Content

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Company profile ▶

Shenzhen ZNV Technology Co., Ltd(Called "ZNV"), Founded in 2005, it is a national high-tech enterprise, formerly known as ZTE Liwei, a subsidiary of ZTE. Depend on AIoT core technologies such as ubiquitous data access, convergence, big data intelligence, AIoT system integration and delivery capability of more than 10 years, ZNV deeply cultivates the market segments of Power& Environment monitoring, intelligent operation and maintenance, safety emergency and one-network management, providing AIoT hardware, software products, solutions and services. At the same time, ZNV is rapidly expanding the field of enterprise digitization and enterprise services, providing AI software, big data software, application services and modeling services for more than 100 enterprise.

Company culture ▶

Our Mission
Create a working system with safe operation and optimum energy utilization for customers!

Safer world, better life!

Corporate Vision

Values
Honest, professional, innovative, win-win!

ZNV Experience ▶

20+Years Telecommunicaiton Experience & 10+ Years Industry Delivery Experience

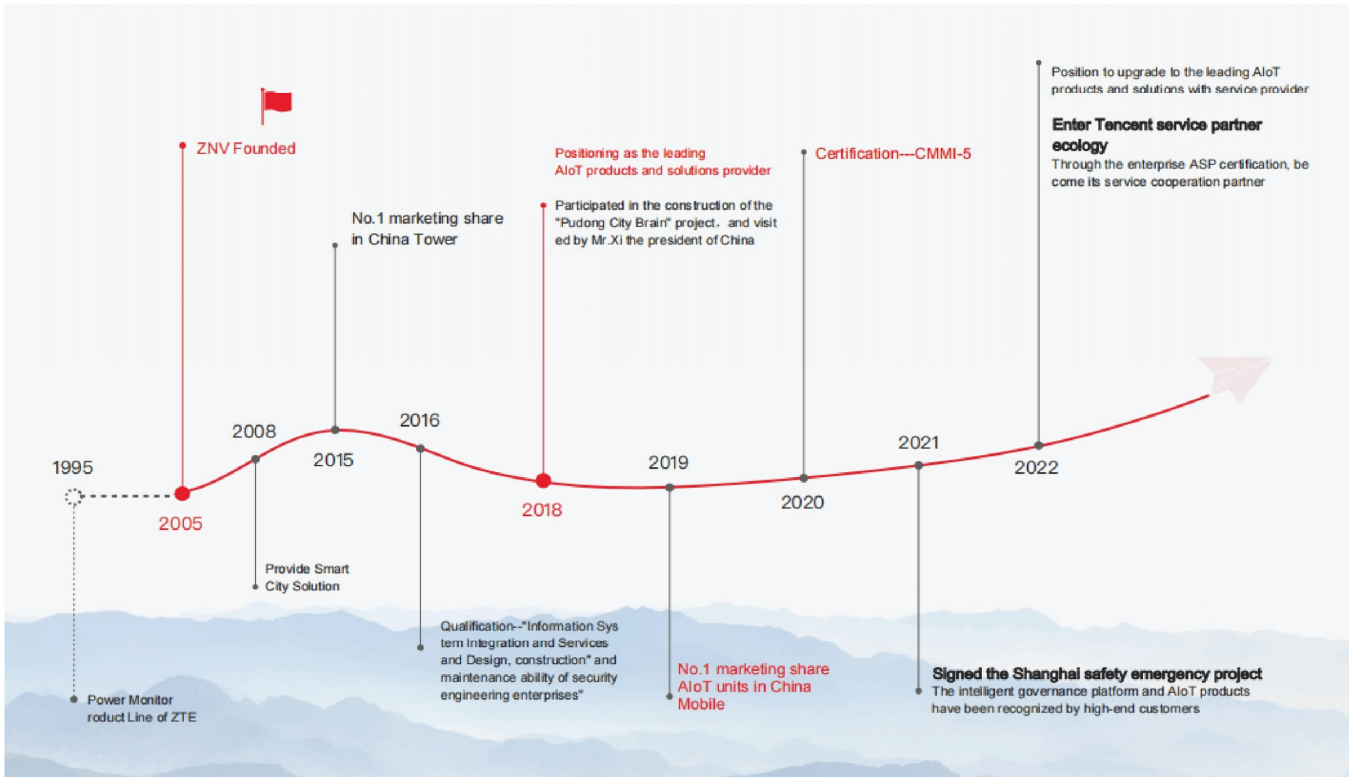| R&D	Marketing	Delivery
25%+ Master degree or above	30% Marketing share for P&E, Intelligent gatway	18年 R&D management experience
700+ Patents and software Copyrights	50+ Smart city and one network of management	CMMI-5
Provincial Engineering Technology Research Center	100+ Digital and intelligent service enterprises	31个 Provinces, cities and autonomous regions

力维智联

感恩有您 一路相伴 17TH

Pragmatic and Steady Growth Against the Trend ▶

ZNV Founded

No.1 marketing share in China Tower

Positioning as the leading AIoT products and solutions provider
Participated in the construction of the "Pudong City Brain" project, and visited by Mr.Xi the president of China

Certification---CMMI-5

Position to upgrade to the leading AIoT products and solutions with service provider

Enter Tencent service partner ecology
Through the enterprise ASP certification, become its service cooperation partner

1995   2008   2016   2019   2021   2022
2005   2015   2018   2020

Provide Smart City Solution

Qualification--"Information System Integration and Services and Design, construction" and maintenance ability of security engineering enterprises"

No.1 marketing share AIoT units in China Mobile

Signed the Shanghai safety emergency project
The intelligent governance platform and AIoT products have been recognized by high-end customers

Power Monitor roduct Line of ZTE

Adhere to Independent Innovation, with 700+ Patents and Soft Copyrights, the Harvest of Authoritative Certification ▶

560+
Technical Patents

150+
Software Copyrights

70+
International Patents

Competitions/Awards, Gain a Wide Range of Authoritative Certification

Undertake Scientific and Technological Innovation Projects at all Levels

National Level
• Selected in the Ministry of Science and Technology national key research and development plan "Science and Technology Innovation 2030 - 'New generation of Artificial Intelligent '" project, ZNV is the leader of the subject

• ZNV was selected as one of the "Key technologies and Demonstration countries of IoT and Smart City 2019-2022" by the Ministry of Science and Technology

Provincial Level
• Be award as "Engineering Technology Research Center of Urban Management Pre Warning and Prediction of Guangdong Province"

City Level
• "Research and Industrialization of Key Technologies of Full Data Connection System in AIoT" was selected in Shenzhen National Development and Reform Commission 2019-2021 Support Plan for strategic Emerging Industries
• The project of "Research and Development and Industrialization of Sentosa Big Data Management and dispatching Platform based on Programmable containerization Technology" was funded by Shenzhen Municipal Bureau of Industry and Information Technology in 2022 to promote the key links of digital economy industrial chain

• "Research and Development of Key technologies of heat dissipation protection materials for 5G communication equipment" was funded by 2020 Key Project of Shenzhen Science and Technology Innovation Commission

"2022 Industry AIoT Innovative Enterprise" of CAS

Top 100 telecom Equipment Technology Service providers in China by 2022
Analytica 2022 "Industrial Data Intelligence" stands for enterprise

CAS "Top 100 Enterprises Promoting Digital Transformation in 2022"

AdvancedRay 2021 Jinrui Award "Best Innovative Enterprise Award"

Love Analytica "2023 Data Science and Machine Learning Platform "on Behalf of the Enterprise

"2022 TOP20 Artificial Intelligence Algorithm Enterprises" of Chinese Academy of Sciences

"China AIoT Industry Panorama in 2023" Represents Enterprise

The "2022 AI Vendor Panorama Report" Represents Enterprises

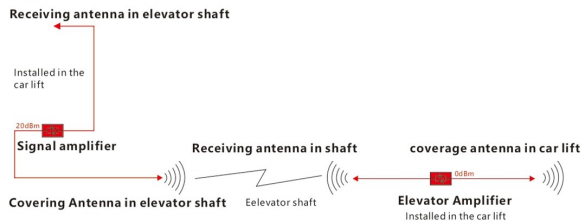**2022 "The Most Valuable Enterprise for Business Cooperation" in the Field of Data Science Platform**

ICT Institute "High-quality Digital Transformation Products and Services Panorama" on Behalf of Manufacturers

Elevator Coverage Solutions

The elevator space is small, the elevator shaft is surrounded by reinforced concrete and reaches a height of tens of meters. The elevator car lift and elevator doors are all made of metal, which greatly attenuates the mobile phone signal. If a signal amplifier is not installed to cover the mobile phone signal in the car lift, Cell phones cannot be used normally in the elevator.

C17L signal amplifier is installed in the elevator machine room, and a Log periodic antenna is used as the Donor antenna, which is installed outside the elevator machine room toward the base station tower. If the total height of the elevator shaft exceeds 50 meters, an A17L series elevator signal amplifier needs to be installed on the top of the elevator shaft of the car lift, and a low-gain panel antenna is used as the service antenna to radiate the interior of the car lift, and a Log periodic antenna with good directivity is used as the the Donor antenna which faces the elevator shaft and receive the signal from the base station in the shaft. The system diagram is as follows:

Receiving antenna in elevator shaft

Installed in the car lift

20dBm

Signal amplifier

Covering Antenna in elevator shaft Eelevator shaft **Receiving antenna in shaft** **coverage antenna in car lift**

0dBm

Elevator Amplifier
Installed in the car lift

Bill of Materials:

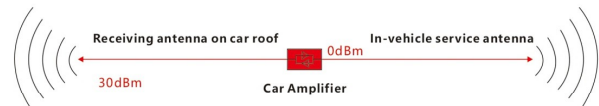| Name	Model	Quantity	Remark
Elevator Amplifier	A17L Series	1 set	Installed on the top of the car lift
Signal Amplifier	C17L Series	1 set	Installed in the elevator shaft
Log Periodic Antenna	OY0727-0965	3 pieces	One outside the shaft, one inside the shaft, and one on the top of the car lift
Panel Antenna	IP0727-0665	1 pieces	Cover the interior of car lift
Coaxial Cable	5D-FB	10~20 meters	
Cable Connector	N-C-J5D	8 pieces	

Vehicle Signal Solutions

Operators deploy fewer base stations in rural areas.The signal is vulnerable to significant attenuation due to terrain impact, and the vehicle body will also attenuate the base station signal by 15~20dB. If the vehicle is driving in the suburbs and the base station signal received in the vehicle is lower than -105dBm, mobile phones in the car will not work normally. Installing car amplifiers can improve in-vehicle signals even when the vehicle is traveling in an area where the base station signal is weak (In the area where there is no signal at all, even if it is installed, the signal in the car cannot be improved)

The main unit of the car amplifier is usually fixed under the passenger seat, and the car omnidirectional antenna with magnet base is mounted on the metal part of the car roof as the receiving antenna. Hide the lead wire of the receiving antenna into the sealing strip of the vehicle door frame. Then pull it into the vehicle and connect it to the BTS port of the car's amplifier.

Use a patch antenna with a self-adhesive sticker to attach it to the suitable position inside the vehicle as a coverage antenna. The signal quality in the vehicle can be improved by using the vehicle mounted 12V power supply to power the amplifier.

Receiving antenna on car roof   **In-vehicle service antenna**

0dBm

30dBm   **Car Amplifier**

Bill of Materials:

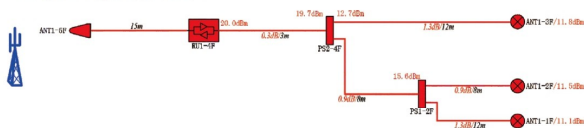| Name	Model	Quantity	Remark
Car Amplifier	A33W-B3B8	1 set	Installed under the passenger seat
Vehicle Magnetic Antenna	CX0727-03360	1 pieces	Mounted on roof metal
Patch Antenna	CT0727-0365	1 pieces	Installed in a suitable position near the driver's seat in the vehicle

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Villa Coverage Solutions

The exterior walls of villa buildings are generally surrounded by cement concrete, which has a large attenuation effect on the signal, And the interior is relatively complex. Cell service is generally weak in areas away from windows and basements. It is not complicated to improve the mobile signal in the villa. Install the receiving antenna on the roof of the villa where the signal is good, install the signal amplifier host in an Elv box or a hideout in the stairwell, and connect the receiving antenna to the amplifier host using a 7D-FB coaxial cable. Mount an omnidirectional coverage antenna in the center of every 100 square meters indoors. Connect the power splitter or coupler with a 7D-FB coaxial cable at the output connector of the amplifier.The signal from the amplifier can be distributed to the coverage antenna.

