
TOXU®
WELCOME
Shenzhen Tongxun Precision Technology Co.,ltd
PRESENTATION TITLE
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2025.08.13
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TOXU®

CONTENTS

01 Company Profile

02 Product Matrix

03 Industry Solutions

04 R&D Capability

05 Why TOXU?

Section Overview

TOXU/KINGRF Founded in 2013, based in Shenzhen; specializes in ODM/OEM/OBM for car antennas, 5G/GNSS RTK antennas, RF vehicle cable assemblies, GNSS modules/receivers, serving automotive, telecom, aerospace, medical & consumer electronics. Factories in Vietnam and China (Shenzhen, Guangxi, Hunan, etc.).

- Certified with IATF16949 & ISO9001; collaborates with Central South University (Cooperative Training Base, doctoral station innovation practice base); Drone Association member, expanding into UAV applications.
- R&D equipped with Keysight/R&S/SATIMO/ETS/GTS test equipment, covering 2G-5G/WIFI/BT/NB-IoT/GNSS/EMTC tests; has mmWave/5G/BD R&D measurement systems.
- Focuses on Vehicle and Satellite Industry, providing communication and positioning solutions; prioritizes quality, reliability, technological leadership, aiming to be a trusted global partner for advanced electronic components.

TOXU®

01 / PART

Company Profile

Technology cornerstone

Certifications

TOXU has 12 years of experience in antenna design, 52+ patents, and has passed IATF 16949 automotive certification,ISO9001 System certificate. It has strong technical strength and reliable product quality.

Industrial base

- The three major bases in **Shenzhen, Changsha, Guangxi and Vietnam** are equipped with fully automatic cable production lines with strong annual production capacity to meet large-scale production needs.
- Founded in 2013
- Registered capital： 10 million RMB
- Brand： TOXU/KingRF
- Number of employees : Over 200
- Factory area：

  Shenzhen covers 3000 (m²)

  Dongguan covers 1500 (m²)

  Guangxi covers 5000 (m²)

R&D Capability introduction

Electronic performance Laboratory

Environmental physics Laboratory

Antenna measurement laboratory

OTA /Microwave Anechoic Chamber

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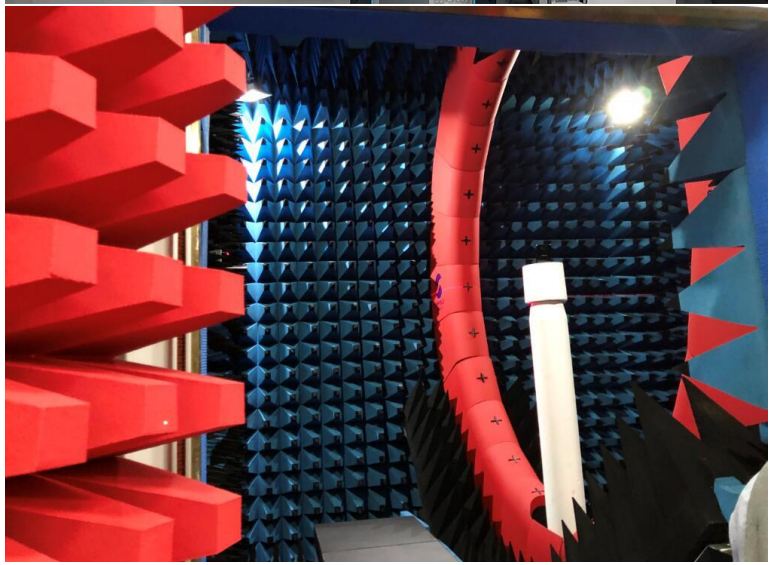


MPS300 Multi-probe OTA measurement system

System spec

Multi-probe OTA measurement system	
Specification item	parameter
Dimension(L*W*H)	4m*3m*3m
Shielding effectiveness	≥100dB
Measurement Freq.	0.6GHz-8GHz
Probe numbers	23+1
Probe array diameter	1.5m
Probe Spacing Angle	15°
The max size of the measured object	≤0.75 m
The max weight of the measured object	≤ 30kg

Measurement capability

ACTIVE Support	
Internet application	support system
cellular network	2G:GSM/GPRS
	3G:CDMA/WCDMA/TD-SCDMA
	4G:LTE_TDD/LTE_FDD
	5G: SA/NSA
internet of things	NB-IoT
	eMTC
	WIFI 802.11b/g/n/a/ac/ax
	BT
satellite navigation : BD/GPS/GLONASS	

PASSIVE Support
support parameter
Gain. Efficiency, pattern, lobe width, cross-polarization ratio, circular polarization pattern, axial ratio, front-to-back ratio, out-of-roundness, pointing accuracy
11 Band test time<3 min (Typical test

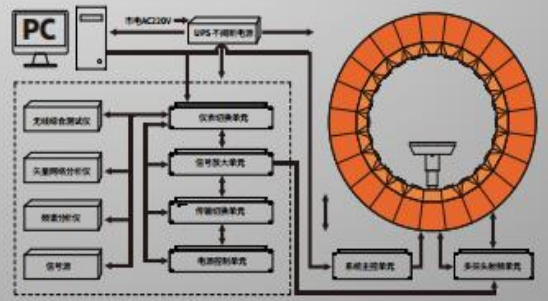
introduction

Fast, Accurate and Stable

MPS300 measurement system is an OTA measurement system designed and built according to the CTIA specification process, Wide range of system applications .The test speed is fast and the operation is stable, which is applied to comprehensive and accurate antenna measurement and OTA measurement.The system covers a wide frequency band.It also supports the latest standards of 5G and WIFI6, and can be used in mobile communication, network communication, security monitoring, smart home, indoor positioning and other fields

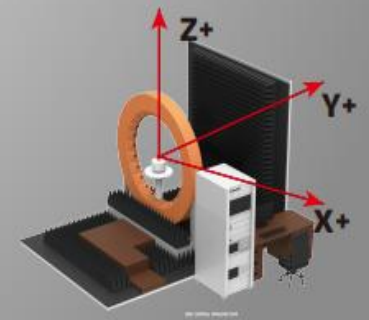
System Control Diagram

System schematic diagram



System Coordinate Diagram

Internal renderings



OTA Laboratory Measurable Capabilities

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Section Overview

02 / PART

Product Series

External Antennas

- C-V2X series
- Cellular series
- Combination series
- GNSS series
- ISM/LORA series
- NFC series
- Satcom series
- UWB series
- Wi-Fi®/Bluetooth® series

Embedded Antennas

- C-V2X series
- Cellular series
- Combination series
- GNSS series
- ISM/LORA series
- NFC series
- SiriusXM series
- UWB series
- Wi-Fi®/Bluetooth® series

RF Cable Assemblies

- FAKRA Assemblies
- Mini FAKRA Assemblies
- Ethernet Assemblies
- I-PEX Assemblies
- SMA Assemblies
- MMCX Assemblies
- MCX Assemblies
- N TYPE Assemblies
- Other Assemblies

RF Connector

- FAKRA Connectors
- Mini FAKRA Connectors
- Ethernet Connectors
- On-Board Receptacles
- Other Connectors

Positioning Chips and Modules

- High precision GNSS
- Standard GNSS
- GNSS Receivers

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Embedded Antennas

C-V2X/GNSS/UWB/Wi-Fi®/Bluetooth®, Millimeter-wave phased array (5G 28GHz), with high integration, facilitates communication among smart devices.

