

TANGREAT

We Save Lives and Prevent leakage of confidence



WATERPROOF HIGH POWER DDS JAMMERS PRISON SOLUTION

Model NO. TG-101M.NET

I. THE PRESENT PROBLEM HAPPEN ON THE PRISONERS TO USE THE MOBILE PHONE.

The rapid development of wireless communication, make great convenience to the lives of people around the world. But criminals' abuse already seriously do harm to people's lives and impartial law enforcement.



Command To Murder The Witness



Collude The Partisans And Be Acquitted



Command Jailbreak

Inmates take use of the wireless communication equipment and engage in the illegal activity with the outside partisans. They command to murder the witness and try to be acquitted, even making the riots to escape from the jail.



II. THE TG-101M.NET SPEC WITH ADVANTAGES AND FEATURES

TG-101M.NET Specification

Waterproof High Power DDS Jamming System TG-101M.NET is developed specially for prisons and other large, sensitive facilities, such as military installations and government compounds. It is upgraded from our prison jamming system TG-101M-PRO. The jamming system can be controlled remotely with activation and deactivation of the system. It is carried out only by using Internet or Ethernet through the central computer.

TG-101M.NET is constructed inside a special metal enclosure, incorporating an efficient "smart active" cooling system with incoming air filters, which enables the system to operate 365 days/24 Hours/7days continuously even in hot weather. Its secure design ensures that the prison inmates and unauthorized prison personnel cannot tamper with the safe and continuous operation of the system.

Main Application

Prisons and other large sensitive locations such as military or governmental compounds. It can also use in Oil and Gas Storage Facilities and fields, Security Services, Military Units, Secret Services, Museums, Border Patrol and Drug Enforcement, Customs, etc.

Advantages and Features

1. Adopting the latest **Direct Digital Synthesizer** Signal source technology, Jamming frequency and Output power are adjustable via LAN remote control or Internet remote control, Any frequency channel within one module can be selected to be blocked;
2. System architecture based on BS + CS mixed mode, using cloud servers, data is stored in the cloud, the DBA end/monitor end/serial interface can be set in arbitrary combination, it is suitable to be used in the single PC, LAN setting and Internet setting , it is a remote control and centralized management platform which could be used all over the country and all over the world;
3. With RS485 wired remote control, internet controlled or wireless data transmission interface, make the engineering network setting more flexible;
4. Real-time monitor equipment working condition;
5. Record query, log query;
6. Could upload building plan to system, convenient to browse and query;
7. Authority management system, could set different levels browser window;
8. Jammer fault alarming system, and can email notification alarm information;
9. Support local and remote monitoring, It is suitable for local area network (LAN) and Internet management;
10. Jammer inside LCD display shows all working information of each module. E-
11. mail and Alarming system. Once something is wrong, such as the cabinet opened maliciously, RF cables cut off deliberately, Modules failure, Temperature problem.
12. Set the time to open and close the machine. System can be automatic entered into operation.
13. Each modular can be ON /OFF and work in separately
14. Selection of antennas to provide more flexibility regarding jamming coverage;
15. UPS and battery backup in case of mains power failure.

Technical Specification

Model	TG-101M.NET Triple Band	TG-101M.NET Four Band	TG-101M.NET Five Band	TG-101M.NET Six Band
Number of Frequency bands	3	4	5	6
All Frequency, Up to 6Bands can be choose	<p>Cellphone Standards</p> <p>CDMA450(460-470MHz)</p> <p>CDMA800/GSM850(851-894MHz)</p> <p>iDEN(869-894MHz)</p> <p>GSM900(925-960MHz)</p> <p>DCS/GSM1800(1805-1880MHz)</p> <p>PCS/GSM1900(1930-1990MHz)</p> <p>3G/WCDMA/CDMA2000(2110-2170MHz)</p> <p>4G/LTE700(American), 4G/LTE800(Europe),4G/LTE2.6GHz,4G-LTE2.3GHz</p> <p>Computer Communication Standards</p> <p>Wlan, 2.4GHz,WiFi,Bluetooth</p> <p>Satellite Communication Systems</p> <p>GlobalStar, GPS,Thuraya (1520-1580MHz)</p>			
Output Power(Watt)	Up to 100Watt/band	Up to 100Watt/band	Up to 80Watt/band	Up to 60Watt/band
Total Power(Watt)	Max: 300Watt	Max: 400Watt	Max: 400Watt	Max: 360Watt
Power Consumption	Max:1800VA	Max:2200VA	Max:2500VA	Max:2200VA
Power Supply voltage	230VAC/110VAC 24-27VDC			
Power Adjust	Multi level adjust by computer			
Housing	Metal Enclosure			
Device Size	720*450*320mm			
Total System Weight (With antennae)	Approx.: 45kg	Approx.: 48kg	Approx.: 50kg	Approx.: 58kg
Controller System	Internet Controller By Computer			
Jamming Source	Direct Digital Synthesize (DDS)Technology			
Humidity	5%-80%			
Operational Temperature	-40 °C - +65 °C			
Cooling System	Active smart with integrated incoming air filter			
Waterproof level	IP55			
Antennae type	Directional Antennae (Omni directional antennae optional)			
Antenna Gain	Directional Antennae up to 15dBi, Omni directional antennae up to 8dBi			
Directional Antennae Number (Max)	2	2	3	3