Take a three-storey villa with 100 square meters per floor as an example.It is equipped with an amplifier host with a downlink output power of 20dBm, install it in the equipment room; install an omni-directional ceiling antenna in the center of the ceiling of each floor, covering 360 degrees in all directions.The receiving antenna is installed on the roof of the building where the signal is stronger.In order not to damage the appearance of the house, the cable connecting the antenna and the signal amplifier should be buried into the wall in advance before the decoration.

The system diagram is as follows:

ANT1-0F   15m   20.0dBm   19.7dBm 12.7dBm   ANT1-3F/11.0dBm
MU1-0F   0.3dB/3m   1.3dB/12m
PS2-4F

15.6dBm   ANT1-2F/11.5dBm
0.9dB/8m
0.9dB/8m   PS1-2F
1.3dB/12m   ANT1-1F/11.1dBm

Bill of Materials:

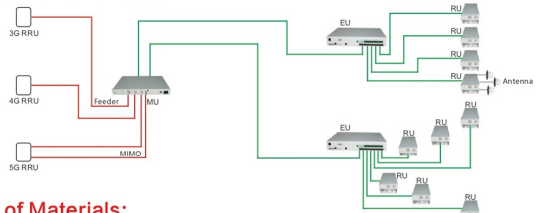| Name	Model	Quantity	Remark
Repeater	C20L-B1B3B8	1 set	installed in equipment room
Log Periodic Antenna	11dBi gain	1 piece	Install on the roof where the signal is strong
Omnidirectional Ceiling Antenna	3~5dBi gain	3 piece	Install the middle position of each ceiling
Coaxial Cable	7D-FB	50 meters	
Coaxial Cable Connector	N-J7D	12 piece	
Coupler	CP0727-7N	1 piece	
Two-way splitter	SP0727-2N	1 piece	

Multi−mode signal coverage solution for large complex buildings

Large buildings such as shopping malls, entertainment centers and hospitals can not be covered by outdoor base stations because of their large building area and large internal spacing. Signal coverage must be achieved by building an indoor distribution system within the building.
The MDAS multi-mode digital optical fiber distribution system is the first choice for building a large-scale indoor distribution system. The MDAS system consists of three parts: the main unit MU, the expended unit EU, and the remote unit RU. The main MU coupled base station, RRU RF output, converts RF signals into digital optical signals and transmits them in four separate ways via fiber optics to four expended units, the EU.Each expended EU then transmits the digital optical signal in eight ways via fiber optics to eight remote-unit RUs.The remote unit RU processes digital signals into RF signals, amplifies them and outputs them to the antenna for coverage.
Taking a hotel indoor distribution system as an example.Coupling the RRU signal with an MDAS host, the MDAS host is then connected to two extensions unit EU, one of which is connected to four remote units in 4 ways and the other is connected to six remote units in six ways.Each remote terminal is connected to 10 omni antennas, each with a coverage radius of 15 meters.
The system diagram is as follows:

3G RRU   EU   RU
RU
RU
RU   Antenna
4G RRU   Feeder   MU   RU
MIMO   EU   RU   RU
5G RRU   RU   RU
RU

Bill of Materials:

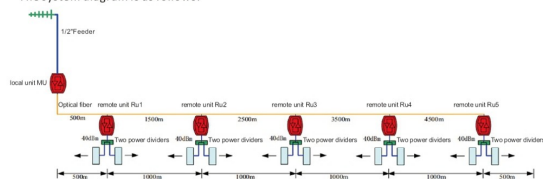| Name	Model	Quantity	Remark
MDAS Main Unit	M27T-B1B3B8-MU	1 pieces	Installed in the communication cabinet of the RRU room
MDAS Expended Unit	M27T-B1B3B8-EU	2 pieces	Installed in the communication cabinet of the RRU room
MDAS Remote Unit	M27T-B1B3B8-RU	10 pieces	Installed in the coverage area
Omni Ceiling Antenna	IO0727-03360	100 pieces	
2 Way Splitter	SP0727-2N	50 pieces	
3 Way Splitter	SP0727-3N	5 pieces	
15db Coupler	CP0727-15N	10 pieces	
10db Coupler	CP0727-10N	30 pieces	
7db Coupler	CP0727-7N	35 pieces	
5db Coupler	CP0727-5N	5 pieces	
1/2" Coaxial Cable	HCAAYZ-50-12	2100 meters	
1/2" Coaxial Cable Connector	NJ-50-12	512 pieces	

Coverage Solutions For Tunnel And Pipe Gallery

Tunnels are diverse. It is divided into road, railway, and metro tunnel according to its use. Different functional tunnels have different requirements for signal coverage. According to the tunnel's structure, it can be divided into curved, straight, long, and short. Tunnels of different structures also have different signal coverage.

In general, the use of highway or rail tunnels for calling or the Internet accessing is not very high.Outdoor base station signals can be extended to achieve signal coverage.

Take the example of a 5km straight road tunnel.a set of 10W air-coupled fiber optic repeater with 1 pcs local unit and 5 .pcs of remote units is adopted.A high-gain outdoor plate antenna is installed at the mouth of the tunnel to receive the signal from the base station and connect it to the fibre optic repeater via a 1 / 2 coaxial cable. local units are installed in tunnels as close as possible to outdoor reception antennas, and five remote units are installed in tunnels of 0.5km, 1.5km, 2.5km, 3.5km and 4.5km. Five remote units are connected to local unit via fibre-optic cable.The radio frequency output port of each remote unit needs to be connected to a two-way splitter and then to 2 directional antennas (installed in reverse), each covering a distance of 500m.

The system diagram is as follows:

Bill of Materials:

Name	Model	Quantity	Remark
Fiber Optical Repeater local unit	O40T-B1B3-MU	1 piece	Installed in the tunnel
Fiber Optical Repeater Remote Unit	O40T-B1B3-RU	5 piece	Installed at 0.5,1.5,2.5,3.5,4.5 km from the tunnel entrance respectively
Directional panel Antenna	OP0825-1265	11 piece	
Coaxial Cable	HCAAYZ-50-12	About 50 meters	
Coaxial Cable Connector	NJ-50-12	38 piece	
Two way splitter	SP0727-2N	5 piece	
Fiber Optic Cable	GYTS53 12core	4500 meters	

Village Coverage Solutions

In many villages located in mountainous areas, the signal in the villages is very weak due to the obstruction of hillsides and forests, and the cost of adding base stations or using optical fiber remote solutions is high and difficult to construct. High-power wireless repeaters are used to solve the problem in mountain villages. The signal coverage is the most economical and quickest solution.

Choose a high-gain parabolic antenna as the receiving antenna, and install it on the hillside where the base station tower can be seen; install the high-power outdoor wireless repeater on the top of the hillside, and use a 1/2 feeder not exceeding 50 meters long to connect the receiving antenna With the repeater; choose a high-gain directional plate antenna as the coverage antenna, install it on the hillside on the back of the receiving antenna, and align the radiation direction to the village, and connect the coverage antenna and the repeater with a 1/2 cable of no more than 10 meters. The radiating surfaces of the receiving antenna and the covering antenna must be opposite.

If there is no AC power available on the hillside to power the repeater, a solar power supply system can be used to power the repeater.The system diagram is as follows:
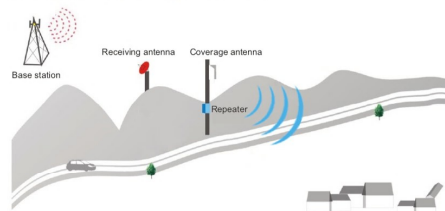
Bill of Materials:

Name	Model	Quantity	Remark
Wireless Repeater	C43T-B1B3	1 piece	Downlink power 43dBm, 95dB gain
Parabolic Antenna	PW1727-2411	1 piece	Horizontal radiation angle 11°, 21dBi gain
Directional Panel Antenna	OP0825-1865	2 piece	18dBi gain
Two Power Dividers	SP0825-2N	1 piece	
Coaxial Cable	HCAAYZ-50-12	about 60 meters	
Coaxial Cable Connector	NJ-50-12	8 piece	

Wide band Repeater Series
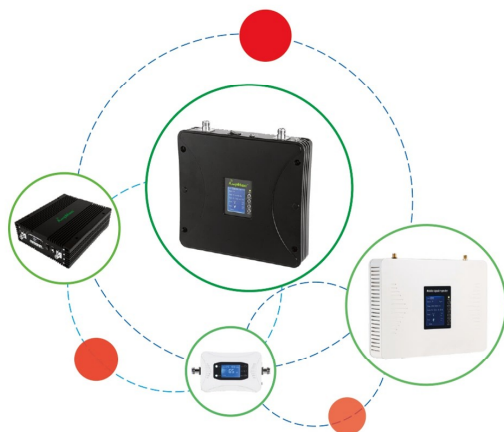
Wide band repeater, also known as signal amplifier or mobile phone partner, refers to a repeater that uses RF filter or dielectric filter for filtering processing. Due to its advantages of simple filtering technology, low time delay, and low cost, it is widely used by customers and favored by the market.

Amplitec wide band repeater has a complete variety, ranging from 10dBm low power to 43dBm high power, from single-band to multi-band products, which can be used in various scenarios.

C20M 4G/5G Dual Band Micro signal repeater

Suitable for 4G/5G signal coverage in residential and small shops

Features

- Large LCD display;
- ALC, AGC, MGC;
- 5G TDD adaptive baseband synchronization;
- ISO self-excitation elimination;
- Upstream idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink automatic balance;
- Support Bluetooth connection to Amplitec Helper APP.

Technical Specifications

Model	C20M-BxNx
Frequency Band	Any one in 4G band 1, 2, 3, 4, 5, 7, 8, 20, 28 ,66 and any one in 5G N41 or N78
Bandwidth	Full Bandwidth in 4G bands and custom bandwidth in 5G bands
Gain	UL 70dB , DL 70dB
Output Power	UL17dBm, DL 17dBm
Gain attenuate	1~31dB, Step of 1dB
ALC control Range	≥ 30 dB
VSWR	≤ 2.0
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz
ACRR	Fully comply with 3GPP
EVM	Fully comply with 3GPP
PCDE	Fully comply with 3GPP
Noise figure	≤ 8.0 dB
Group delay	≤1 µs
Power supply	DC: 12V /3A
Dimension	180*130*45mm
Weight	<1.8kg

Note: The letter "x" means the 3gpp 4G band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66 and 5G bands : 41, 78

C20M 4G/5G Triple Band Micro signal repeater

Suitable for 3G/4G/5G signal coverage in small shops and offices

Features

- Large LCD display;
- ALC, AGC, MGC;
- 5G TDD adaptive baseband synchronization;
- ISO self-excitation elimination;
- Upstream idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink automatic balance;
- Support Bluetooth connection to Amplitec Helper APP.

Technical Specifications

Model	C20M-BxBxNx
Frequency Band	Any two in 4G band 1, 2, 3, 4, 5, 7, 8, 20, 28,66 and any one in 5G N41 or N78
Bandwidth	Full Bandwidth in 4G bands and custom bandwidth in 5G bands
Gain	UL 70dB , DL 70dB
Output Power	UL 17dBm, DL 20dBm
Gain attenuate	1~31dB, Step of 1dB
ALC control Range	≥ 30 dB
VSWR	≤ 2.0
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz
ACRR	Fully comply with 3GPP
EVM	Fully comply with 3GPP
PCDE	Fully comply with 3GPP
Noise figure	≤ 8.0 dB
Group delay	≤1 µs
Power supply	DC: 12V /3A
Dimension	250*230*50mm
Weight	<2.5kg

Note: "X" is 3GPP Band Number: 1, 2, 3, 4, 5, 7, 8, 20, 28and 5G bands : 41, 78

C13L Series Single Band Micro signal repeater

Suitable for the signal coverage between apartments and equipment

Features

- Large size LCD display;
- ALC, AGC, MGC;
- ISO self-excitation elimination;
- Upstream idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink are automatically balanced.