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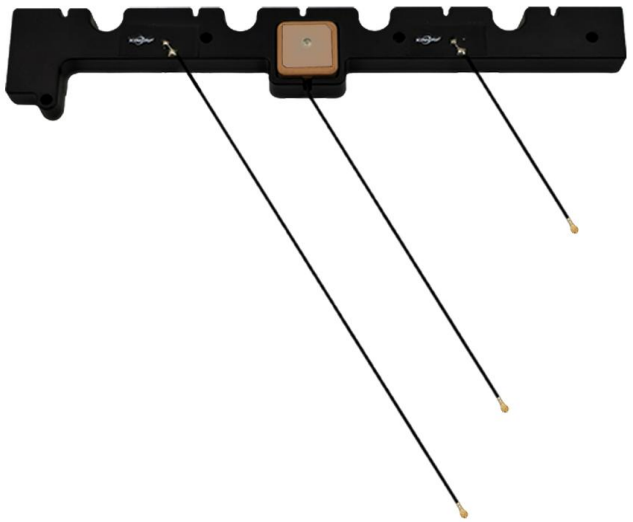

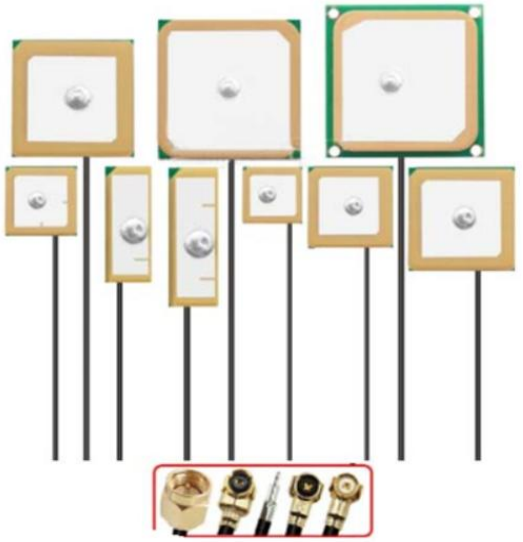

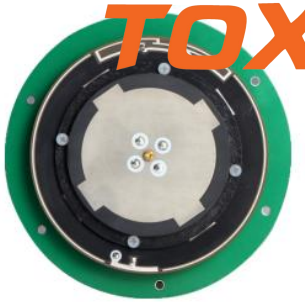

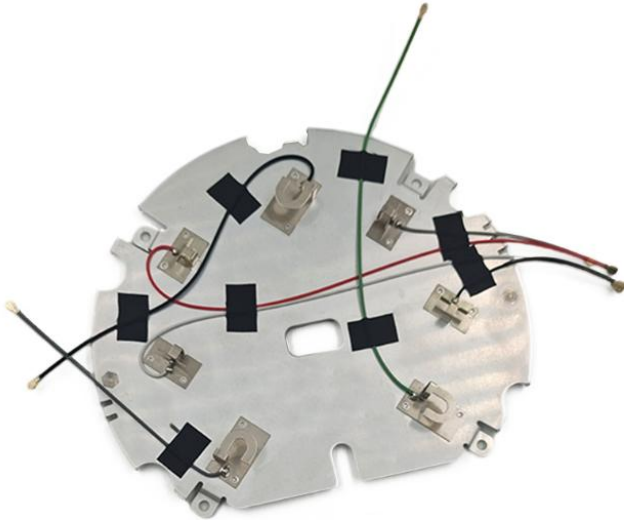

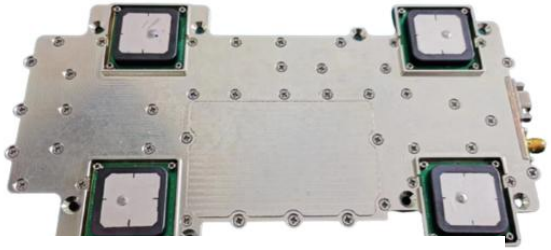

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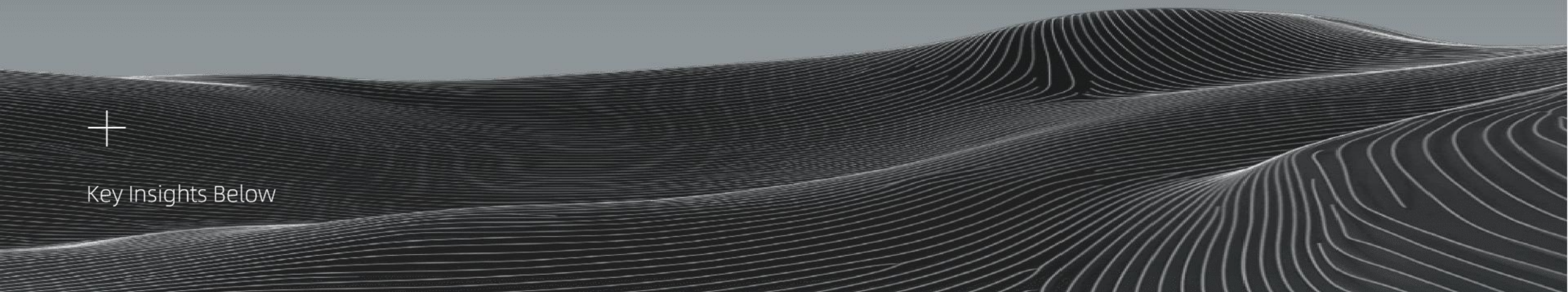
External Antennas

Satcom/GNSS/C-V2X/UWB，Anti-interference spiral design (RTK accuracy ±1cm), stable performance, suitable for complex environments.



Key Insights Below

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RF Cable Assemblies

CONTENT.

FAKRA/Mini FAKRA/IPEX/SMA/MMCX， Low loss, high shielding (>90dB), excellent performance, meeting high-frequency communication needs.

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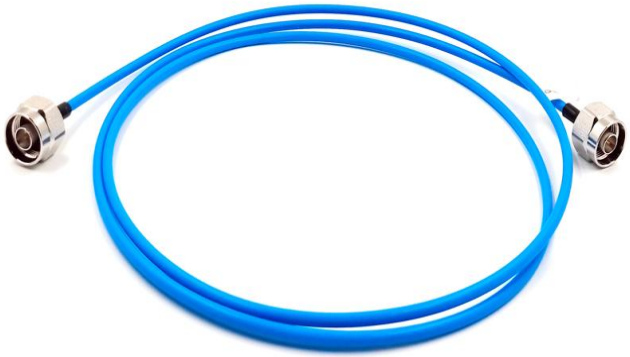

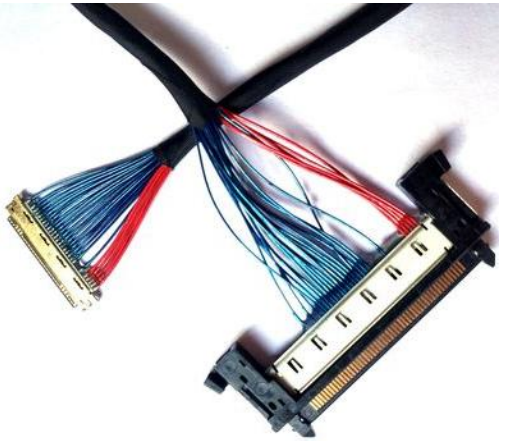

CLEAR & CONCISE

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RF Connectors

FAKRA/Mini FAKRA/Ethernet/On-Board，Automotive-grade waterproof connector (IP67), suitable for various vehicle scenarios.