III.. HOW TO WARRANTY THE DEVICE IN NORMAL WORKING UNDER EXTREMELY HIGH TEMPERATURE.



Active Cooling System



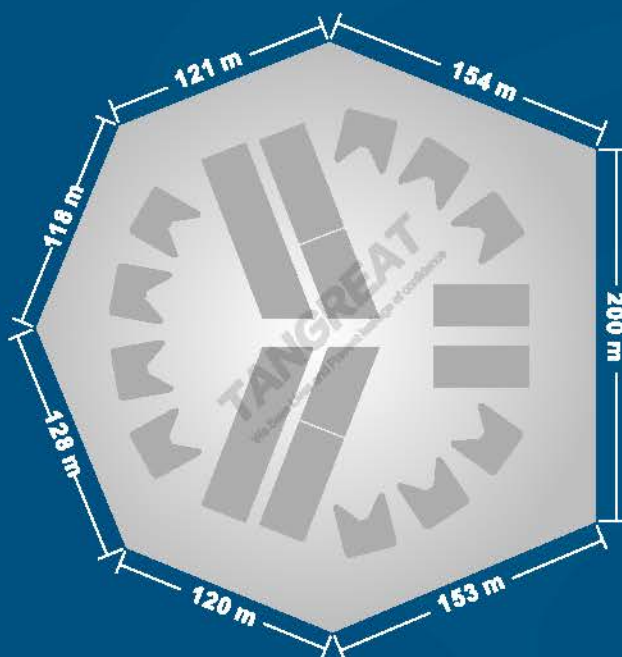
Metal protection Cover with incoming air Filter



The Metal Heat efficient and automatic cooling system.

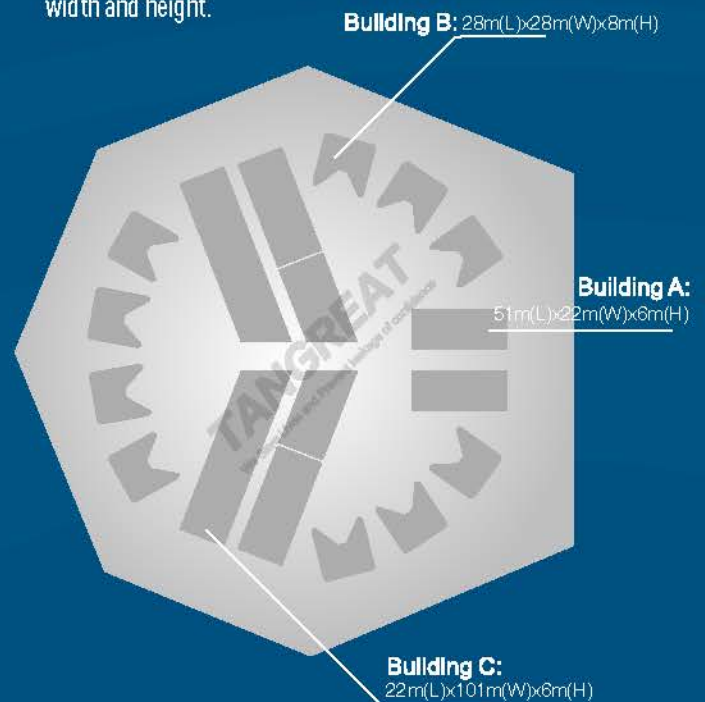
IV. BEFORE WE DESIGN THE INSTALLATION QUANTITY AND COMPLETE SOLUTION, INFORMATION BELOW MUST BE OFFERED

a. The map and size of prison.



It helps us to define the jammer quantities to be installed.

b. All the buildings location inside the prison as well as their length , width and height.