Technical Specifications

Model	C13L-Bx
Frequency Band	Any one in band 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66
Bandwidth	Full Bandwidth
Gain	UL 65dB , DL 65dB
Output Power	UL17dBm, DL 13dBm
Gain attenuate	1~31dB, Step of 1dB
ALC control Range	≥ 30dB
VSWR	≤ 2.0
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz
ACRR	Fully comply with 3GPP
EVM	Fully comply with 3GPP
PCDE	Fully comply with 3GPP
Noise figure	≤ 6.0 dB
Group delay	≤1.5 µs
Power supply	DC: 5V /1A
Dimension	130*90*19.5mm
Weight	<0.4kg

Note: "X" is 3GPP Band Number: 1, 2, 3, 4, 5, 7, 8, 20, 28

C17L Series Dual Band Micro signal repeater

Suitable for small residential signal coverage problems

Features

- Large size LCD display;
- ALC, AGC, MGC;
- ISO self-excitation elimination;
- Upstream idle shutdown;
- Over-power automatic shutdown;
- Automatic balancing of uplink and downlink;
- Optional Bluetooth connection to Amplitec Helper APP.

Technical Specifications

Model	C17L-BxBx	C20L-BxBx
Frequency Band	Any one in band 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66	
Bandwidth	Full Bandwidth	
Gain	UL 65dB , DL 70dB	
Output Power	UL15dBm, DL 17dBm	UL15dBm, DL 20dBm
Gain attenuate	1~31dB, Step of 1dB	
ALC control Range	≥ 30dB	
VSWR	≤ 2.0	
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz	
ACRR	Fully comply with 3GPP	
EVM	Fully comply with 3GPP	
PCDE	Fully comply with 3GPP	
Noise figure	≤ 8dB	
Group delay	≤1.5 µs	
Power supply	DC: 5V /2A	
Dimension	220*140*37mm	
Weight	<1.2kg	

Note: The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

C20M Series Five Band Micro signal repeater

Suitable for the 2G/3G/4G signal coverage of small shops and offices

Features

- Large LCD display;
- ALC, AGC, MGC;
- ISO self-excitation elimination;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink automatic balance;
- Support Bluetooth connection to Amplitec Helper APP.

Technical Specifications

	C20M-5B-BR1	C20M-5B-BR2	C20M-5B-EU	C20M-5B-SA
Model				
Frequency Band	B1, 3, 5, 7, 28	B1, 3, 7, 8, 28	B1, 3, 7, 8 ,20	B2, 4, 5 ,7 ,28 or 25, 66, 5, 7, 28
Bandwidth	Full Bandwidth			
Gain	UL 70dB , DL 70dB			
Output Power	UL 15dBm, DL 20dBm			
Gain attenuate	1~31dB, Step of 1dB			
ALC control Range	≥ 25dB			
VSWR	≤ 2.0			
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz			
ACRR	Fully comply with 3GPP			
EVM	Fully comply with 3GPP			
PCDE	Fully comply with 3GPP			
Noise figure	≤ 8 dB			
Group delay	≤1.5 µs			
Power supply	DC: 12V /3A			
Dimension	250*230*50mm			
Weight	<2.5kg			

C20L Series Triple Band Micro signal repeater

Suitable for the signal coverage of small hops and offices

Features

- Large LCD display;
- ALC, AGC, MGC;
- ISO self-excitation elimination;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink automatic balance;
- Support Bluetooth connection to Amplitec Helper APP.

Technical Specifications

Model	C20L-BxBxBx
Frequency Band	Any three in band 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66
Bandwidth	Full Bandwidth
Gain	UL 65dB , DL 70dB
Output Power	UL 15dBm, DL 17dBm
Gain attenuate	1~31dB, Step of 1dB
ALC control Range	≥ 30dB
VSWR	≤ 2.0
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz
ACRR	Fully comply with 3GPP
EVM	Fully comply with 3GPP
PCDE	Fully comply with 3GPP
Noise figure	≤ 8 dB
Group delay	≤1.5 μs
Power supply	DC: 12V /3A
Dimension	178*253*50mm
Weight	<2.4kg

Note: The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

C23S Series Dual Wide band repeater

Suitable for 3G4G signal coverage in offices and warehouses

Features

- Smart OLED display;
- ALC, AGC, MGC;
- ISO self-excitation elimination;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink automatic balance;
- Support Bluetooth connection to Amplitec Helper APP.

Technical Specifications

Model	C23S-BxBx
Frequency Band	Any two in band 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66
Bandwidth	Full Bandwidth
Gain	UL 73dB , DL 73dB
Output Power	UL 23dBm, DL 23dBm
Gain attenuate	1~31dB, Step of 1dB
ALC control Range	≥ 25dB
VSWR	≤ 2.0
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz
ACRR	Fully comply with 3GPP
EVM	Fully comply with 3GPP
PCDE	Fully comply with 3GPP
Noise figure	≤ 8 dB
Group delay	≤1.5 μs
Power supply	DC: 12V /3A
Dimension	292*140*48mm
Weight	<1.8kg

Note: The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

A23 series quad-band car amplifier

Suitable for enhancing 2G3G4G signals in cars and trucks

Features

- ALC, AGC, MGC;
- OLED display;
- ISO self-excitation elimination;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink automatic balance.

Technical Specifications

Model	A23-4B1	A23-4B2	A23-4B3	A23-4B4	A23-4B5	A23-4B6
Frequency Band	B1, 3, 5, 7	B1, 3, 5, 28	B1, 3, 5, 28A	B2, 4, 5, 7	B1, 3, 7, 8	B1, 3, 7, 20
Bandwidth	Full Bandwidth					
Gain	UL 50dB , DL 50dB					
Output Power	UL 23dBm, DL 0dBm					
ALC control Range	≥ 25dB					
VSWR	≤ 2.0					
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz					
ACRR	Fully comply with 3GPP					
EVM	Fully comply with 3GPP					
PCDE	Fully comply with 3GPP					
Noise figure	≤ 8.0 dB					
Group delay	≤1.5 μs					
Power supply	DC: 12V /2A					
Dimension	162*122*34mm					
Weight	<1kg					

A33W Dual-band car amplifier

Suitable for enhancing 3G4G signals in cars and trucks

Features

- Small size, easy to install;
- Low noise;
- Low interference;
- Low power consumption.

Technical Specifications

Model	A33W-BxBx
Frequency Band	Any two in band 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66
Bandwidth	Full Bandwidth
Gain	UL 45dB , DL 45dB
Output Power	UL 26dBm, DL10dBm
VSWR	≤ 2.0
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz
ACRR	Fully comply with 3GPP
EVM	Fully comply with 3GPP
PCDE	Fully comply with 3GPP
Noise figure	≤ 8.0 dB
Group delay	≤1.5 μs
Power supply	DC: 12V /2A
Dimension	163*92*25mm
Weight	<0.5kg

Note: The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

C27S Series Wide Band Repeater

Suitable for solving the signal coverage of small shopping malls, office buildings and basements

Features

- Smart OLED display;
- ALC, AGC, MGC;
- ISO automatically eliminates self-excitation;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink automatic balance;
- Optional Bluetooth connection "Amplite Helper" mobile APP function

Technical Specifications

Model	C27S-Bx	C27S-BxBx	C27S-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Bandwidth	Full Bandwidth		
Gain	UL 75dB , DL 80dB		
Output Power	UL 23dBm, DL 27dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Noise figure	≤ 6dB	≤ 8dB	≤ 8dB
Group delay	≤1.5 μs		
Power supply	DC: 27V /2A	DC: 27V /3A	DC: 27V /5A
Dimension	310*268*58mm	205*268*96mm	360*268*96mm
Weight	<4.5kg	<6.5kg	<9kg

Note: The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

C33S Series Wide Band Repeater

Suitable for solving the signal coverage of small shopping malls, office buildings, pipe corridors and tunnels.

Features

- Smart OLED display;
- ALC, AGC, MGC;
- ISO automatically eliminates self-excitation;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink automatic balance;
- Optional Bluetooth connection "Amplite Helper" mobile APP function

Technical Specifications

Model	C33S-Bx	C33S-BxBx
Frequency Band	Any two in band 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66	
Bandwidth	Full Bandwidth	
Gain	UL80dB , DL 85dB	
Output Power	UL24dBm, DL 33dBm	
Gain attenuate	1~31dB, Step of 1dB	
ALC control Range	≥ 30 dB	
VSWR	≤ 2.0	
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz	
ACRR	Fully comply with 3GPP	
EVM	Fully comply with 3GPP	
PCDE	Fully comply with 3GPP	
Noise figure	≤6dB	≤ 8 dB
Group delay	≤1.5 μs	
Power supply	DC: 27V /3A	DC: 27V /5A
Dimension	310*268*58mm	310*268*96mm
Weight	<4.5kg	<7.5kg

Note: The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

C33J Series Triple Wide Band Repeater

Suitable for solving the signal coverage of small shopping malls, office buildings, pipe corridors and tunnels.

Features

- Smart OLED display;
- ALC, AGC, MGC;
- ISO automatically eliminates self-excitation;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink automatic balance;
- Support USB connection to local PC monitoring software

Technical Specifications

Model	C33J-BxBxBx
Frequency Band	Any three in band 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66
Bandwidth	Full Bandwidth
Gain	UL 80dB , DL 85dB
Output Power	UL 24dBm, DL 33dBm
Gain attenuate	1~31dB, Step of 1dB
ALC control Range	≥ 30dB
VSWR	≤ 2.0
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz
ACRR	Fully comply with 3GPP
EVM	Fully comply with 3GPP
PCDE	Fully comply with 3GPP
Noise figure	≤ 8dB
Group delay	≤1.5 μs
Power supply	AC: 100~264V/50Hz
Dimension	490*410*190mm
Weight	<25kg

Note: The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

C37J Series Wide Band Repeater

Suitable for solving the signal coverage of large shopping malls, office buildings and villages.

Features

- Smart OLED display;
- ALC, AGC, MGC;
- ISO automatically eliminates self-excitation;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink automatic balance;
- Support USB connection to local PC monitoring software

Technical Specifications

Model	C37J-Bx	C37J-BxBx	C37J-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Bandwidth	Full Bandwidth		
Gain	UL 80dB , DL 85dB		
Output Power	UL 24dBm, DL 33dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Noise figure	≤ 6dB		
Group delay	≤1.5 μs		
Power supply	AC: 100~264V/50Hz		
Dimension	370*332*137mm	490*410*210mm	490*410*210mm
Weight	<12kg	<28kg	<28kg

Note: The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

C43J Series Wide Band Repeater

Suitable for large indoor distribution systems or remote rural signal coverage

Features

- Smart OLED display;
- ALC, AGC, MGC;
- ISO automatically eliminates self-excitation;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink automatic balance;
- Support USB connection to local PC monitoring software

Technical Specifications

Model	C43J-Bx	C43J-BxBx	C43J-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Bandwidth	Full Bandwidth		
Gain	UL 90dB , DL 95dB		
Output Power	UL 24dBm, DL 43dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Noise figure	≤ 6 dB		
Group delay	≤1.5 µs		
Power supply	AC: 100~264V/50Hz		
Dimension	490*410*190mm	490*410*210mm	698*500*225mm
Weight	<25kg	<28kg	<38kg
Note: The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66			

Band Selective Repeater Series

Band selective repeater, also known as industrial repeater, refers to a repeater that uses IF saw filter or digital filtering technology for filtering. Due to the high out-of-band suppression performance of the band selective repeater, the out-of-band signal other than 400K can be suppressed by 40dBc, which can effectively avoid adjacent frequency interference, so operators usually use the band selective repeater when extending the coverage network.

Amplitec's band selective repeater have been selected several times overseas mobile communication operators' repeater equipment procurement bidding projects. This is equipment earmarked for Vodacom, Ooredoo, Telkomsel and other multinational operators.

F20S/F23S Band Selective Repeater

Indoor Coverage Projects for Operators

Features

- Smart OLED display;
- The band width can be adjusted with in the range of 0.2~24MHz in 100K steps;
- ALC, AGC, MGC;
- ISO self-excitation elimination;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlinks are automatically balanced.