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Positioning Modules

High Precision GNSS/GNSS Receivers, Anti-spoofing encrypted positioning (military grade), high precision, high reliability, to ensure positioning security.

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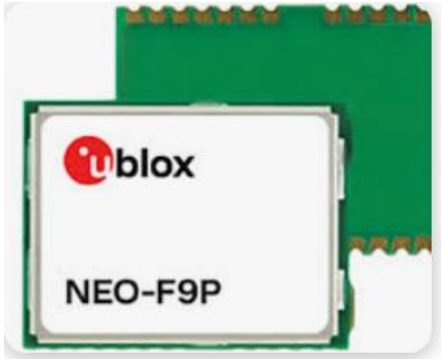
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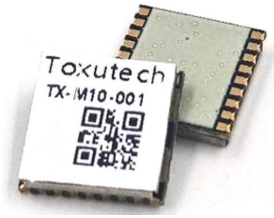
NEO-F9P


ublox
NEO-M8P


ublox
MAX-M10


SinoGNSS
K803
GNSS
Module


Toxutech
TX-M10-001


unicore
UM980


unicore
UM960


NAV3120
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SN: XXXXXXXXXX
ASENSING


NAV3320
SAA
ASENSING

Brand	UBX-M8030	UBX-M8130	UBX-M8230	UBX-M10050	UBX-G7020	MTK-3335AT	MTK-AG3331	NEO F9P-15B-00	ZED-F9P-01B
chip	M8030	M8130	M8230	M10050	G7020	MTK-3335AT	MTK-AG3331	NAV3320	NAV3120
Alternative models	**TX-UM826/UM810**	**TX-UM826-01**	**TX-UM826-02**	**TX-UM10-26**	**TX-UG26**	**TX-MAG3-26SB**	**TX-MAG3-26**	**TX-NAV3320/UM960**	**TX-NAV3120/UM980**
size	12x16x2.4mm/10.1x9.7x2.4mm	12x16x2.4mm	12x16x2.4mm	12x16x2.4mm/10.1x9.7x2.4mm	12x16x2.4mm/10.1x9.7x2.4mm	12x16x2.4mm	12x16x2.4mm	12mm*16mm*2.6mm（LGA 24PIN）	17mm*22mm*3.1mm（LGA 54PIN）
GPS Signal	GPS/BDS/GLO/GAL	GPS/BDS/GLO/GAL	GPS/BDS/GLO/GAL	GPS/BDS/GLO/GAL	GPS	GPS/BDS/GLO/GAL/SBAS	GPS/BDS/GLO	GPS/BDS/GLO/GAL L1L2L5	GPS/BDS/GLO/GAL L1L2L5
Number of channels	72	72	72	72	56	72	72	1040	1040
Positioning mode	Single system; Multiple systems	Single system; Multiple systems	Single system; Multiple systems	Single system; Multiple systems	Single system;	Single system; Multiple systems	Single system; Multiple systems	Multiple systems	Multiple systems
Cold start acquisition/tracking sensitivity	-157/-165dBm	-148/-164dBm	-148/-167dBm	-148/-167dBm	-148/-162dBm	-161dBm/-167dBm	-163dBm/-165dBm	-145/-160dBm	-145/-160dBm

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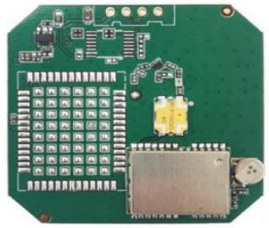

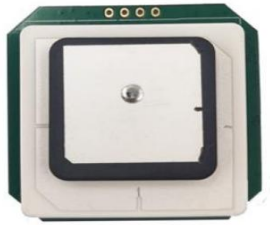


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3V3
SDA
SCL
RTK
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RST
SAFE
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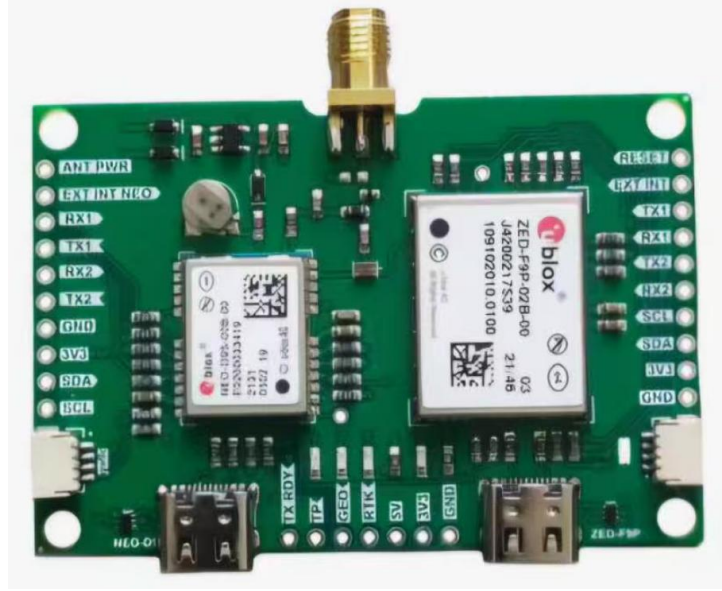
GPS_FIX
5V
TX2
RX2
CS
TX/MISO
SCK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RX1
TX1
RX2
TX2
GND
3V3
SDA
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RESET
EXT INT
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RX1
TX2
RX2
SCL
SDA
3V3
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Section Overview

03 / PART

Industry Solutions

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Scenario case

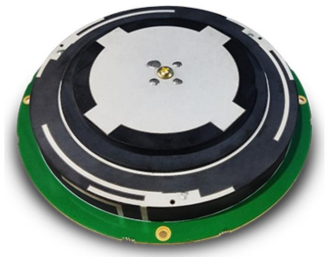
National Land Surveying and Mapping (Fixed Base Station + Mobile RTK) | Geological Disaster Monitoring, widely used to facilitate accurate surveying and monitoring.

product portfolio

A high-precision GNSS module, L1/L5 dual-band antenna, and 3D choke antenna combine for a powerful combination suitable for a variety of measurement scenarios.

Surveying and mapping

Surveying and mapping application



All in 1 GNSS/WIFI/4G Combo Antenna

3D Choke Antenna

LDS Antenna

4 stars full band gnss Surveying Antenna

L1+L5 RTK Positioning Antenna

L1+L5 RTK Positioning Antenna

Drone/Robot

01

product portfolio

Drone: rectangular aerial antenna + 5.8GHz mushroom antenna + RTK spiral antenna; Robot: UWB positioning module + anti-interference Wi-Fi antenna, lightweight design, excellent performance.