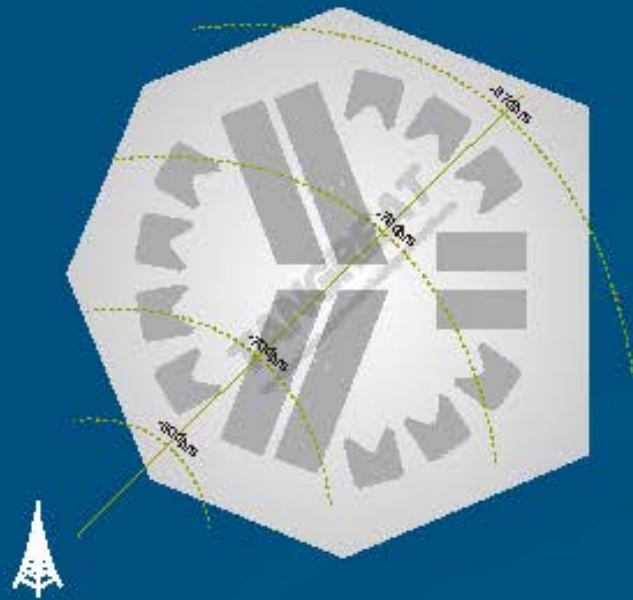
Building B: 28m(L)×28m(W)×8m(H)

Building A: 51m(L)×22m(W)×6m(H)

Building C: 22m(L)×101m(W)×6m(H)

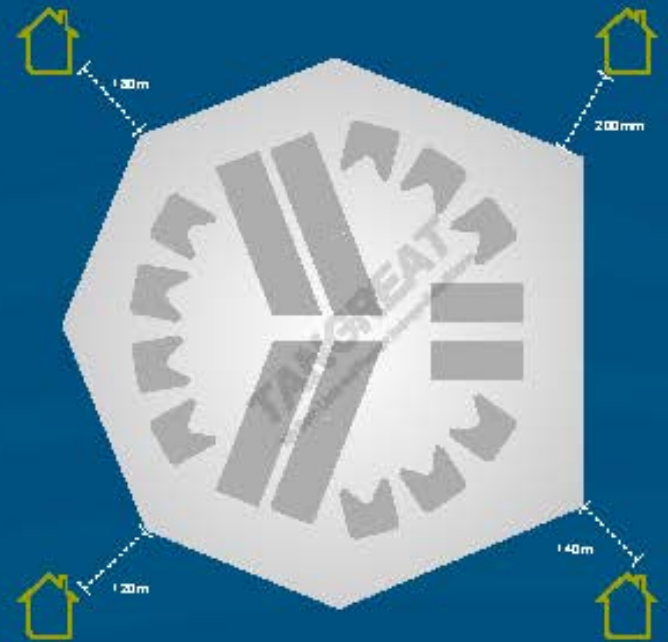
These will be helpful to design the height of the antenna as well as coverage range of the device. Moreover it will better to confirm the quantities of jammers and position to be installed.

c. The Cellphone signal strength (or nearest BTS distance) from all directions surrounding the prison



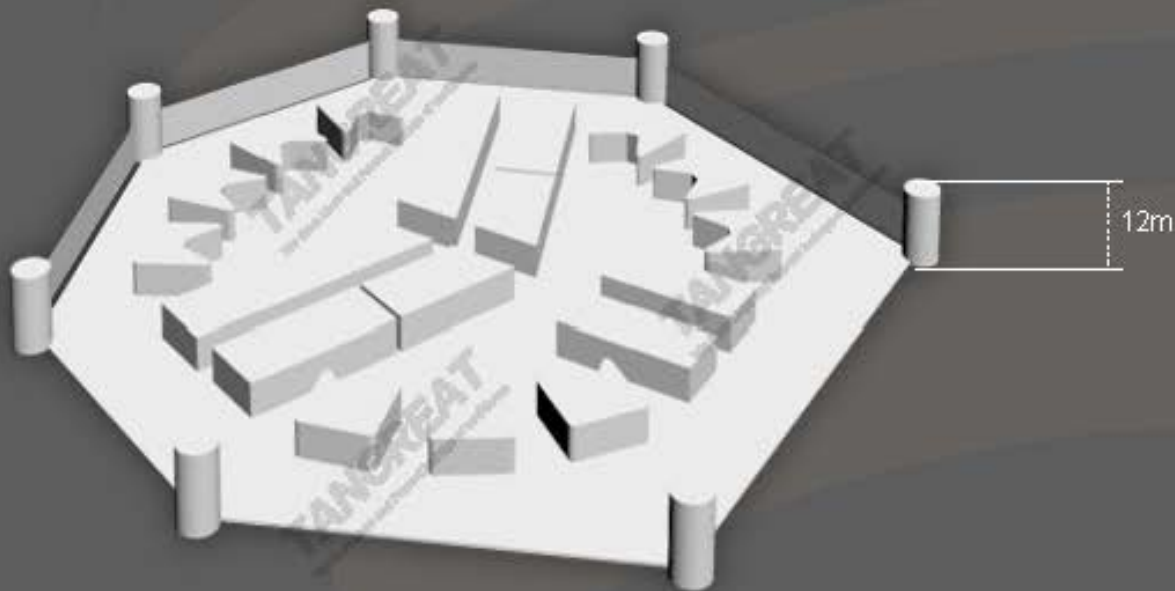
This is also important factor to confirm the quantities of the jammers and position to be installed.