Technical Specifications

Model	F20S-Bx	F20S-BxBx	F20S-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Bandwidth	0.2~24MHz can be set		
Gain	UL 70dB , DL 70dB		
Output Power	UL 15dBm, DL 20dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Out of band Gain	Fully comply with 3GPP		
Noise figure	≤ 6 dB	≤ 8 dB	≤ 8 dB
Group delay	≤9 µs		
Power supply	DC: 12V3A	DC: 12V5A	DC: 12V5A
Dimension	205*268*58mm	360*268*58mm	360*268*96mm
Weight	< 3 kg	< 5 kg	< 9 kg
Note: The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66			

F20T Series Band Selective Repeater

Indoor Coverage Projects for Operators

Features

- Smart OLED display;
- Support band width adjustment in the range of 0.2~24MHz in 100K steps;
- ALC, AGC, MGC;
- ISO self-excitation elimination;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and down links are automatically balanced;
- Support 4G Modem wireless access network management cloud platform.

Technical Specifications

Model	F20T-Bx	F20T-BxBx	F20T-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Bandwidth	0.2~24MHz can be set		
Gain	UL 70dB , DL 70dB		
Output Power	UL 15dBm, DL 20dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Out of band Gain	Fully comply with 3GPP		
Noise figure	≤ 6 dB	≤ 8 dB	≤ 8 dB
Group delay	≤9 µs		
Power supply	DC: 12V3A	DC: 12V5A	DC: 12V5A
Dimension	205*268*58mm	250*268*96mm	380*268*96mm
Weight	< 3 kg	< 7 kg	< 9 kg
Note: The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66			

F33T Series Band Selective Repeater

Suitable For Indoor Coverage Projects For Operators

Features

- Smart OLED display;
- Support band width adjustment in the range of 0.2~24MHz in 100K steps;
- ALC, AGC, MGC;
- ISO self-excitation elimination;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and down links are automatically balanced.
- Support 4G Modem wireless access network management cloud platform.

Technical Specifications

Model	F33T-Bx	F33T-BxBx	F33T-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Bandwidth	0.2~24MHz can be set		
Gain	UL 80dB , DL 85dB		
Output Power	UL 23dBm, DL 33dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Out of band Gain	Fully comply with 3GPP		
Noise figure	≤ 6 dB	≤ 8 dB	≤ 8 dB
Group delay	≤9 μs		
Power supply	DC: 12V3A	DC: 12V5A	AC: 100~264V/50Hz
Dimension	330*268*58mm	330*268*96mm	490*410*210mm
Weight	< 5 kg	<7.5 kg	< 28 kg

Note：The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

F37T Series Band Selective Repeater

suitable for operators to solve the signal coverage of large shopping malls, villages and tunnels

Features

- Smart OLED display;
- Support bandwidth adjustment in the range of 0.2~24MHz in 100K steps;
- ALC, AGC, MGC;
- ISO self-excitation elimination;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and down links are automatically balanced.
- Support 4G Modem wireless access network management cloud platform.

Technical Specifications

Model	F37T-Bx	F37T-BxBx	F37T-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Bandwidth	0.2~24MHz can be set		
Gain	UL 85dB, DL 90dB		
Output Power	UL 24dBm, DL 37dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Out of band Gain	Fully comply with 3GPP		
Noise figure	≤ 6 dB	≤ 8 dB	≤ 8 dB
Group delay	≤9 μs		
Power supply	AC: 100~264V/50Hz		
Dimension	370*332*137mm	490*410*210mm	490*410*210mm
Weight	<12kg	< 28 kg	< 28 kg

Note：The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

F43T Series bandwidth adjustable with repeater

Suitable for operators to solve outdoor signal coverage in remote rural areas

Features

- Smart OLED display;
- Support bandwidth adjustment in the range of 0.2~24MHz in 100K steps;
- ALC, AGC, MGC;
- ISO self-excitation elimination;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink are automatically balanced.
- Support 4G Modem wireless access network management cloud platform.

Technical Specifications

Model	F43T-Bx	F43T-BxBx	F43T-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Bandwidth	0.2~24MHz can be set		
Gain	UL 90dB , DL 95dB		
Output Power	UL 24dBm, DL 43dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Out of band Gain	Fully comply with 3GPP		
Noise figure	≤ 6 dB		
Group delay	≤9 μs		
Power supply	AC: 100~264V/50Hz		
Dimension	490*410*190mm	490*410*210mm	698*500*225mm
Weight	< 25kg	<28kg	<38kg

Note：The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

S20T Series Digital Tape Repeater

Suitable for solving indoor signal coverage of multiple operators at the same time

Features

- Smart OLED display;
- Support bandwidth adjustment in the range of 0.2~24MHz in 100K steps;
- ALC, AGC, MGC;
- ISO self-excitation elimination;
- Uplink idle shutdown;
- Over-power automatic shutdown;
- Uplink and downlink are automatically balanced.
- Support 4G Modem wireless access network management cloud platform.

Technical Specifications

Model	S20T-Bx	S20T-BxBx	S20T-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Sub-bands	1~3 for each band		
Bandwidth	0.2 ~ 20 MHz can by set for each sub-band		
Gain	UL 70dB , DL 70dB		
Output Power	UL 15dBm, DL 20dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Out of band Gain	Fully comply with 3GPP		
Noise figure	≤ 6 dB	≤ 8 dB	≤ 8 dB
Group delay	≤13 μs		
Power supply	DC: 27V3A	DC: 27V5A	DC: 27V8A
Dimension	250*268*58mm	250*268*96mm	380*268*96mm
Weight	< 3.5 kg	<7 kg	< 9 kg

Note：The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

S33T Series Digital Repeater

Suitable for solving 2000-5000 square meters of multi-operator signal coverage at the same time
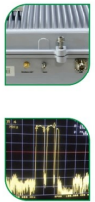
Features

- Smart OLED display;
- Support 1~3 subbands;
- Support for setting subband bandwidth in the range of 0.2 to 20 MHz.
- ALC, AGC, MGC;
- Over-power automatic shutdown;
- Uplink and down links are automatically balanced.
- Support 4G Modem wireless access network management cloud platform.

Technical Specifications

Model	S33T-Bx	S33T-BxBx	S33T-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Sub-bands	1~3 for each band		
Bandwidth	0.2 ~ 20 MHz can by set for each sub-band		
Gain	UL 80dB , DL 85dB		
Output Power	UL 23dBm, DL 33dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Out of band Gain	Fully comply with 3GPP		
Noise figure	≤ 6 dB	≤ 8 dB	≤ 8 dB
Group delay	≤13 μs		
Power supply	AC：100~264V/50Hz	AC：100~264V/50Hz	AC：100~264V/50Hz
Dimension	370*332*137mm	490*410*210mm	490*410*210mm
Weight	<12kg	< 28 kg	< 28 kg

Note：The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

S37T Series Digital Repeater

Suitable for solving indoor and outdoor signal coverage of multiple operators at the same time

Features

- Smart OLED display;
- Support 1~3 subbands;
- Support setting subband bandwidth in the range of 0.2~20M
- ALC, AGC, MGC;
- Over-power automatic shutdown;
- Uplink and down links are automatically balanced.
- Support 4G Modem wireless access network management cloud platform.

Technical Specifications

Model	S37T-Bx	S37T-BxBx	S37T-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Sub-bands	1~3 for each band		
Bandwidth	0.2 ~ 20 MHz can by set for each sub-band		
Gain	UL 85dB , DL 90dB		
Output Power	UL 23dBm, DL 37dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Out of band Gain	Fully comply with 3GPP		
Noise figure	≤ 6 dB		
Group delay	≤13 μs		
Power supply	AC：100~264V/50Hz		
Dimension	370*332*137mm	490*410*210mm	490*410*210mm
Weight	<12kg	< 28 kg	< 28 kg

Note：The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

S43T Series Digital Repeater

Suitable for indoor and outdoor signal coverage of multiple operators at the same time

Features

- Smart OLED display;
- Support 1~3 subbands;
- Support for setting subband bandwidth in the range of 0.2~20MHz;
- ALC, AGC, MGC;
- Over-power automatic shutdown;
- Uplink and down links are automatically balanced.
- Support 4G Modem wireless access network management cloud platform.

Technical Specifications

Model	S43T-Bx	S43T-BxBx	S43T-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Sub-bands	1~3 for each band		
Bandwidth	0.2 ~ 20 MHz can by set for each sub-band		
Gain	UL 90dB , DL 95dB		
Output Power	UL 25dBm, DL 43dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤-36 dBm @ 9KHz~1GHz, ≤-30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Out of band Gain	Fully comply with 3GPP		
Noise figure	≤ 6 dB	≤ 8 dB	≤ 8 dB
Group delay	≤13 μs		
Power supply	AC：100~264V/50Hz		
Dimension	490*410*190mm	490*410*210mm	698*500*225mm
Weight	< 25kg	< 28 kg	<38kg

Note：The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

Fiber optical repeater series

Fiber Optical repeater is a repeater that uses optical fiber for signal transmission, and consists of a local unit and a remote unit. The local unit transmits the coupled signal from the base station to the remote unit through electro-optical conversion through optical fiber, and the remote unit converts the optical signal into an electrical signal, enters the RF unit for amplification, and sends it to the transmitting antenna to cover the target area.

Amplitec fiber optical repeaters are of all kinds, excellent performance and stable quality, and are favored by many customers all over the world.

O37T Series Fiber Optical Repeater

Suitable for multi-signal coverage in remote villages and tunnels

Features

- ALC, AGC, MGC;
- Digital filtering;
- Support 15KM optical fiber transmission;
- Over-power automatic shutdown;
- Uplink and downlink are automatically balanced;
- Support LAN connection to local OMT monitoring software;
- Support 4G Modem wireless connetion network management platform.

Technical Specifications

Model	O37T-Bx	O37T-BxBx	O37T-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Bandwidth	Full Bandwidth		
Gain	UL 90dB , DL 95dB		
Output Power	UL 30dBm, DL 37dBm		
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤ -36 dBm @ 9KHz~1GHz, ≤ -30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Out of band Gain	Fully comply with 3GPP		
Noise figure	≤ 6 dB		
Group delay	≤13 μs		
optical interface	FC/FC		
Power supply	AC：100~264V/50Hz		
MU Dimension	370*280*140mm	355*295*180mm	450*350*190mm
MU Weight	< 15kg	< 15 kg	<28kg
RU Dimension	450*350*190mm	450*350*190mm	513*461*187mm
RU Weight	< 25kg	< 25 kg	<28kg

Note：The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

O43T Series Fiber Repeater

Suitable for solving remote villages and tunnel signal coverage

Features

- Digital filtering;
- Optical fiber transmission distance 15KM;
- Support 1x4x4 networking;
- ALC, AGC, MGC;
- Over-power automatic shutdown;
- Uplink and downlink are automatically balanced;
- Support LAN connection to local OMT monitoring software;
- support 4G Modem wireless connection network management platform.

Technical Specifications

Model	O43T-Bx	O43T-BxBx	O40T-BxBxBx
Frequency Band	Any single band in "x"	Any two bands in "x"	Any three bands in "x"
Bandwidth	Full Bandwidth		
Gain	UL 90dB , DL 95dB		UL 90dB , DL 95dB
Output Power	UL 30dBm, DL 43dBm		UL 30dBm, DL 40dBm
Gain attenuate	1~31dB, Step of 1dB		
ALC control Range	≥ 30 dB		
VSWR	≤ 2.0		
Spurious emission	≤ -36 dBm @ 9KHz~1GHz, ≤ -30 dBm @ 1GHz~12.75GHz		
ACRR	Fully comply with 3GPP		
EVM	Fully comply with 3GPP		
PCDE	Fully comply with 3GPP		
Out of band Gain	Fully comply with 3GPP		
Noise figure	≤ 6 dB		
Group delay	≤13 μs		
optical interface	FC/FC		
Power supply	AC：100~264V/50Hz		
MU Dimension	370*280*140mm	355*295*180mm	450*350*190mm
MU Weight	< 15kg	< 15 kg	<25kg
RU Dimension	450*350*190mm	490*410*210mm	513*461*187mm
RU Weight	< 25kg	< 28 kg	<28kg

Note：The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

M27T series fiber optical indoor distribution system (MDAS)

Suitable for operators to solve the signal coverage of large shopping malls, hotels and office buildings

Features

- ALC, AGC, MGC;
- Digital filtering;
- Support LTE 2*2 MIMO;
- MU supports parallel connection of 4 EUs.;
- EU supports parallel connection of 8 RUs;
- Support 2KM o optical fiber transmission distance;
- Support LAN connection to local OMT monitoring software;
- Support 4G modem remote connection network management platform.

