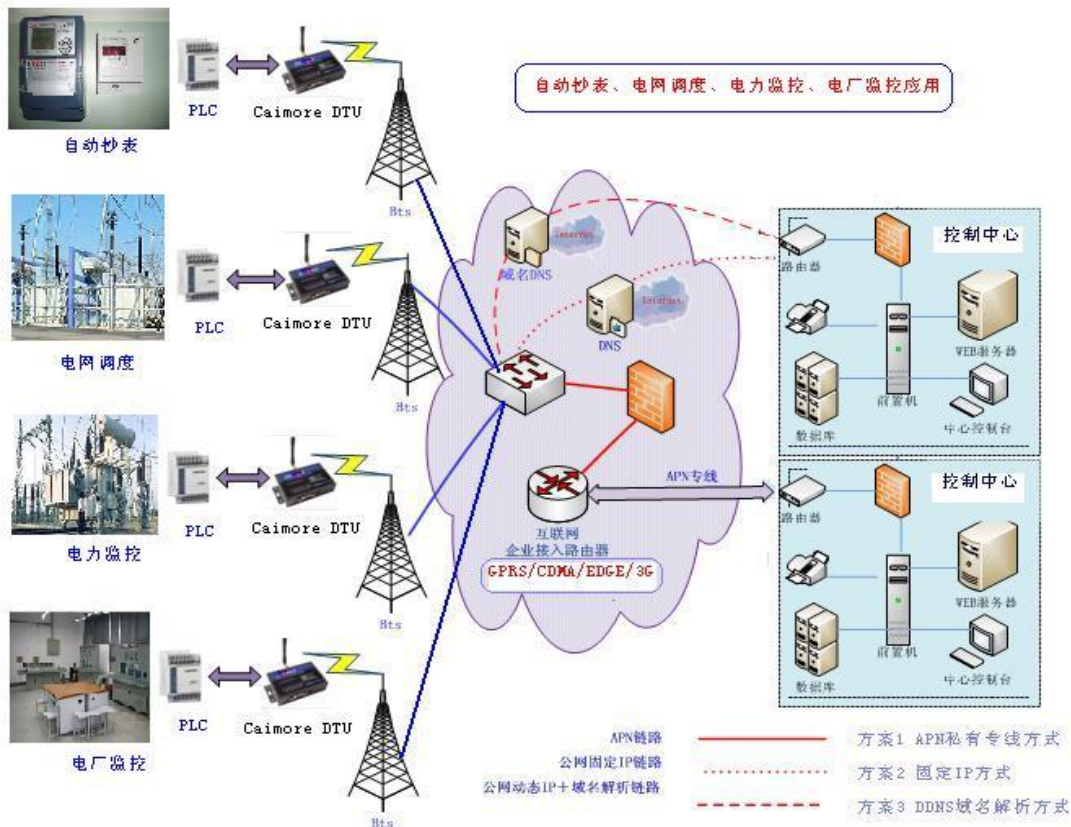

2. Network management monitoring industry application (gas pipe network, oil pipe network, heating network monitoring, tap water pipe network monitoring, etc.)
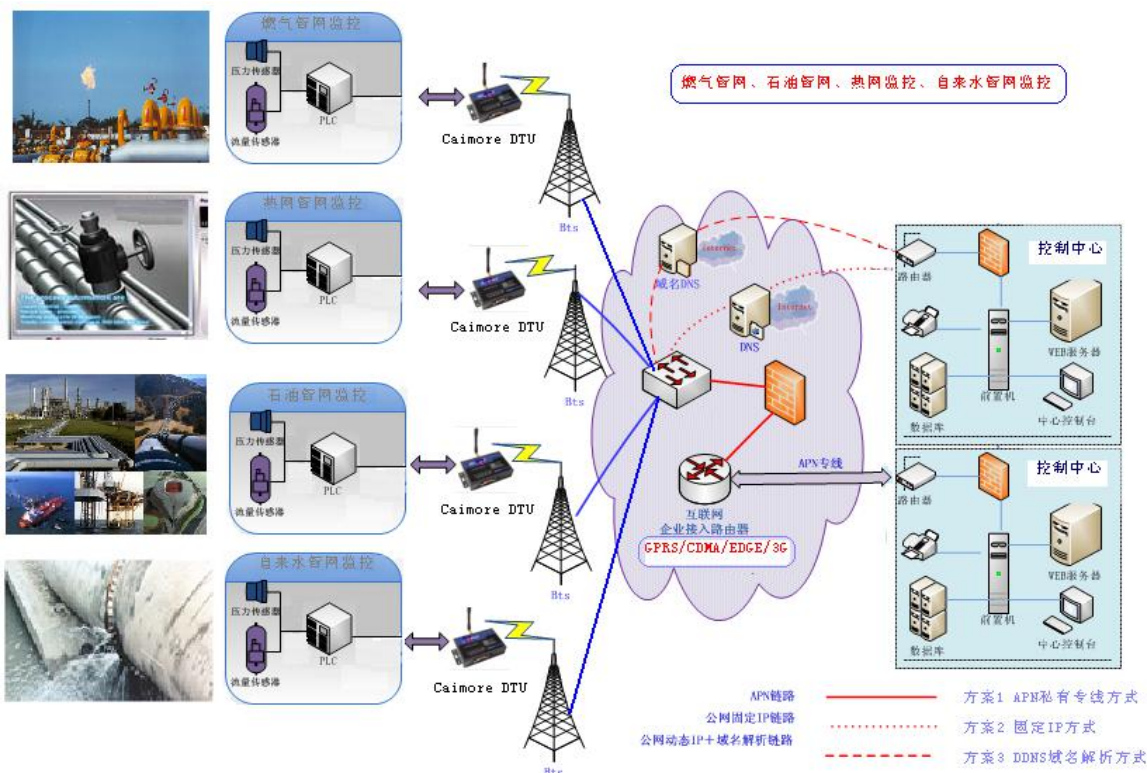
3. Oilfield monitoring, street light control, traffic control, vehicle guidance