d. The distance between prison in all direction and its nearest residential area



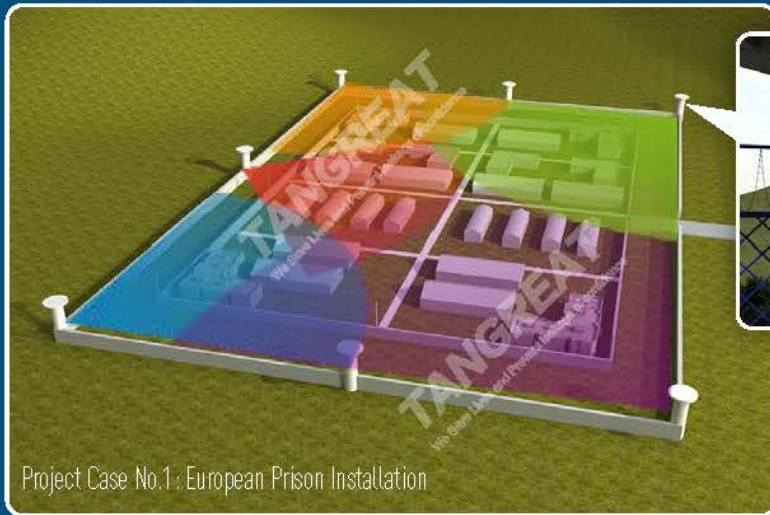
This helps us to confirm the antennae mounting position and installation angle in order not to interfere the normal cellular phone working in surrounding residential areas.

e. Height of Perimeter wall, Are there patrolling tower or not , if yes, its height and position must be offered.



Through these info, we can confirm whether we can take advantage of the fixing post to mount the jammers on the perimeter wall or existed patrolling towers. Therefore ,the installation cost can be reduced greatly.

V. PROJECT SHOW & INSTALLATION



Take use of the existing building to install the jammers. This cost will be lower to some degree.



Setup a cylindrical communication tower. It is also very safe. But the cost remains expensive.

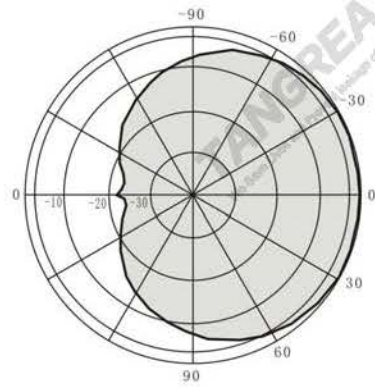


Take use of the existing building to install the jammers. This cost will be lower to some degree.