Technical Specifications

Model	M27T-BxBx-MU/EU/RU	M27T-BxBxBx-MU/EU/RU
Frequency Band	Any two band in "x"	Any three band in "x"
Bandwidth	Can be custom	
Gain	UL 40dB , DL 40dB	
Output Power	UL -20dBm, DL 27dBm	
Gain attenuate	1~31dB, Step of 1dB	
ALC control Range	≥ 30 dB	
VSWR	≤ 2.0	
Spurious emission	≤-36dBm @ 9KHz~1GHz, ≤-30dBm @ 1GHz~12.75GHz	
ACRR	Fully comply with 3GPP	
EVM	Fully comply with 3GPP	
PCDE	Fully comply with 3GPP	
Out of band Gain	Fully comply with 3GPP	
Noise figure	≤ 6dB	
Group delay	≤13μs	
optical interface	LC/LC	
Dimension	440*330*47mm @ MU, 440*330*70mm @ EU, 350*195*120mm @ RU	
Weight	<5kg @ MU, <6.5kg @ EU,<8.2kg @ RU	
Power supply	AC 100~264V/50Hz @MU & EU,AC 100~264V/50Hz or DC 48V by EU @RU	

Note：The letter "x" means the 3gpp band number: 1, 2, 3, 4, 5, 7, 8, 20, 25, 28, 66

Passive Components/Antenna Series

- Low Insertion loss
- Low Intermodulation
- Low VSWR
- Widely used in indoor distribution systems and DAS systems
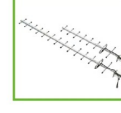
Antennas

5G 4*4 MIMO Omni Ceiling Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
IO0660-05360-4N	617~960	4	2.0	360°	80°
	1710~2700	5	1.8	360°	50°
	3300~3800	6	1.8	360°	40°
	4900~6000	6	1.8	360°	50°

5G 2*2 MIMO Omni Ceiling Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
IO0740-03360-2N	698~806	3	1.8	360°	60°
	806~960	3.5	1.5	360°	50°
	1710~2700	4	1.5	360°	50°
	3400~4000	5	1.5	360°	40°

5G 4*4 MIMO Panel Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
IP0738-0865-4N	698~960	6	1.8	80°	75°
	1710~2700	8	1.8	60°	55°
	3300~3800	8	1.8	65°	40°

5G 2*2 MIMO Panel Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
IP0740-0965-2N	698~960/1710~2700/3400~4000	8.5	1.8	65°	50°
OP0740-0965-2N	698~960/1710~2700/3400~4000	8.5	1.8	65°	50°
IP0738-0665-2N	698~960/1710~2700/3300~3800	6.5	1.8	65°	60°
OP0738-0665-2N	698~960/1710~2700/3300~3800	6.5	1.8	65°	60°

12dBi MIMO Panel Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
OP0738-1265-2N	698~960	12±1	1.8	70°	65°
	1710~2690	12±1	1.8	65°	35°
	3300~3800	12±1	1.8	65°	30°
OP0727-1265-4N	698~960	12	1.8	65°	15°
	1710~2690	12	1.5	65°	10°

Outdoor Directional Panel Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
OP0727-1265	698~960/1710~2700	12	1.5	65	13
OP0727-1565	698~960/1710~2700	15	1.5	65	13
OP8096-1865	806~960	18	1.5	65	7.5
OP1718-1865	1710~1880	18	1.5	65	13
OP1900-1865	1850~1990	18	1.5	65	13

Parabolic Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
PW824-2014	824~896	20.5	1.5	14	14
PW900-2111	880~960	21	1.5	11	11
PW1718-2411	1710~1880	24	1.5	11	11
PW1900-2411	1850~1990	24	1.5	11	11
PW2100-2416	1920~2170	24	1.5	16	16
PW0738-1825	698~2700/3300~3800	24	1.5	16	16

Log Periodic Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
OY0738-0965	698~960/ 1710~2500/3300~3800	9	1.5	65	55
OY0738-1165	698~960/ 1710~2500/3300~3800	11	1.5	65	50
OY0727-0965	698~960/ 1710~2700	9	1.5	65	50
OY0727-1165	698~960/ 1710~2700	11	1.5	65	50

Outdoor Omni Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
OO0727-05360	698~960/1710~2700	5	1.5	360	60
OO8096-11360	806~960	11	1.4	360	7
OO1800-11360	1710-1880	11	1.5	360	7
OO2100-11360	1920-2170	11	1.5	360	7

Panel Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
IP0738-0665	698~960/ 1710~2700/3300~3800	6	1.5	65	55
IP0727-965	698~960/ 1710~2700	9	1.5	65	55
OP0738-0665	698~2700/ 3300~3800	6	1.5	65	55
OP0727-965	698~960/ 1710~2700	9	1.5	65	55

Yagi Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
OB0809-0954	800~960	9	1.4	54	48
OB1720-1062	1710~2000	10	1.4	62	48
OB1921-1062	1920~2170	10	1.4	62	48
OB0809-1434	824~960	14	1.4	34	30
OB1721-1434	1710~2000	14	1.4	34	30
OB1921-1434	1920~2170	14	1.4	34	30

Low IM3 Ceiling Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	IM3 (dBc@2x20w)
IO0738-03360-B	698~960/1710~2700/3300~3800	3	1.8	360	-150
IO0740-03360-B	698~960/1710~2700/3300~4000	3	1.8	360	-150
IO0738-04360-2N-B	698~960/1710~2700/3300~4000	4	1.8	360	-150

Omni Ceiling Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
IO0738-03360	698~2700/3300~3800	5	1.5	360	60
IO0727-03360	698~960/1710~2700	5	1.5	360	60
IO0727-03360-2N	698~960/1710~2700	3/5	2	360	60

Whip Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Vertical Beamwidth
IG0709-03360	698~960	3	2	360	75
IG0827-03360	824~960/1710~2700	3	2	360	75

Car Antenna

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Horizontal Beamwidth	Connector
CX0727-03360-3	698~960/ 1710~2700MHz	3dBi	2.5	50w	SMA-J
CX0727-03360-5	698~960/ 1710~2700MHz	3/5dBi	2.5	50w	SMA-J
CT0727-03360-3	698~960/ 1710~2700MHz	3dBi	2.5	50w	SMA-J

Microstrip/Cavity Splitters

Cavity Splitters

Microstrip Splitters

Combiners
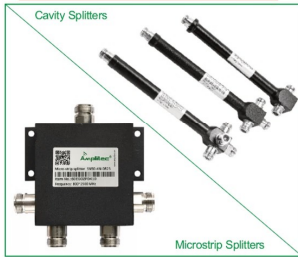
Model	Frequency (MHz)	Insertion loss (dB)	Power (W)	Intermodulation (dBc)	Dimension (mm)
SN0825-2N	800~2500	3.4	50	-120	70*55*20
SN0727-2N-B	698~2700	3.4	50	-150	70*55*20
SN0825-4N	800~2500	5.4	50	-120	100*75*20
SN0727-3N-B	698~2700	5.4	50	-150	100*75*20
SN0825-5N	800~2500	6.8	50	-120	95*95*20
SN0727-4N-B	698~2700	6.8	50	-150	95*95*20
SN0825-6N	800~2500	8	50	-120	165*120*20
SN0727-5N-B	698~2700	8	50	-150	165*120*20
SP0825-2N	800~2500	9	50	-120	182*135*20
SN0825-6N-B	698~2700	9	50	-150	182*135*20
SP0727-3N	698~2700	3.1	200	-120	218*60*15
SP0727-2N-B	698~3800	3.1	300	-150	243*60*25
SP0727-4N	698~2700	4.8	200	-120	235*60*15
SP0738-3N-B	698~3800	4.8	300	-150	268*60*25
SP0727-4N-B	698~2700	6	200	-120	235*60*43
SP0738-4N-B	698~3800	6	300	-150	268*60*43
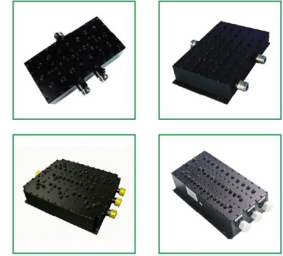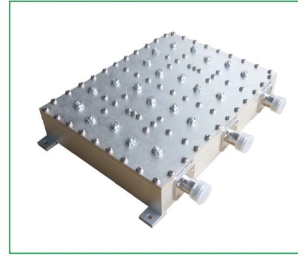
Model	Frequency (MHz)	Insertion loss (dB)	Power (W)	Isolation (dB)	Intermodulation Attenuation (+43dBm*2)	Dimension (mm)
CMB3B8-2N	880~960 1710~1880	0.8	200	60	-120dBc	180*98*53
CMB1B3-2N	1710~1880 1920~2170	0.8	200	60	-120dBc	170*123*53
CMB1B3 B8-3N	880~960 1710~1880 1920~2170	0.8	200	80	-120dBc	170*218*53
CMB1B3B8 B20-4N	791~862 880~960 1710~1880 1920~2170	0.8	200	60	-120dBc	242*235*53
CMB1B3 B7B8-4N	880~960 1710~1880 1920~2170 2500~2690	0.8	200	60	-120dBc	242*235*53

Cavity Couplers

Attenuators

Model	Frequency (MHz)	Insertion loss (dB)	Power (W)	Isolation (dB)	Intermodulation Attenuation (+43dBm*2)	Dimension (mm)
CP0727-6N	698~2700	6	200	20	-120 dBc	157*58*20
CP0738-6N-B	698~3800	6	300	20	-150 dBc	170*68*23
CP0727-10N	698~2700	10	200	20	-120 dBc	157*58*20
CP0738-10N-B	698~3800	10	300	20	-150 dBc	170*68*23
CP0727-15N	698~2700	15	200	20	-120 dBc	157*58*20
CP0738-15N-B	698~3800	15	300	20	-150 dBc	170*68*23
CP0727-20N	698~2700	20	200	20	-120 dBc	157*58*20
CP0738-20N-B	698~3800	20	300	20	-150 dBc	170*68*23
CP0727-30N	698~2700	30	200	20	-120 dBc	157*58*20
CP0738-30N-B	698~3800	30	300	20	-150 dBc	170*68*23

Model	Frequency (MHz)	Gain (dBi)	VSWR (dB)	Withstand power	Joint
RA0727-xN-5	DC-3GHz	X=1/3/6/10/15/20/30/40	≦1.20	5W	N-J/N-F
RA0727-xN-10	DC-3GHz	X=1/3/6/10/15/20/30/40	≦1.20	10W	N-J/N-F
RA0727-xN-25	DC-3GHz	X=1/3/6/10/15/20/30/40	≦1.20	25W	N-J/N-F
RA0727-xN-30	DC-3GHz	X=1/3/6/10/15/20/30/40	≦1.20	30W	N-J/N-F
RA0727-xN-50	DC-3GHz	X=1/3/6/10/15/20/30/40	≦1.20	50W	N-J/N-F
RA0727-xN-100	DC-3GHz	X=1/3/6/10/15/20/30/40	≦1.20	100W	N-J/N-F
RA0727-xN-200	DC-3GHz	X=1/3/6/10/15/20/30/40	≦1.20	200W	N-J/N-F

Atlantis

Machine Vision Analysis Unit

www.znv.com

With the acceleration of urban development, urban intelligent monitoring and management are facing more and more challenges. The video-based visualization application is widely used in the city management field, such as city security, environmental health governance, combating illegal behaviors and other businesses. However, due to the low utilization rate of video surveillance in the past, the video application does not integrate the management business process, the complex and changeable law enforcement situation on the spot, the insufficient evidence, the lack of law enforcement personnel and other problems, the timeliness and accuracy still cannot be guaranteed.

With the maturity of deep learning algorithms, the rapid iteration of AI accelerated computing chips and the accumulation of structured information generated by the Internet, the rapid development of machine vision technology in the field of artificial intelligence, research and exploration of how to realize the active discovery of illegal behaviors in video data, rapid summary, intelligent analysis, automatic alarm and other issues, will bring a leap-forward for intelligent city management Sexual progress will also play a positive role in solving the unfavorable situation of "fewer people and more things to do" and "more points and more areas" in urban management.