4. Power industry application cases (distribution monitoring, grid automation, automatic meter reading, grid dispatching)

Typical application

Power Industry
- ✧ Street lamp monitoring
- ✧ Meter monitoring
- ✧ Computer room monitoring
- ✧ Automatic remote control system for power distribution network
- ✧ Remote meter reading

Transportation Industry
- ✧ Traffic instructions
- ✧ Vehicle induction
- ✧ Highway monitoring
- ✧ Traffic light control and photo transmission

Water conservancy industry
- ✧ Water conservancy monitoring
- ✧ Real-time transmission monitoring of water supply network

Environment, meteorology, oil field and other industries
- ✧ Monitoring of key pollution sources
- ✧ Environmental monitoring
- ✧ Weather monitoring
- ✧ Real-time noise monitoring
- ✧ Oilfield monitoring
- ✧ Heat network monitoring
- ✧ Coal monitoring
- ✧ Earthquake monitoring
- ✧ All kinds of PLC with serial port or 485 interface;
- ✧ DTU realizes wireless data transmission

Corporate Qualification

Item	Content
	2011, it was rated as "the best supplier for customer satisfaction in China's industrial control industry"; the company's GPRS DTU product was rated as "innovative product award".
	2012, the company became a member of "China Quality Travel".
	2013, the company became a member of the "Technical Innovation Strategic Alliance of Intelligent Power Transmission and Distribution Equipment Industry".
	2014, it was rated as an innovative pilot enterprise .
	2014, the company's Zhanjiang Wi-Fi coverage project was awarded the "Sample Engineering Award" by the 13th China Automation Annual Conference.
	2015, its video products were rated as "Top Ten Video Transmission Enterprises" by China's industrial control industry.

Corporate Honor	2015, the noise monitoring project was awarded the "Sample Project Award" by the 14th China Automation Annual Conference. 2015, its video products were rated as "Top Ten Video Transmission Enterprises" by Huaqiang Security Network. 2016, the video products was rated by Huaqiang Security Network as "2015-2016 High-quality Supplier in China's Security Industry". 2016, it was rated as the "best supplier of charging equipment parts" by charging pile communication equipment. 2016, won the " Product Gold Award of 2016 7th Guangzhou International New Energy Automobile Industry Exhibition ". 2016, The 3rd China Good Wi-Fi Organizing Committee awarded Caimore "2016 Best Wi-Fi Industry Application Solution Provider". 2018, the company's industrial router was rated as "China's Top Ten Industrial Router Brands", and DTU was rated as "China's DTU Top Ten Brands" 2018, it was rated as a key listed reserve enterprise in Xiamen City. 2019, it was rated as a key listed reserve enterprise in Xiamen City. 2019, it was rated as a key listed reserve enterprise in Fujian Province. 2019, Shortlisted for China Telecom Corporation Limited, DICT solution partner of Shanghai branch 2020, Selected as a key listed reserve company in Xiamen
High-tech Enterprise	2009, it was recognized as a high-tech enterprise by the country
Double-soft Enterprise	2010, it was recognized as a double-soft enterprise by the country
Occupational Health and Safety Management System Certification	ISO9001:2015 quality management system conforms to the standard ISO14001:2015 environmental management system conforms to the standard ISO45001:2018 occupational health and safety management system conforms to the standard
Copyright	The company has 7 patented technology certificates to maintain equipment stability and 31 software copyright certificates.
Offices	Nine regional offices have been established nationwide to provide customers with close and considerate services.
Registered Capital	The company has a registered capital of 20.58 million; it is a key high-tech enterprise supported by Xiamen City.
Historical Accumulation	18 years of industry R&D accumulation and industry application test.