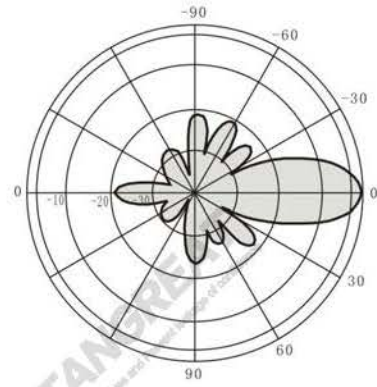


VI. ANTENNAE SPECIFICATION

Directional Antenna



Horizontal Plane

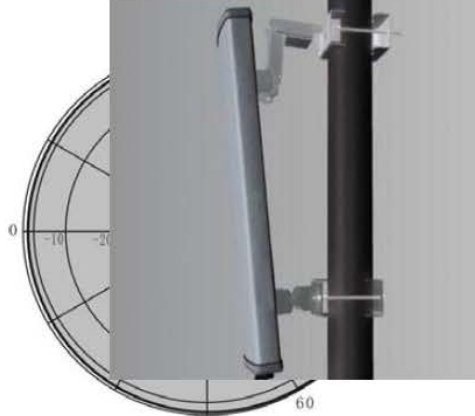


Vertical Plane

Directional Antenna Specification

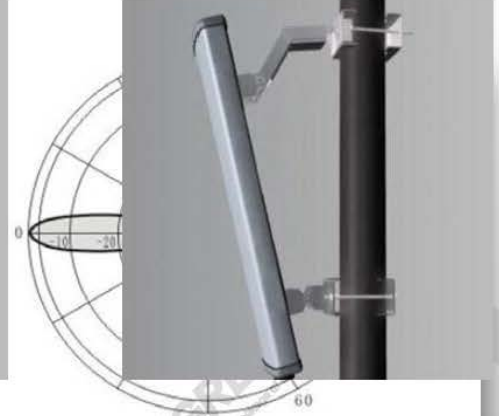
Model	TG5-18DT			
Frequency Range	450-470MHz	725-960MHz 1805-1990MHz	725-960MHz 1520-2200MHz	725-960MHz 2300-2700MHz
	Single-band	Dual-band		
Input Impedance	50(Ω)			
VSWR	≤ 1.5			
[3dB]HPBW	65°H-plane 7°E-plane			
Maximum Power	500Watt			
Gain	5dBi	12-15dBi	15-18dBi	15-18dBi
F/B	>25(dB)			
Isolate	>28(dB)			
PIM	<-107(dBm)			
Cross Polarization	>15(dB)			
Polarization	Vertical Polarization			
Connector Type	N-K			
Lighting Protection	Direct Ground			
Wind Velocity	200(km/h)			
Weight	11KG			
Height*Width*Depth	125*290*90(mm)			
Hold Pole Diameter	$\Phi 50 - \Phi 100$ (mm)			

VII. ANGLE OF THE ANTENNA CAN BE ADJUSTED



Adjusting the angle of the antenna to get a better forward and backward jamming range.

Horizontal Plane



Vertical Plane

Omni Antenna Specification

Model	TG3-120N			
Frequency Range	450-470MHz	725-960MHz	1520-2200MHz	2300-2700MHz
Input Impedance	50(Ω)			
VSWR	≤ 1.5			
(3dB)HPBW	35°E-plane			
Maximum Power	150Watt			
Gain	3dBi	5dBi	7-10dBi	10-12dBi
Polarization	Vertical Polarization			
Connector Type	N-K			
Lighting Protection	Direct Ground			
Wind Velocity	200(km/h)			
Length	1100-1300cm	650-950cm	650-1800cm	650-950cm
Hold Pole Diameter	$\varnothing 33 - \varnothing 36$ (mm)			

VIII. ANGLE OF THE ANTENNA CAN BE ADJUSTED



Adjusting the angle of the antenna to get a better forward and backward jamming range.

IX. FAILURE ALARM



Jammer Enclosure Opened Maliciously



RF Cables Cutoff Deliberately



Over Temperature



Modules Problems

In case of the modules are broken, the alarm lights on the modules will be Red ON. The computer will also make an alarming sound.

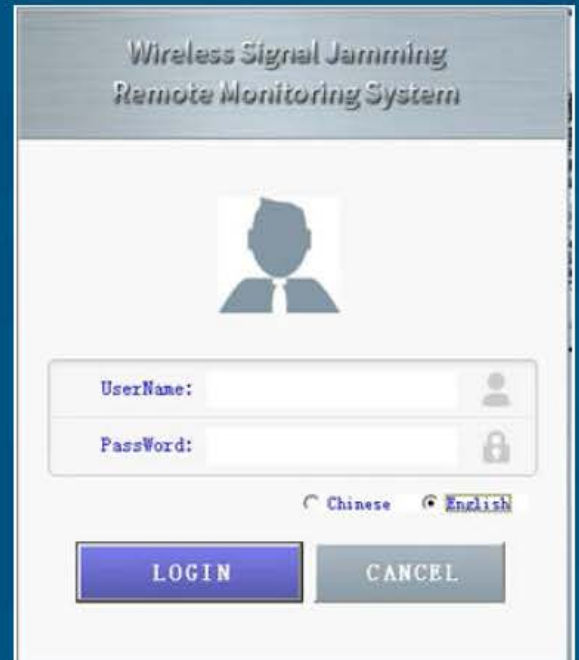
X. Complete Accessories

- ① Jammer,
- ② Directional Antennae / Omni directional antennae optional,
- ③ AC power supply cable,
- ④ case key,
- ⑤ System Software file,
- ⑥ Wireless router antennas,
- ⑦ RS232 Com Cable,
- ⑧ Wireless router,
- ⑨ RF cables.

TG-101M.NET Internet remote control system

1. Monitoring And Introduction

Click TanGreat Monitoring end, enter user name, password and choose language, you will enter the remote control interface which is shown in the following page.