Atlantis machine vision analysis unit is a modular intelligent discovery and analysis product for city violation problems. It uses the analysis algorithm of key elements in the scene based on deep learning to identify and locate specific targets in videos/images, and realizes the intelligent in-depth analysis of a series of multi-source view data such as people, cars, non-motor vehicles, objects and events generated in complex and changeable scenes. Through the comprehensive analysis of structured and semi-structured data to identify abnormal behavior and statistics in videos, realize disorderly parking of non-motor vehicles, personnel intrusion, illegal parking, illegal dumping of muck trucks, disorderly pile of goods, illegal drying, disorderly setting of billboards, illegal setting of banners, garbage overflow, occupation operation, cross-door operation, tourism vendors, human flow statistics. For city management, community security, comprehensive treatment to provide low cost, high efficiency, intelligent services.

Atlantis machine vision analysis unit consists of a view parsing engine and a fusion analysis engine. It helps transform city management from "see" and "see clearly" to "understand".
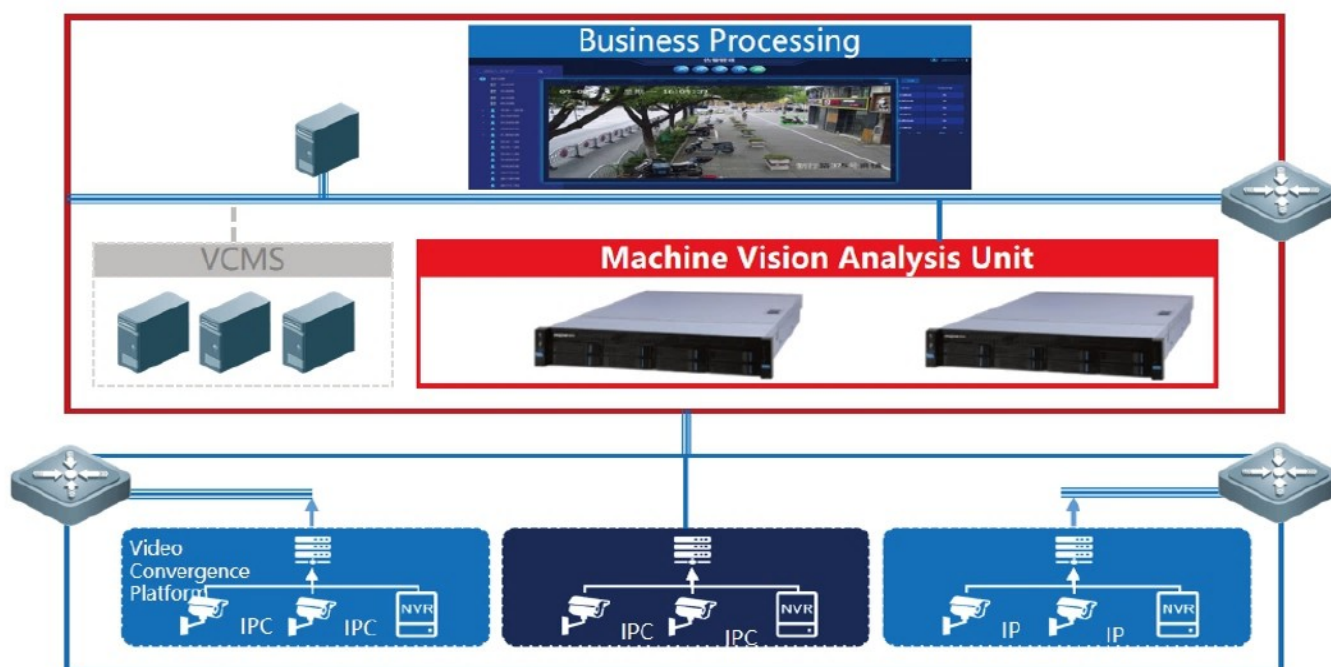
Features

Provide Visual Easy to Choreograph Operation, Construct Model Rapidly

Intelligent analysis is the combined application of key elements such as people, vehicles, objects and scenes in different scenarios. Through AI perception and fusion analysis, users can freely choose capability components according to scene requirements and quickly build scene models.

No Sunshield	Sunshield
Face of Driver	Face of Driver
Without Seat Belt	Seat Belt
Gray	Color of Vehicle
Small Car	Vehicle Type
Peugeot	Vehicle Brand
XXBN525	License Number

Age group

Glasses

Gender

Beard

Advanced deep learning algorithm, identifies violations accurately

Based on deep learning intellisense technology, intelligent analysis and alarm can be carried out by multi-dimensional perception of people, cars, objects and scenes, as well as integrated analysis of structured/unstructured data. Modular AI recognition function can conduct personalized analysis for different camera videos.

Key Elements Feature Module

Classify Module

Identify Module

View Key Element

View Fingerprint Module

View Semantic Module

View Detection Module

Plate Recognition

Scenario Comparison

Incident Recognition
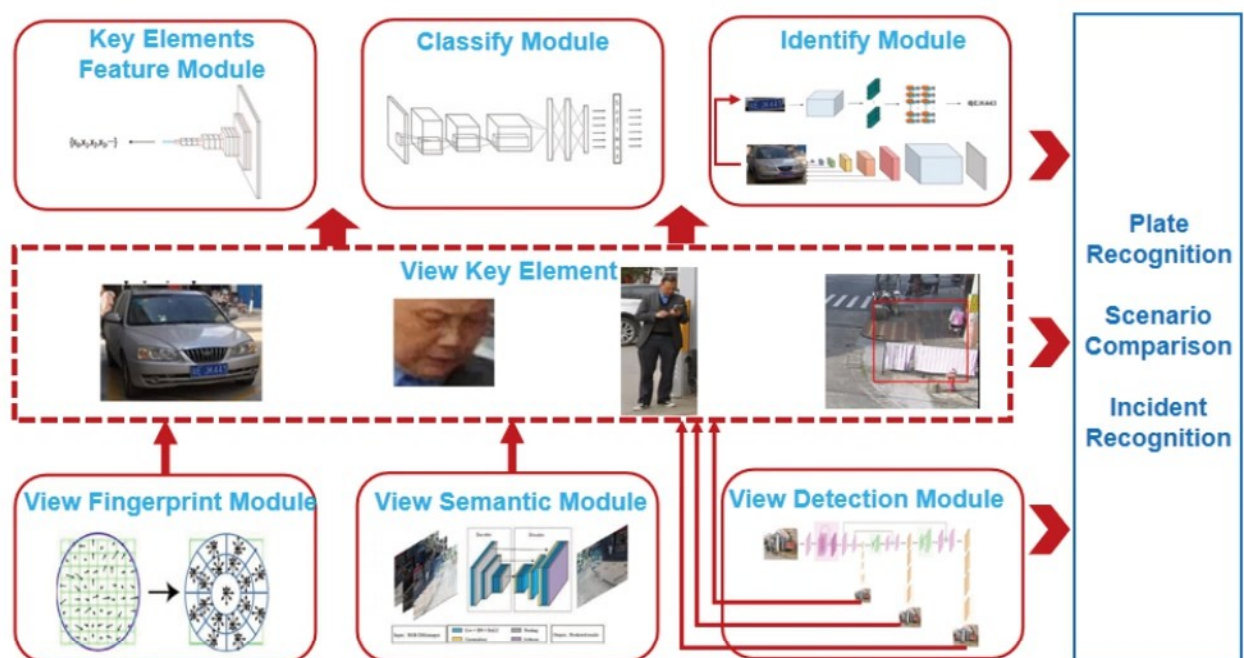
Rich Data, Diversity Scenario Algorithm Model

Intelligent identification and analysis of violations of many kinds of events in urban management, and active alarm of violations discovered. The main categories of violations include disorderly parking of non-motor vehicles, personnel intrusion, illegal parking of motor vehicles, muck car violations, disorderly piling, illegal drying, disorderly advertising billboards, illegal setting of banners, overflowing garbage bins, occupying the road business, cross-door business, tour stalls, etc.
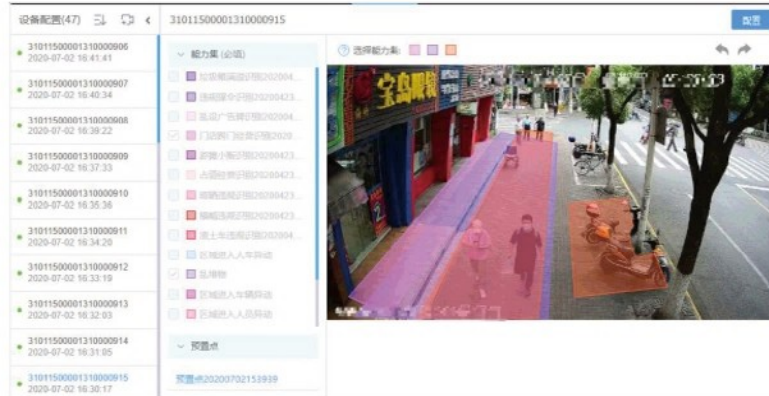
Road Management

The perception technology based on deep learning can intelligently identify and analyze violations of various events, realize real-time discovery and active alarm of violations, solve the problem of manpower shortage in road management, and improve the operation efficiency.

Pavement Goods | Violation Parking of Non-Vehicle | People Intrusion | Violation Parking
Roadside Booths | Roadside Booths | Violation Umbrella | Violation Advertising Board
Violation Banner | Trash Garbage | Violation Dry Clothe | Roadside Business

Community Management

Deep learning technology based on a number of scenarios associated with the community management intelligent detection and analysis of the illegal act, the effective protection of the community management and orderly and clean.

Violation Banner
Trash Garbage | People Intrusion

Slag Car Management

Based on the deep learning technology against the illegal violation of residue in the car to ensure legitimacy of residue in car running in the city, to ensure the safety of people's life.

Slag Car Monitor

Support Real-time Video Based People/Traffic Flow Statistics

Facing the designated detection area of traffic light intersections, entrances and exits of key sections, and other entrance and exit scenes, the number of people and vehicles entering and leaving areas can be judged to realize dynamic statistics of people and traffic flow

People Counting | Vehicle Counting
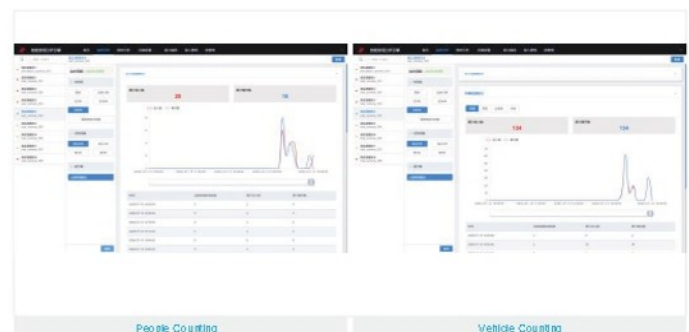
ZNV Video Structure Edge Gateway

ZNV Video structured edge gateway is a lightweight, real-time online view structured gateway created by ZNV based on video industry standards and deep learning algorithm. It can provide accurate and efficient real-time detection and abnormal discovery capabilities of people, cars and objects, and serve various scenarios such as public security monitoring, smart parks, safe cities and smart parking lots. To provide customers with flexible and efficient video structure on the edge of the network.