Technical indicators

Lightweight design (<20g) | Omnidirectional gain ≥5dBi, meeting the lightweight and high-performance requirements of drones and robots。

UAV/Drone application

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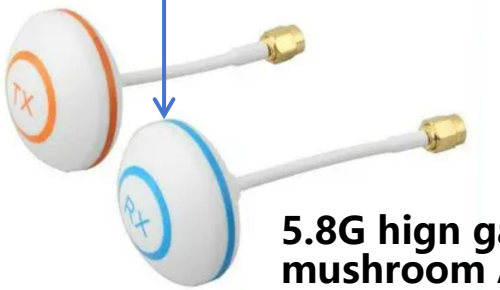
Rectangular Lightweight Aviation Antenna

RTK GNSS Helical Antenna

Circular aerial antenna



5.8G hign gain mushroom Antenna

RTK GNSS Helical Antenna

Smart agriculture

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HERE`S THE KEY INFORMATION

PART 01

product portfolio

Agricultural machinery autonomous driving: integrated antenna (GNSS+4G); soil monitoring: LoRa fiberglass antenna (433MHz), adapted for agricultural scenarios.

PART 02

Scenario advantages

Vibration and dustproof (IP68) | -40°C to 85°C wide operating temperature range, adapting to harsh agricultural environments and ensuring stable operation.

Agricultural machinery automatic driving application

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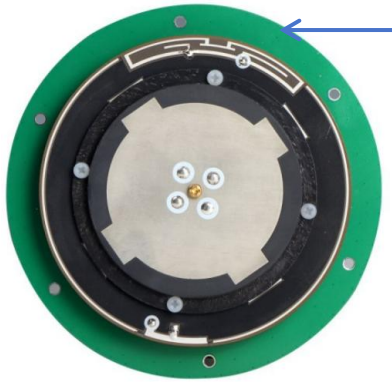
Dish-type high-precision surveying and mapping antenna

433MHZ Suction cup antenna



All-in-one autonomous driving antenna

TNC Jumper cable

Vehicle all-in-one Antenna

433MHZ Suction cup antenna

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Foundation reinforcement system (CORS)

/ 01

product portfolio

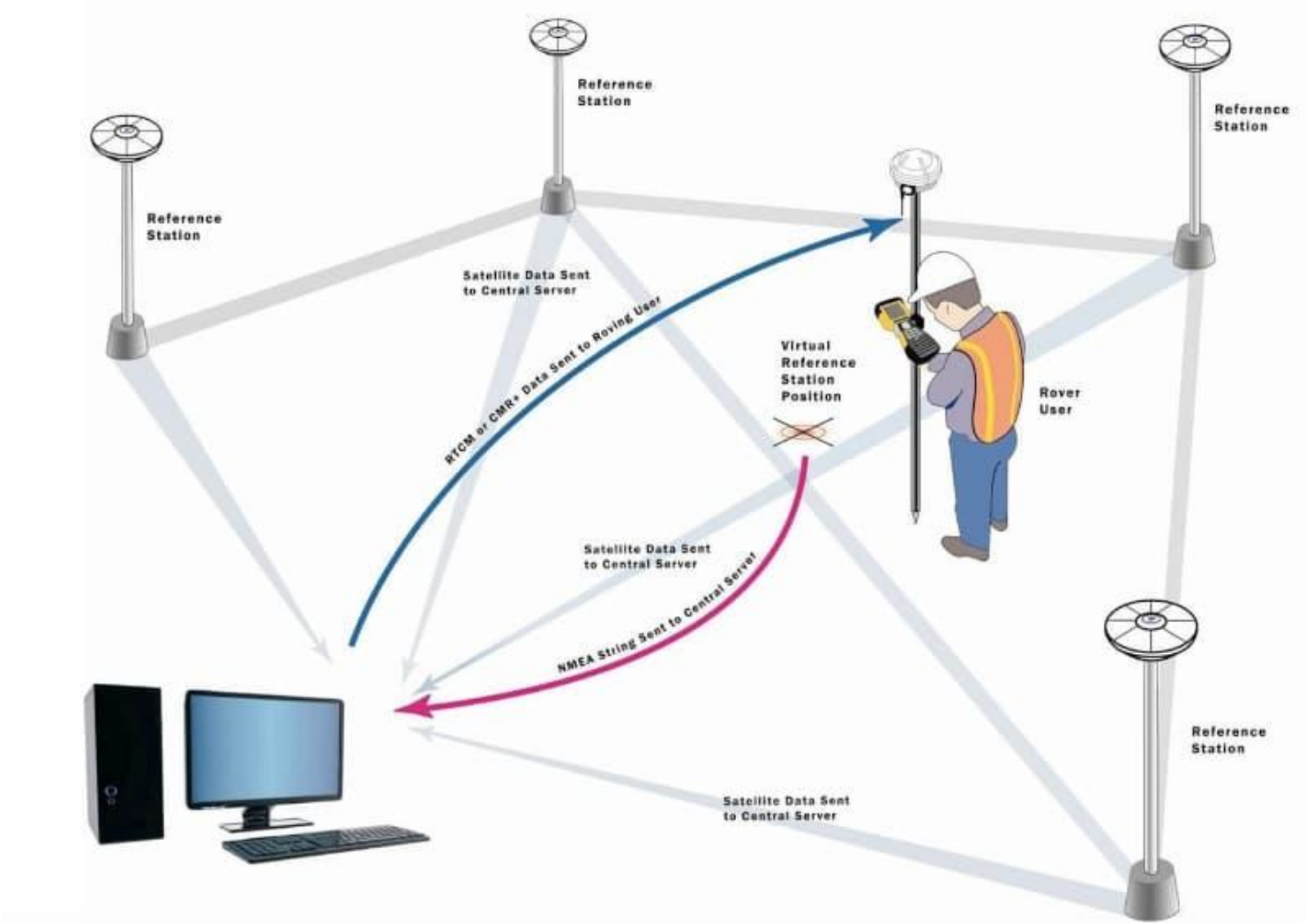
A comprehensive combination of multi-satellite full-band mapping antenna + N-type cable assembly + high-stability crystal oscillator module, compatible with CORS systems.

/ 02

technical barriers

Phase center error <0.5mm | Multipath suppression technology, high precision, high reliability, ensuring stable system operation.

Cors station antenna application



Base station antenna application

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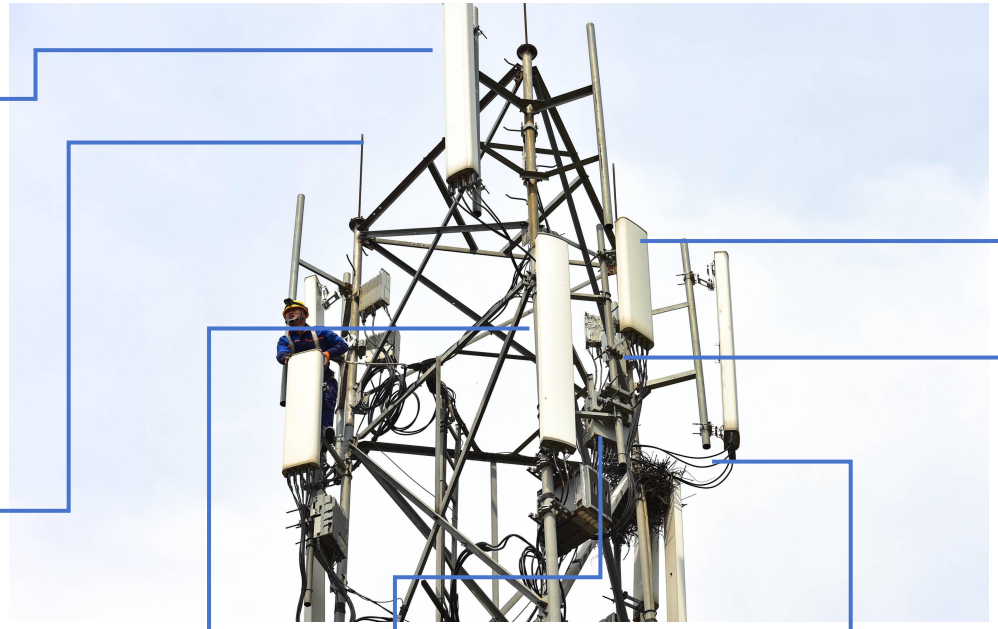
5G base station Antenna