2. Monitoring interface

Menu bar includes System Setting, Working Condition Alarm Setting, History Query, log Query, Read, Write, Map Setting, Time Setting, Exit and About.

TC001-Wireless Signal Jamming Remote Monitoring System(User End) Ver1.0 [Username: TC001] - [Date of Login:2015-02-09 13:50:50]

System Settings[S] Working Condition[C] Read[R] Write[W] Map Settings[M] Timing Settings[T] Inventory Report[R] Log Report[L] Debug Mode[D] Exit[X] About[A]

TC001 2015-02-09 13:50:50

Working Condition [OK] Send [OK] Write [OK] User Settings [OK] Location Settings [OK] Alarm Query [OK] History Query [OK] Log Query [OK] Map Settings [OK] Timing Setting [OK] Test [OK]

The remote monitoring system in jammer equipment

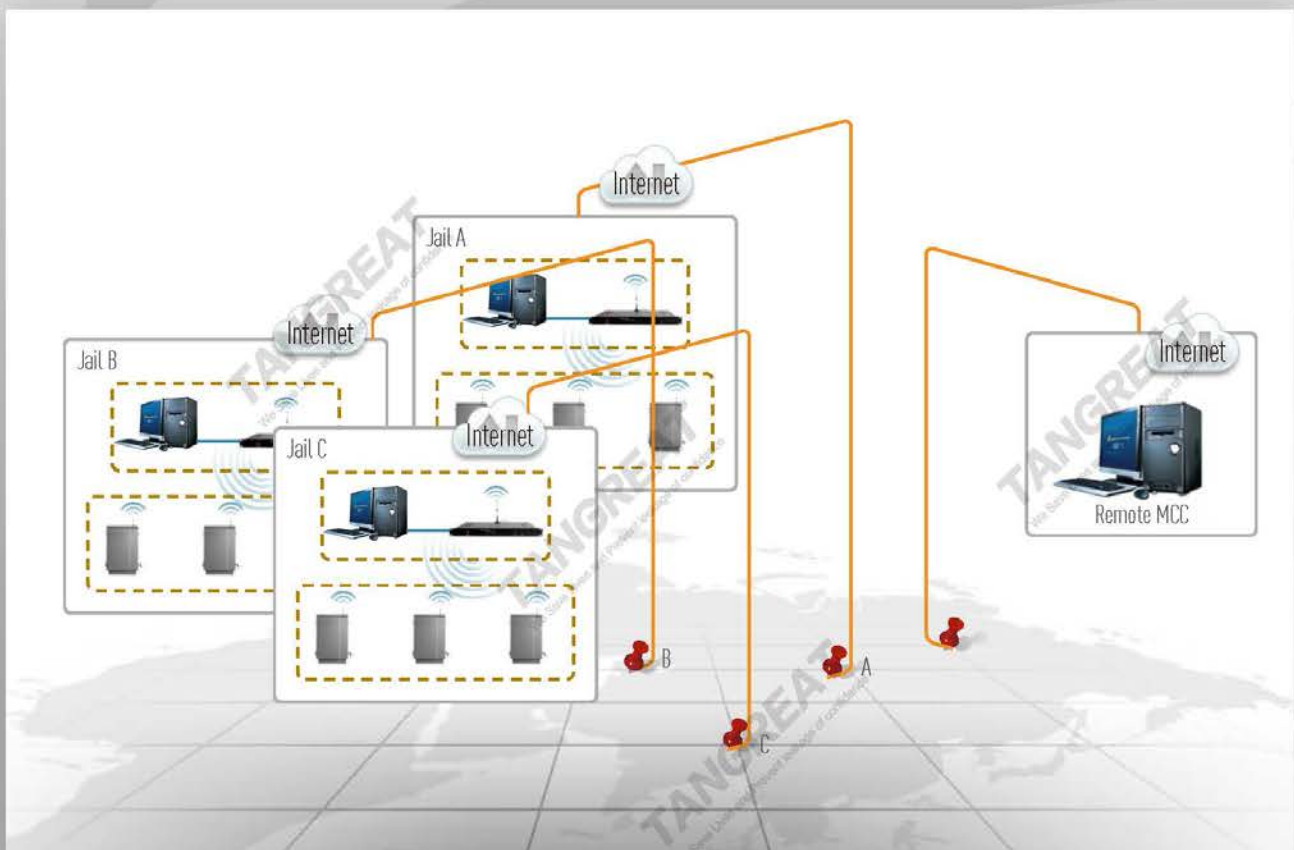
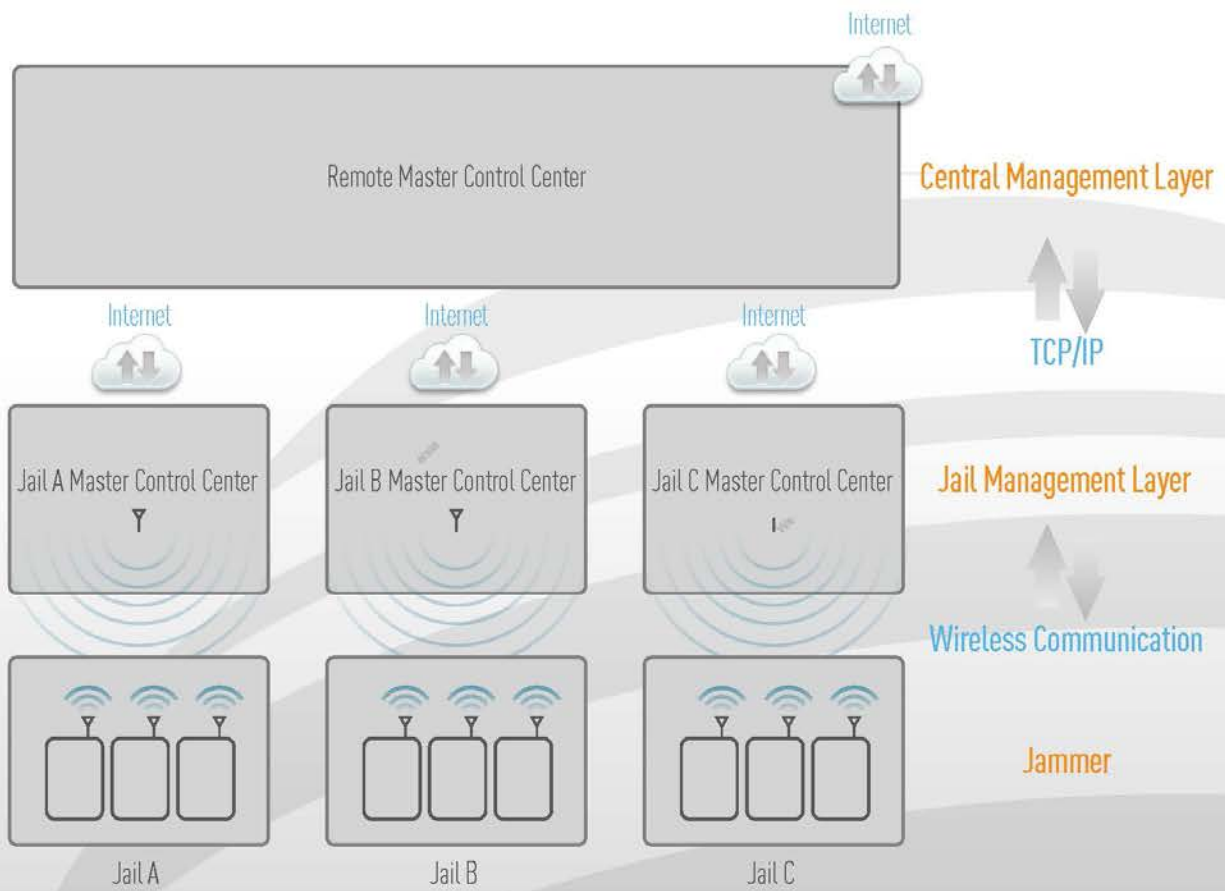
ID	Sending Date	Turning Message	Output Power (dbm)	Temperature (deg)	Voltage (V)	Current (I)	VSWR	Status	Door Trip	Module Name
5	[YB01001 FF00FD007F] 2015-02-09 13:50:09		49	42	26	6	1.2	1	0	850-894 MHz Module
			49	41	26	7	1.2	1	0	925-960 MHz Module
			49	45	26	10	1.2	1	0	1805-1920 MHz Module
6	[YB01001 FF00FD007F] 2015-02-09 13:50:10		49	42	26	6	1.2	1	0	850-894 MHz Module
			49	41	26	7	1.2	1	0	925-960 MHz Module
			49	45	26	10	1.2	1	0	2110-2170 MHz Module