- ZXNVM CIMS-IAC-201
- ZXNVM CIMS-IAC-202

Specification

Model	ZXNVM CIMS-IAC-201	ZXNVM CIMS-IAC-202
Modality	Embedded all-in-one, edge smart box	
Hardware Configuration	CPU: 4 core, 64 bit, max 2.0GHz RAM: LPDDR4/4G Memory: eMMC 16G, support expansion Netork: Gigabit network port, onboard WIF	CPU: 8 core, 64 bit, max 2.6GHz GPU: Mali-T864 + RK1808 RAM: LPDDR4/8G Memory: eMMC 16G, support expansion Netork: Gigabit network port, onboard WIF
Operation Environment	Operation Temperature: -10℃~50℃ Humidity: 10%~90% (Non-condensing) Inch: 154 x 107 x 34mm (L×W×H) Power: DC in 12V	Operation Temperature: -10℃~50℃ Humidity: 10%~90% (Non-condensing) Inch: 187mm*131mm*54mm (L×W×H) Power: DC in 12V
Performance	Support 4 channels 1080P real-time video detection (image processing 4FPS); Face detectable size: 32*32 pixels; Humanoid detectable size: 64 * 64 pixels; Vehicle detectable size: 200 * 200 pixels (plates 100 * 100 pixels) ;	Support 20 channels 1080P real-time video detection (image processing 4FPS); Face detectable size: 32*32 pixels; Humanoid detectable size: 64 * 64 pixels; Vehicle detectable size: 200 * 200 pixels (plates 100 * 100 pixels) ;

Function

Function	Description
Face Capture	Recognize face features in video and pictures, output the smallest best face image
Humanoid Capture	Recognize the humanoid target and human features, and cut out the humanoid picture.
Vehicle (License Plate) Capture	Identify the vehicle and license plate features, and capture the vehicle or license plate picture
Environment Monitor	Identify environmental anomalies, such as abnormal motion detection and intrusion identification, and output alarm messages
Video Quality Diagnosis	It automatically detects abnormal problems such as no signal, snowflake screen, occlusion and blurring in the real-time video picture, and outputs alarm messages.

Typecal Network

Video Device

ZNV Video Structure Edge Gateway

Video/Picture Library

Person/Vehicle Recognition

Other Video Service Application Systems
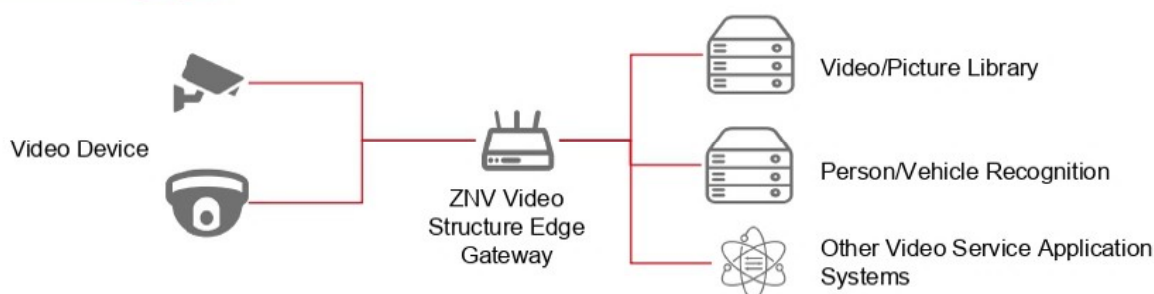
Scenarios

ZNV video structured edge gateway can support a variety of intelligent video service scenarios and provide intelligent functions such as face capture, vehicle capture, license plate capture, environmental anomaly warning, video quality diagnosis for front-end view acquisition devices, fully mining the value of front-end view data, and providing more flexible service options for edge side video intelligence. Provide customers with highly available video structuring capabilities and data analysis capabilities.

Police
- Person/Vehicle Snap
- Vehicle Plate
- Old Camera Access
- Decoupled with Video and Algorithm

Smart Store
- Customer Precision Positioning
- Counting
- No-entry Warning for Critical Areas

Smart Community
- Stranger/Vehicle Management
- Abnormal Behavior Monitoring
- Old Camera Access

Smart City
- Person/Vehicle Snap
- City Management
- Old Camera Access
- Decoupled with Video and Algorithm

Smart Factory
- Person/Vehicle Snap
- Counting
- No-entry Warning for Critical Areas
- Old Camera Access

Smart Business
- Customer Flow Statistics
- Area Anti-theft
- Old Camera Access

Highlights

1

Wide Compatibility
Connect to mainstream vendors' camera, support access to older devices, and support access to multiple protocols such as SDK, Onvif/RTSP, and GB28181 from mainstream vendors.

2

Flexibility and Efficiency
Built-in self-developed high-precision algorithm, can choose algorithm set freely, using standard interface, docking and start immediately once power on.

3

Deployment Freely
With lightweight design, small size and diverse functions, the product can be configured and deployed on demand according to different service scenarios, reducing the cost of intelligent video systems.

Shenzhen ZNV Technology Co., Ltd

ZNV Website   ZNV Official Accout

ZNV

Sensing & Creating

Battery Management

ZNV Shenzhen ZNV Technology Co., Ltd.

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Version: 2022 V1.1

Energy Management Service
Fuel Management
Asset Management
Battery Management
Smart Temperature
Site Security Management
Smart Site Access Management

Your Reliable Site Health-Keeper
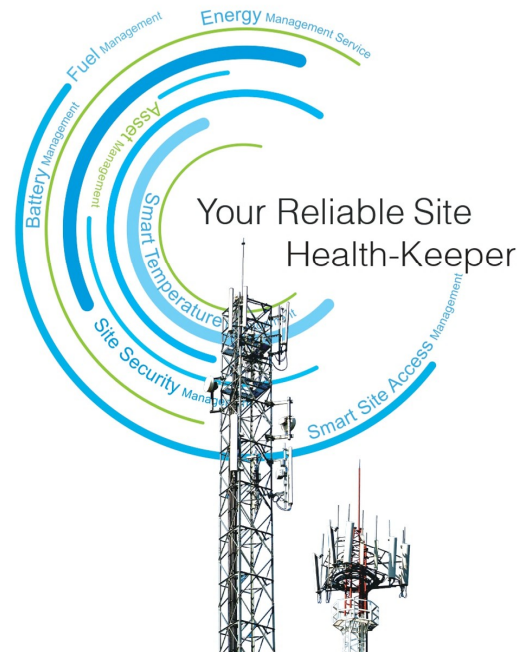
Challenges

Challenges

As the most important backup power source, the battery management is facing more and more challenges, such as: Short-lived battery, no history battery data & analysis, can't find bad cell in time, no alerts of remaining battery capacity, battery stolen .

01 Dendritic Crystals

The overdischarge or long-term discharge state results in the formation of dendritic crystals through the membrane. Solder lead particles on the plate cause short circuit.

02 Positive Plate Corrosion

The negative electrode produces water, reduces the acidity , and the positive reaction produces H +, accelerating the corrosion of the positive grid.

03 Loss Water

The rate at which the gas is generated at the time of charging is greater than the rate of the gas re-chemical reaction, resulting in a portion of the gas escaping and loss of water.

04 Negative Sulfation

Lead sulfate causes the negative electrode to remain in a non-fully charged state for a long time, resulting in a decrease in battery capacity even battery failure.

05 Thermal Runaway

The heat of battery generated in the float and overcharge state will increase, when the cooling can not be achieved with the balance, the battery will accelerate to dry, resulting in increased internal pressure even cause the battery to melt or explode.

Difficulty of Battery management and maintenance

Only "electrolyte water loss" situation does not require maintenance, other failures still exist.

Sealed valve design is a one-time structure, with "non-maintainable" features.

It is complicated to judge the quality of the battery.

Short board effect: a damaged battery will cause the failure of the entire battery pack.

Manual maintenance not only requires a lot of manpower and time, but also it is difficult to achieve the desired results.

Architecture
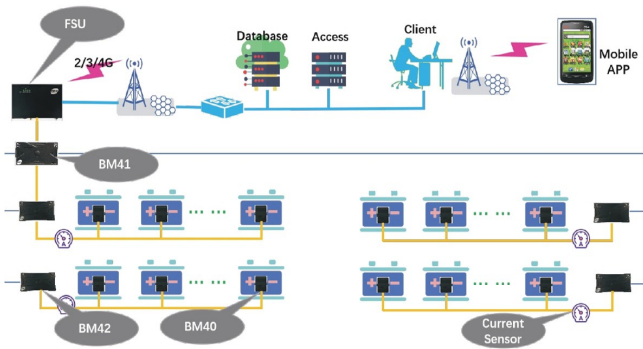
1) The battery management interface unit BM41 converts the UART bus into an RS485 serial port and communicates with the FSU;
2) The battery management unit BM40 is responsible for collecting battery cell voltage, temperature, and internal resistance information;
3) The battery current detection unit BM42 is responsible for collecting battery pack current and ambient temperature information;
4) Support MODBUS protocol, each UART bus supports up to 130 devices.

Functionality

- Group voltage
  Cell Voltage
- Charge and discharge current
- Cell temperature
- Cell internal resistance
- Backward cell
- Remaining capacity
- Remaining service time
- Maintenance reminder
- Replacement reminder
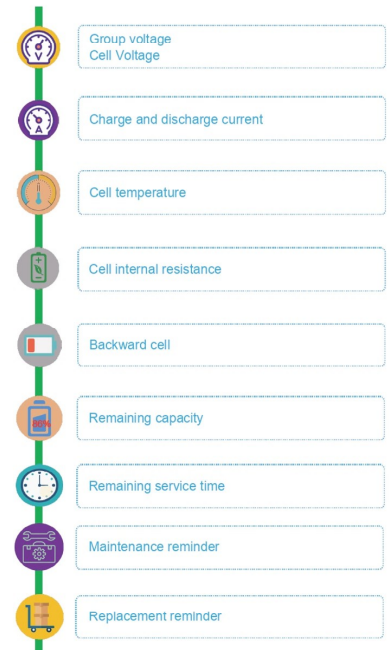
GUI

Battery Monitoring Display

Platform Home Page:
Display Content Selection

GP1490-UN
Portable Power Station

🔦 Applications

Outdoor camping

Outdoor office electricity
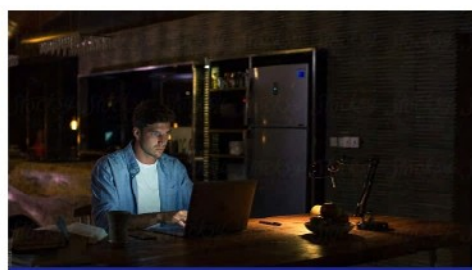
Emergency power supply

🔦 Highlights

LiFePO$_4$ battery
2000+ cycles life

LED lighting
Power your quality life

Compact size
easy to carry

Pure sine wave
efficiency＞90%

PD compatible, can fast charge
to mobile, tablet, laptop

Multiple
protection

Charging multiple devices
simultaneously to meet the daily needs

MPPT highly
efficient charge

Working time

Macbook 13	Iphone XR	UAV	SLR cameras
7105mAh	2942mAh	60W	1800mAh
53 Times	**132 Times**	**20 Hours**	**210 Times**

Loudspeaker box	Projector	Car refrigerator	Fan
30W	150W	62W	40W
40 Hours	**8 Hours**	**13.6 Hours**	**30 Hours**

Note: The above data are from laboratory, and the test data will fluctuate up and down due to different factors such as environment, method of use, equipment specifications and so on. This test data is for reference only.