5G wall mount antenna

GPS&BD Mushroom Antenna

GPS&BD Mushroom Antenna

Timing GPS Antenna

GPS&GLONASS &BD Mushroom Antenna

GPS&BD Antenna

Internet of Things

product portfolio

Meter: 433MHz spring antenna/suction cup antenna; Industrial sensor: NB-IoT embedded antenna; Connection solution: LoRaWAN gateway (10km long range), adaptable to various IoT scenarios.

PC & Notebook application

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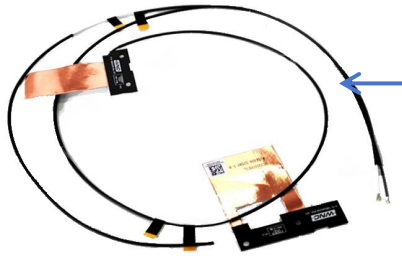
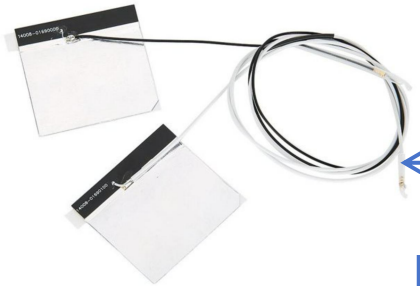
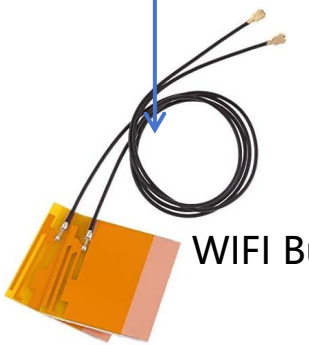


4G/ WIFI Bulid-in Antenna



WIFI Build-in Antenna

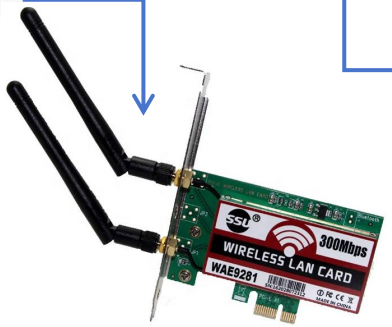
WIFI Build-in Antenna



WIFI Build-in Antenna

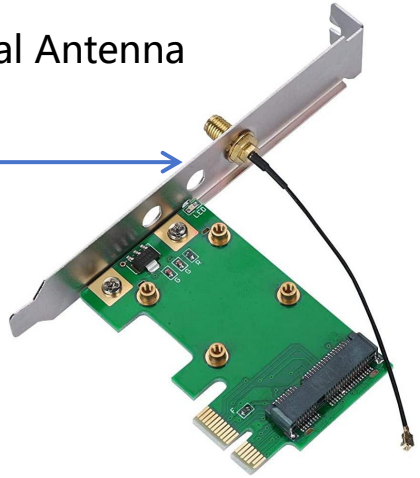
MIMO WIFI
External Antenna

WIFI External Antenna



External network card WIFI antenna

WIFI External Antenna



Internet of things application

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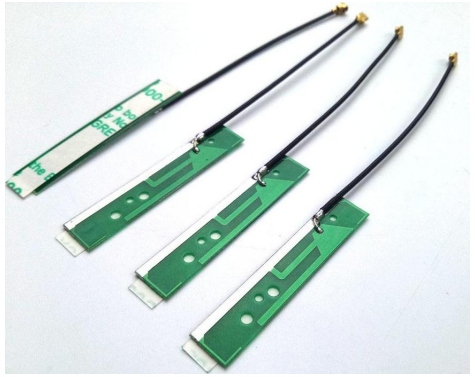
smart water meter