Local Map Floor Map

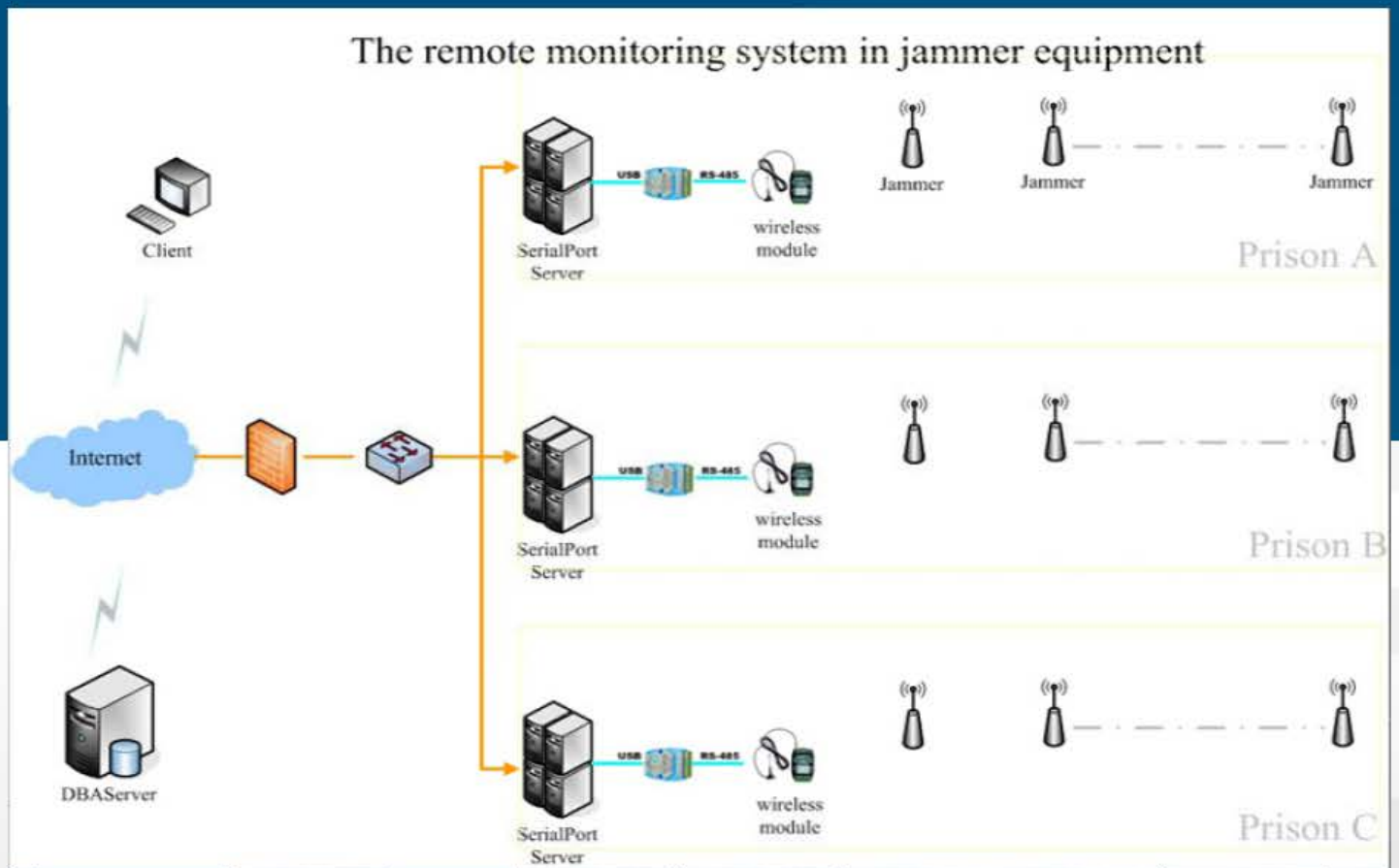
Remote control system setting

- ◆ User management
- ◆ Set the location
- ◆ E-Mail setting
- ◆ Upload and download map
- ◆ Check the working condition
- ◆ Check other users
- ◆ Alarming setting
- ◆ Record Query
- ◆ Read&Write
- ◆ Map Setting
- ◆ Timing Setting

SYSTEM CONTROLLING NETWORK STRUCTURE DIAGRAM FOR A PLURALITY OF PRISONS



WORKING PRINCIPLE DIAGRAM FOR JAMMING DEVICE



Wireless Explosion Prevention Expert



TANGREAT

SHENZHEN TANGREAT TECHNOLOGY CO.,LTD

Add: 4th Floor, R&D Building, Dacheng Industrial Park, Jihua Road, Buji, ShenZhen,518129, China

Tel: 86-755-33611882 Fax: 86-755-33611881 www.tangreat.com

All copyrights are reserved by TANGREAT. Without permission, mustn't be Copied and reproduced. Once discovered, legal liability will be held.