Specifications

Item	GP1490-UN
Rated power [W]	1200W
Peak power [W]	2400W
Battery cell	NCM
Power supply energy [wh]	1490wh
Output waveform	Pure sine wave
AC output [V]	220V
AC outlet	Universal
Certification	CCC / FCC / UL / PSE / EU/ IEC / UN38.3 / RoHS
DC Output	2 DCs(13.3V) 3 USB A(5V) 1 Type C(PD) 1 cigarette outlet(13.3v) : Max 133W
Net weight [kg]	≈13 kg
Size [mm]	330×245×265 mm

GP288-UN
Portable Power Station

🔦 Appearance

🔦 Highlights

Real-time monitoring of product performance

Peak power 500W

Multiple charging methods

Complete certification UN38.3, MSDS, RoHS

Battery balance system to ensure the consistency

Auto-cut circuit when short occurs

1 year warranty

Multiple protection

Function Panel Description

Screen Display ❶

DC5.5 × 2.1 Port ❷
QC3.0 18W ❸

Cigaretee Lighter Port ❹

❻ USB On/Off Switch
❼ LED On/Off Switch
❽ AC On/Off Switch

❾ AC Socket

❺ EC5 Lead Acid

❿ 5W LED Light

Input Power ❶

❷ Output Power

❸ Remaining SOC %
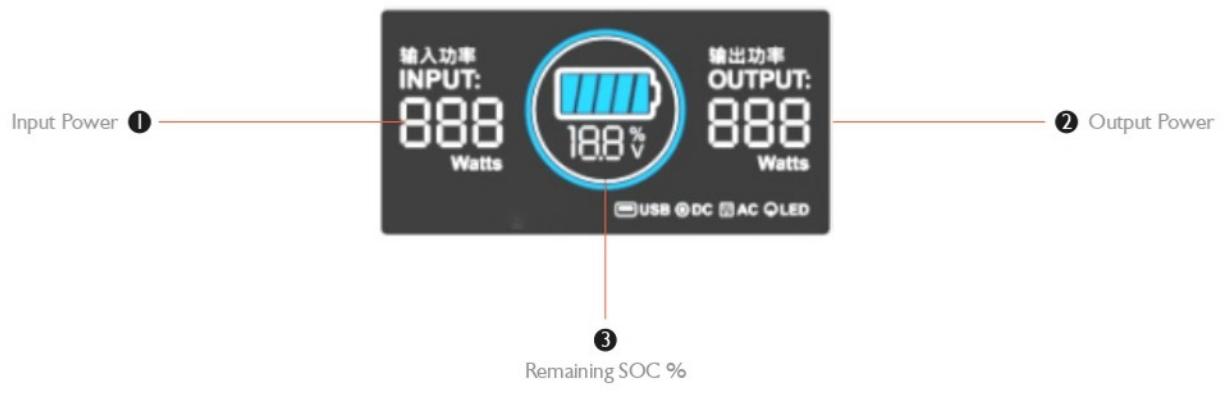
Specifications

Item	GP288-UN
Battery Type	Sealed Lead Acid Solar Battery
Rated power [W]	250W
Nominal Capacity [wh]	288wh
Nominal Voltage [V]	12V
Input Voltage Range [V]	12V - 15.2V
Charging Interface	DC5.5 × 2.1
Charging Method	Solar Charging; Standard Charger Charging
Max. Input Current [A]	Max. 5A
Nominal Output Voltage [V]	220V - 240V
Nominal Output Frequency [Hz]	50Hz / 60Hz
Product Weight [kg]	≈9kg
Product Dimension [mm]	236×168×180 mm
Charging Temperature [°C]	0 °C - 40 °C
Discharging Temperature [°C]	-10 °C - 40 °C

GP345-UN
Portable Power Station

💡 Appearance

💡 Highlights

2000+ cycles life

LiFePO$_4$ battery

Fully compatible with portable USB devices

220V output

Multiple port

Multiple protection

Outdoor / Emergency

Complete certification

Working time

Macbook 13 7105mAh **12 Times**	**Iphone XR** 2942mAh **31 Times**	**UAV** 60W **4.5 Hours**	**SLR cameras** 1800mAh **51 Times**
Loudspeaker box 30W **9.5 Hours**	**Projector** 150W **1.9 Hours**	**Lamp** 20W **14.5 Hours**	**Fan** 40W **7 Hours**

Note: The above data are from laboratory, and the test data will fluctuate up and down due to different factors such as environment, method of use, equipment specifications and so on. This test data is for reference only.

Specifications

Item	GP345-UN
Rated power [W]	300W
Peak power [W]	600W/3S
Battery cell	LiFePO$_4$
Power supply energy [wh]	345wh
Battery capacity [mAh]	107813mAh
Life cycle	≥2000 times
Output waveform	Pure sine wave
AC output [V]	220V
AC outlet	Universal
Certification	CE / FCC / GB / UN38.3
USB output	USB-A1 (QC3.0): 5V/9V/12V(18W) USB-A2 (QC3.0): 5V/9V/12V(24W) Type-C (PD/QC3.0): 5V/9V/12V(27W)
Charging time	About 5.3 hours
Net weight [kg]	≈5.1 kg
Size [mm]	250×155×176 mm

GP691-UN
Portable Power Station

💡 Appearance

💡 Highlights

2000+ cycles life	LiFePO$_4$ battery	Fully compatible with portable USB devices	220V output
Multiple port	Multiple protection	Outdoor / Emergency	Complete certification

🔦 Working time

Macbook 13	Iphone XR	UAV	SLR cameras
7105mAh	2942mAh	60W	1800mAh
25 Times	**62 Times**	**9.5 Hours**	**100 Times**

Loudspeaker box	Projector	Car refrigerator	Fan
30W	150W	62W	40W
19 Hours	**3.8 Hours**	**9.4 Hours**	**14.5 Hours**

Note: The above data are from laboratory, and the test data will fluctuate up and down due to different factors such as environment, method of use, equipment specifications and so on. This test data is for reference only.

🔦 Specifications

Item	GP691-UN
Rated power [W]	600W
Peak power [W]	1200W/3S
Battery cell	LiFePO$_4$
Power supply energy [wh]	691wh
Battery capacity [mAh]	21600mAh
Life cycle	≥2000 times
Output waveform	Pure sine wave
AC output [V]	220V
AC outlet	Universal
Certification	CE / FCC / GB / PSE / METI / UL2743 / UN38.3
USB output	QC3.0: 5V/9V/12V(USB-A1: 18W Max. USB-A2: 24W Max. Type-C: 27W Max.
Charging time	About 6.5 hours
Net weight [kg]	≈8.5 kg
Size [mm]	270×182×191 mm

Power Station Brochure

Power your quality life

GSK307-50W-PAYGo

Solar lantern system for:
• Lighting
• Mobile charge

💡 Highlights
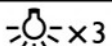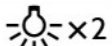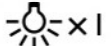
50W 18V Poly	307wh LiFePO$_4$	3×360lm LED lamp

💡 Charging Time & Working Time Based on 50W, 24Ah

☀️ solar	6 - 7Hrs @ STC	
💡×3	1080lm	34Hrs
💡×2	720lm	52Hrs
💡×1	360m	102Hrs
Fan	30Hrs	

STC——25°C, AM1.5,1000W/m2

💡 Optional accessories

Item	Name	Picture	Name	Specification
1	GSK-Torch-A		Solar torch with reading light	• Solar panel: 0.2W/5V Poly-crystalline • Battery: 3.2V/250mAh LiFePO4 • Light source: torch 0.5W, reading light 0.2W • Working time: 2H for torch, 4H for reading light • Charging time: 5H under sufficient sunlight
2	GSK-Radio-A		FM, AM, SW Radio	• Built in 3.7v/1200mAh Li-ion battery
3	GSK-Fan-A		Solar DC Fan -16 inch stand fan	• Power consumption: about 11W • Number of Regulated Speeds: 3 • Speed: 960/1100/1250rpm • Accessory: 1*2.5M connection cable

GSK461-100W-PAYGo

Solar lantern system for:
- Lighting
- Mobile charge

🔦 Highlights

100W 18V Poly	461wh LiFePO$_4$	3×360lm LED lamp
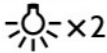
🔦 Charging Time & Working Time Based on 50W, 24Ah

▦	9 - 10.5Hrs @ STC	
🔆×3	1080lm	51Hrs
🔆×2	720lm	78Hrs
🔆×1	360m	153Hrs
Fan	45Hrs	

STC——25°C, AM1.5, 1000W/m2

🔦 Optional accessories

Item	Name	Picture	Name	Specification
1	GSK-Torch-A		Solar torch with reading light	• Solar panel: 0.2W/5V Poly-crystalline • Battery: 3.2V/250mAh LiFePO4 • Light source: torch 0.5W, reading light 0.2W • Working time: 2H for torch, 4H for reading light • Charging time: 5H under sufficient sunlight
2	GSK-Radio-A		FM, AM, SW Radio	• Built in 3.7v/1200mAh Li-ion battery
3	GSK-Fan-A		Solar DC Fan -16 inch stand fan	• Power consumption: about 11W • Number of Regulated Speeds: 3 • Speed: 960/1100/1250rpm • Accessory: 1*2.5M connection cable

IP Products

Camera Series

Semi-dome

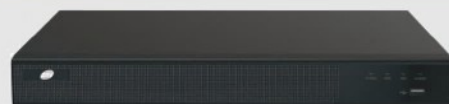Bullet Camera

Speed Dome Camera

Bullet Camera

4/5/8MP

- High-performance 1/3" Progressive Scan CMOS
- High quality imaging with 5MP resolution
- Support H.264/H.265/JPEG/AVI Compression
- Saturation/Brightness/Contrast /Sharpness, Mirror, 3D NR , White Balance, FLK(Flicker Control),Occlusion Detection,HLC
- Compliant with ONVIF protocol
- Main Stream: 5MP@30fps / 4MP@30fps / 1080P@30fps / 720P@30fps
- Auto switch for day/night surveillance
- 18X or 36X optical zoom for HD PTZ

NVR Value Series

- H.265/H.264 video compression standard
- Support 4/8/16ch video inputs
- Support 4/8/16ch PoE inputs
- Support HDMI and VGA outputs
- Support 1 SATA hard disk (up to 8T)

NVR Pro Series

- H.265/H.264 video compression standard
- Support 16/32/64ch video inputs
- Support 16ch PoE inputs
- Support HDMI and VGA outputs
- Support 2/4/8 SATA hard disk (up to 8T)

Application Topology

IP Camera

Monitor

NVR

Switch

Client
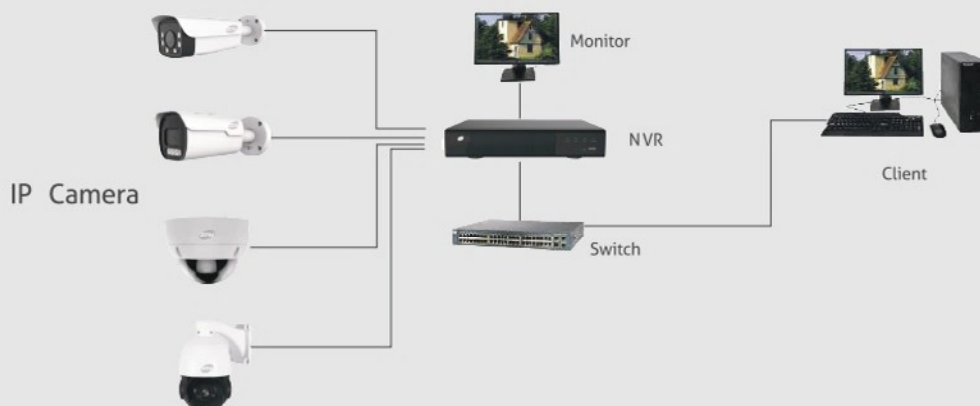
Wi-Fi Products

Wi-Fi Camera Series

WiFi Bullet Camera

WiFi Bullet Camera

WiFi Semi-dome Camera

WiFi Miniature Camera

4 MP

- 1/3" CMOS Sensor, Fullhan Soc, With IR-CUT
- Main Stream: 4MP@30fps /1080P@30fps/ 720P@30fps
- WIFI Range: No obstacles 300m Max
- Smart Analytics: Intrusion Detection
- Water Resistance: IP67
- IR Range: 25-30M

Wi-Fi NVR

- 4/8CH WIFI NVR, 1 x SATA, 1 x USB, 1 x RJ-45
- WiFi encryption method:Wpa2-psk. WiFi mode: 802.11b/g/n hybrid
- Incoming Bandwidth80M; wireless network bandwidth28M
- WIFI Range: No Obstacles 300m Max
- Power Adaptor: 1xDC12V2A

Application Topology

Monitor

WiFi Camera

WiFi NVR

Client
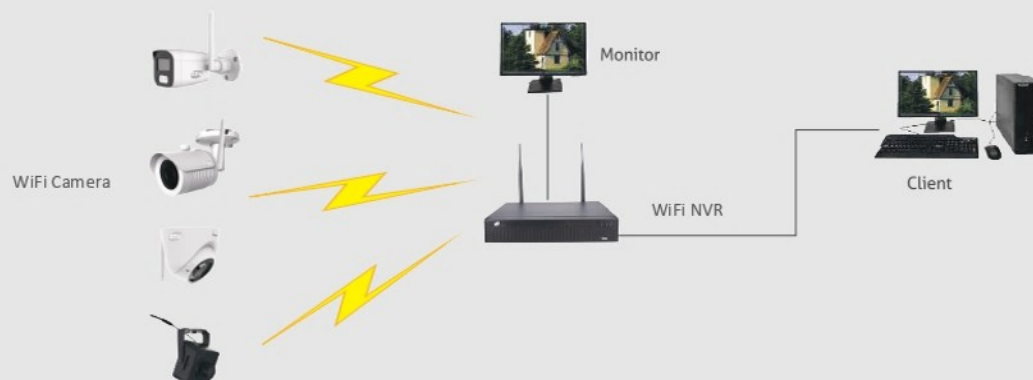
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