smart meter

smart gas meter

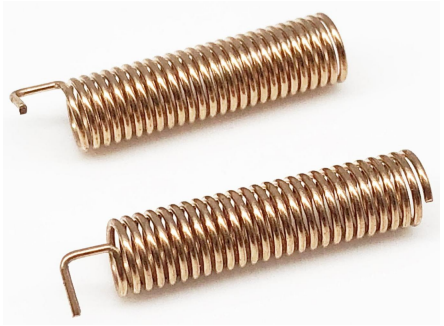
wireless smoke detector

433MHz Sucker antenna



WIFI Antenna

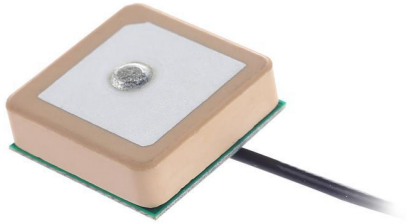
GPS Positioning Antenna



433Mhz Spring Antenna

4G Antenna

Wearable application



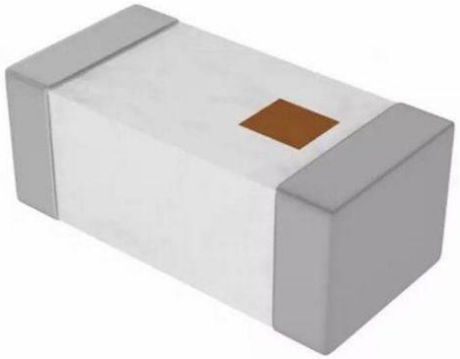
GPS Ceramic Antenna

Watch LDS Antenna

GPS Ceramic Antenna

3.2*1.6 Chip Antenna

WIFI Chip Antenna



5.0*2.0 Chip Antenna

Intelligent connected cars

Solution architecture

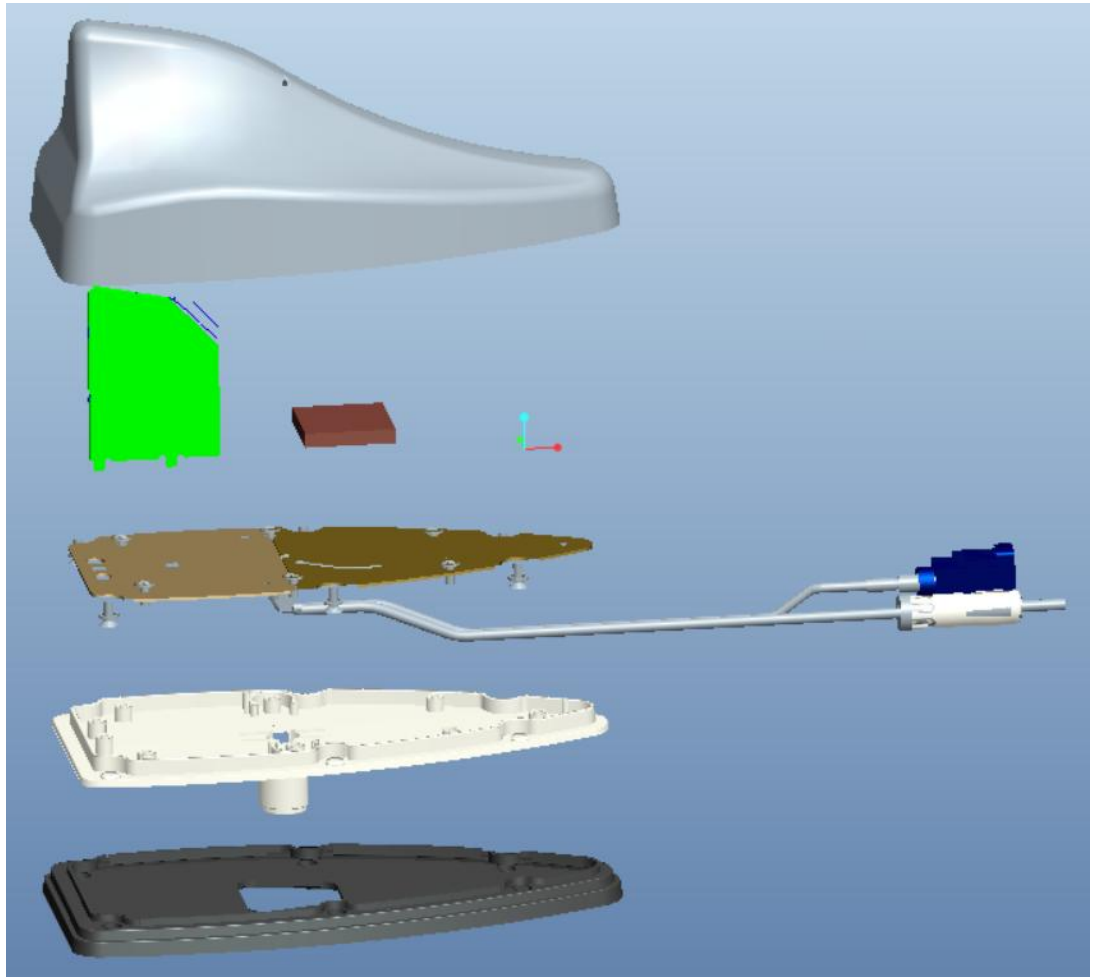
The diagram shows the solution architecture and clearly illustrates the layout of the intelligent connected vehicle antenna system.

Customer case

Wuling (low-cost shark fin) | IKCO (Middle East sand control) | Xidi (V2X+RTK fusion) – with a wide range of customers and rich case studies, demonstrates its strength.

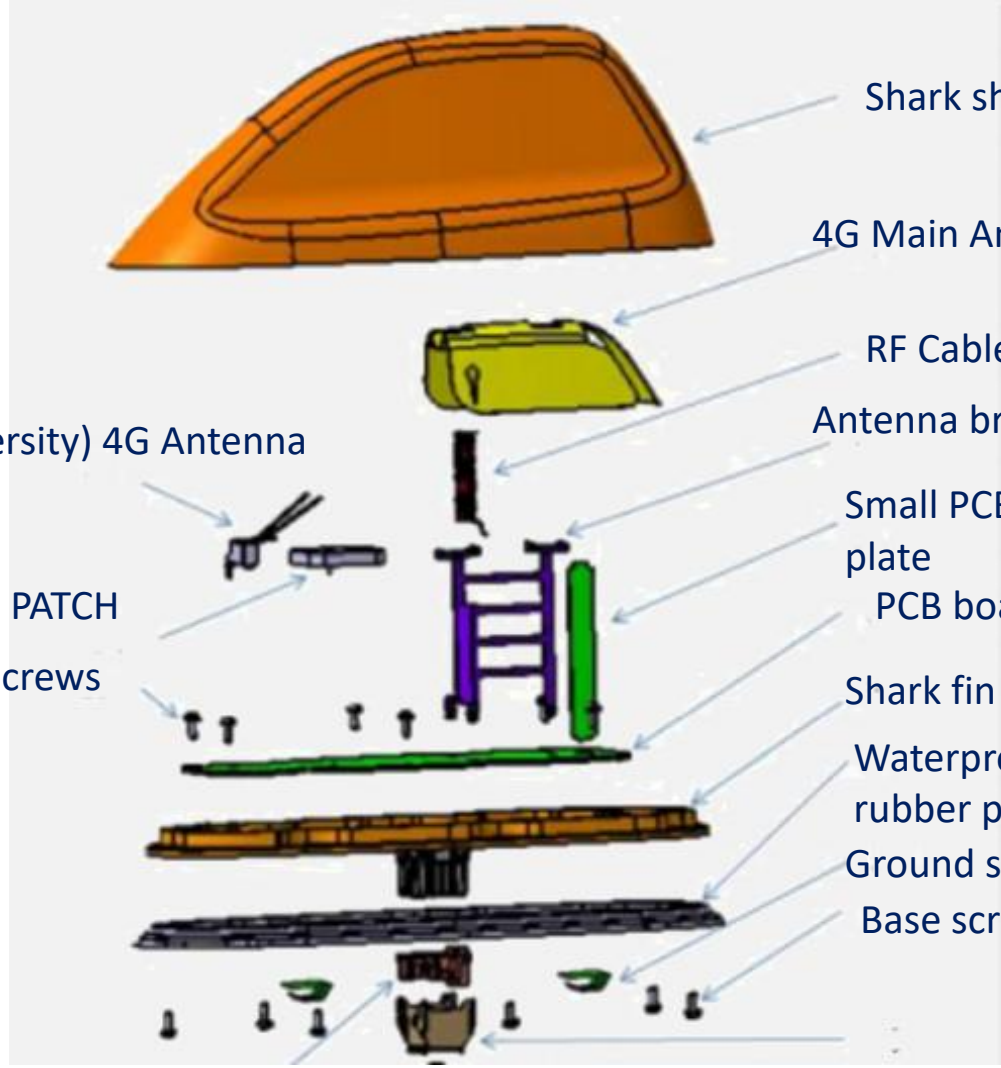
1. BAIC shark fin antenna

Shipments		2017~2020年 10K/month
	Function	AM/FM+GNSS
	Frequency	AM： 530 kHz to 1710 kHz FM： 76.0 MHz to 107.9 MHz GNSS: 1561MHz to 1576MHz
	Gain	AM:0~3dB FM:15±3dB GNSS:28±3dB
	Voltage	AM/FM:12±3V GNSS:3.3~5V
	Cable	AM/FM: 1.5C-2V/JASO
	Connector	GNSS: FAKRA C code
	Waterproof	IP67



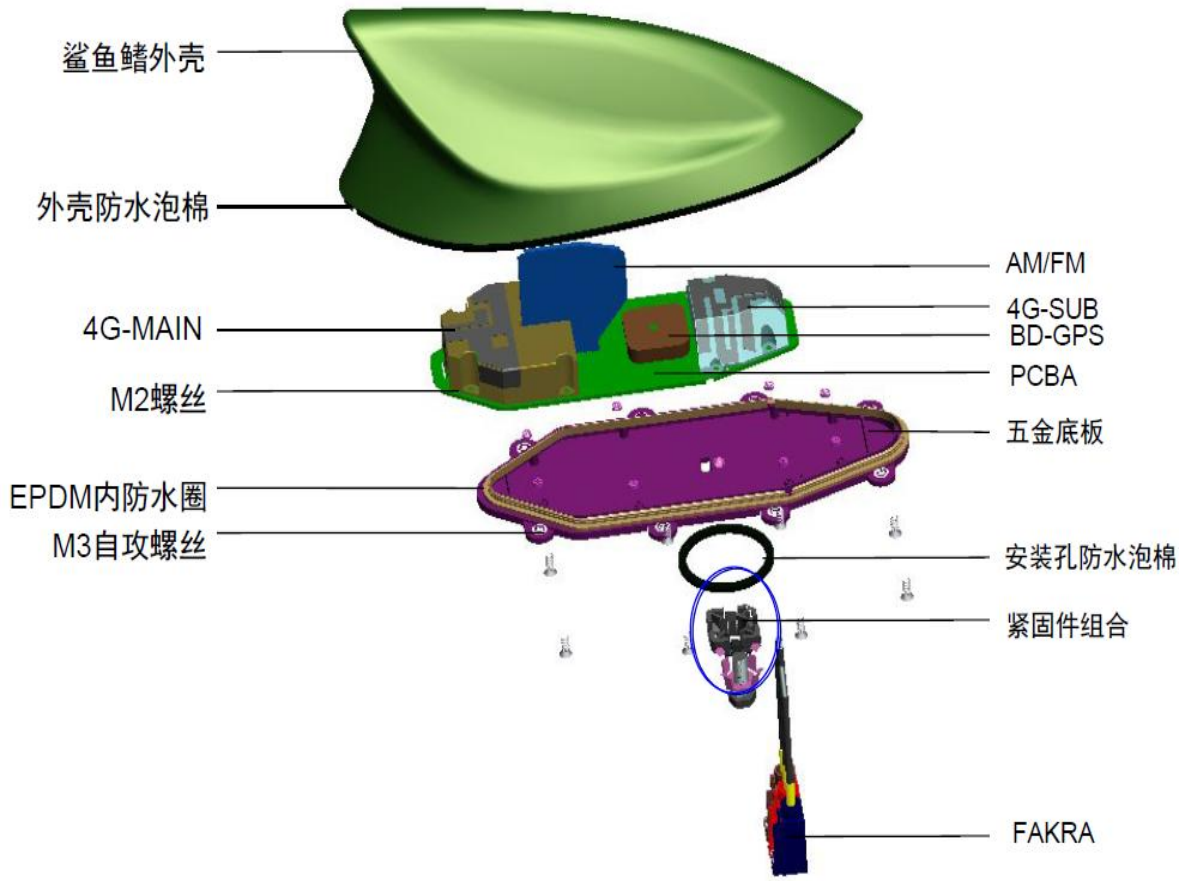
2. SAIC 4G+GPS shark fin antenna

Shipment		2016~2019 5K/Month
	Function	4G mimo +GNSS
	Frequency	4G: 824~960MHZ, 1710~2690MHZ GNSS: 1561MHz to 1576MHz
	Gain	4G :0dB typ. @824~960MHZ 1dB typ. @1710~2690MHZ GNSS:28±3dB
	Voltage	4G :0V GNSS :3.3~5V
	Cable	RG174 CABLE
	Connector	4G M： FAKRA D code 4G D： FAKRA K code GNSS: FAKRA C code
	Waterproof level	IP67



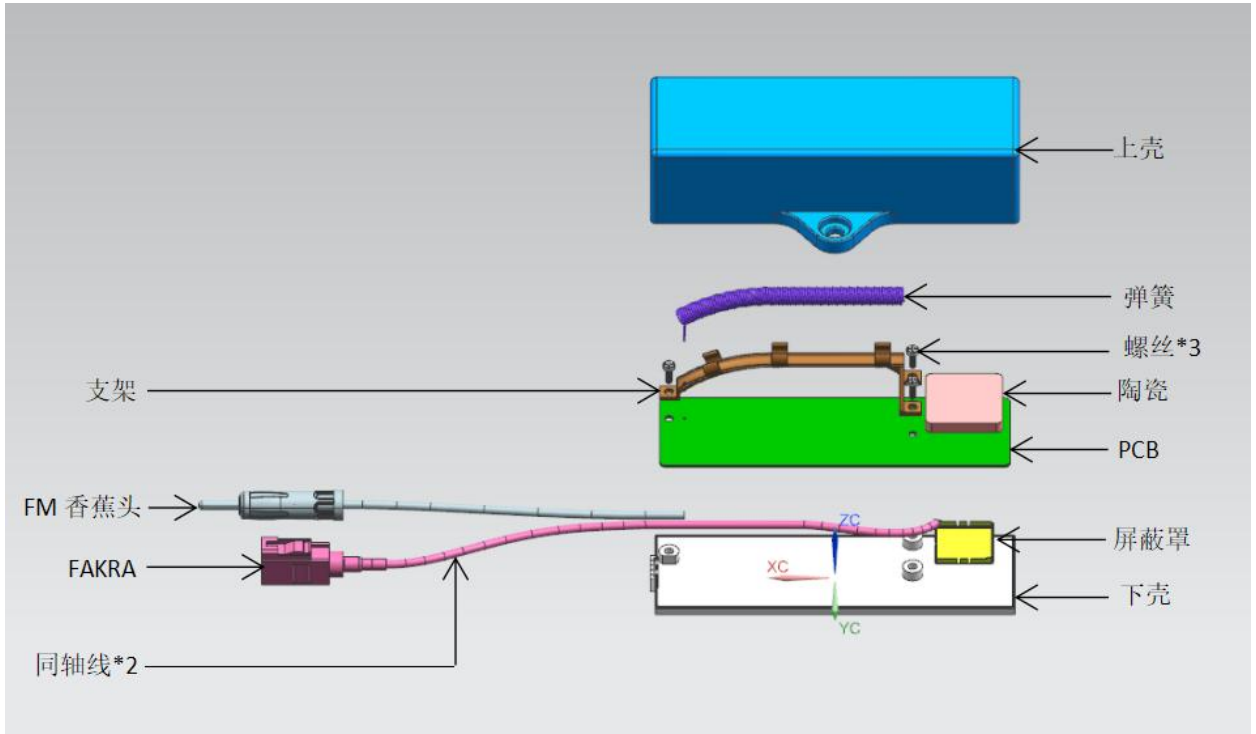
3. JAC 4G+GPS+AMFM Shark fin Antenna

Shipment		2015~2018 2K/Month
	Function	4G mimo +GNSS+AM/FM
	Frequency	4G: 824~960MHZ, 1710~2690MHZ GNSS: 1561MHz to 1576MHz
	Gain	4G :0dB typ. @824~960MHZ 1dB typ. @1710~2690MHZ GNSS:28±3dB AM： 530 kHz to 1710 kHz FM： 76.0 MHz to 107.9 MHz
	Voltage	4G :0V GNSS :3.3~5V AM/FM: 12±3V
	Cable	4G/GNSS: RG174 CABLE AM/FM: 1.5C-2V
	Connector	4G M： FAKRA D code 4G D： FAKRA K code GNSS: FAKRA C code AM/FM: FAKRA A code
	Waterproof level	IP67



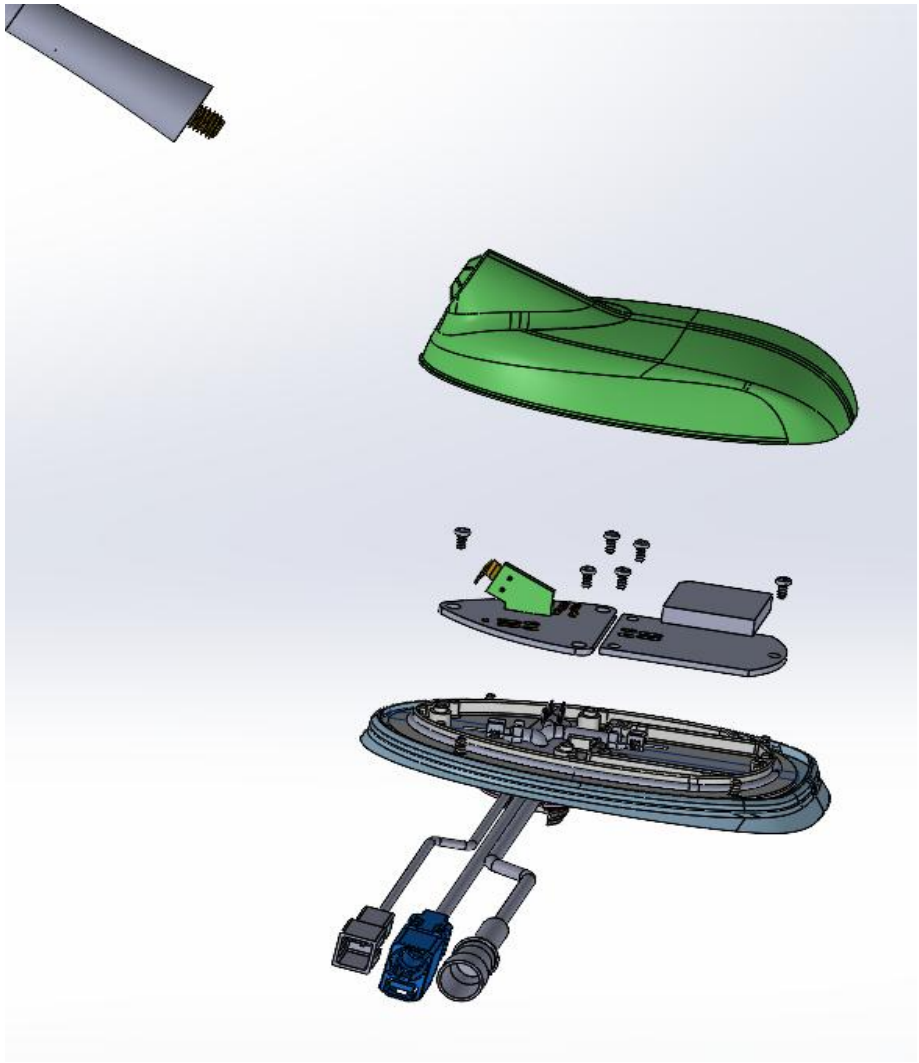
4.WuLing AM FM+GPS Shark fin Antenna

Shipment		2024~2025 5K/Month
	Function	AM/FM+GNSS
	Frequency	AM FM: AM: 520-1710khz / FM: 87.5-108 MHz GNSS: 1561MHz to 1576MHz
	Gain	GNSS:28±3dB AM： 520 kHz to 1710 kHz FM： 76.0 MHz to 107.9 MHz
	Voltage	GNSS :3.3~5V AM/FM: 12±3V
	Cable	GNSS: RG174 CABLE AM/FM: 1.5C-2V
	Connector	GNSS: FAKRA C code AM/FM: JASO
	Waterproof level	IP67



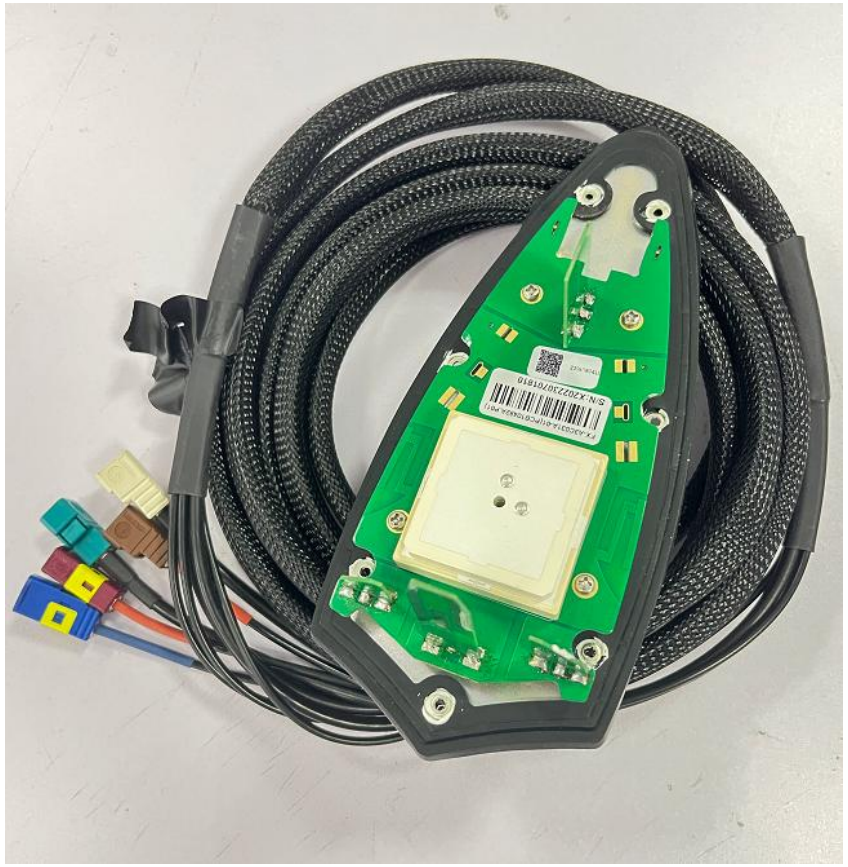
5.IKCO AM FM Shark fin Antenna

Shipment		2021~2025 10K/Month
	Function	AM/FM+GNSS
	Frequency	AM FM: AM: 520-1710khz / FM: 87.5-108 MHz GNSS: 1561MHz to 1576MHz
	Gain	GNSS:28±3dB AM： 520 kHz to 1710 kHz FM： 76.0 MHz to 107.9 MHz
	Voltage	GNSS :3.3~5V AM/FM: 12±3V
	Cable	4G/GNSS: RG174 CABLE AM/FM: 1.5C-2V
	Connector	GNSS: FAKRA C code AM/FM: JASO
	Waterproof level	IP67



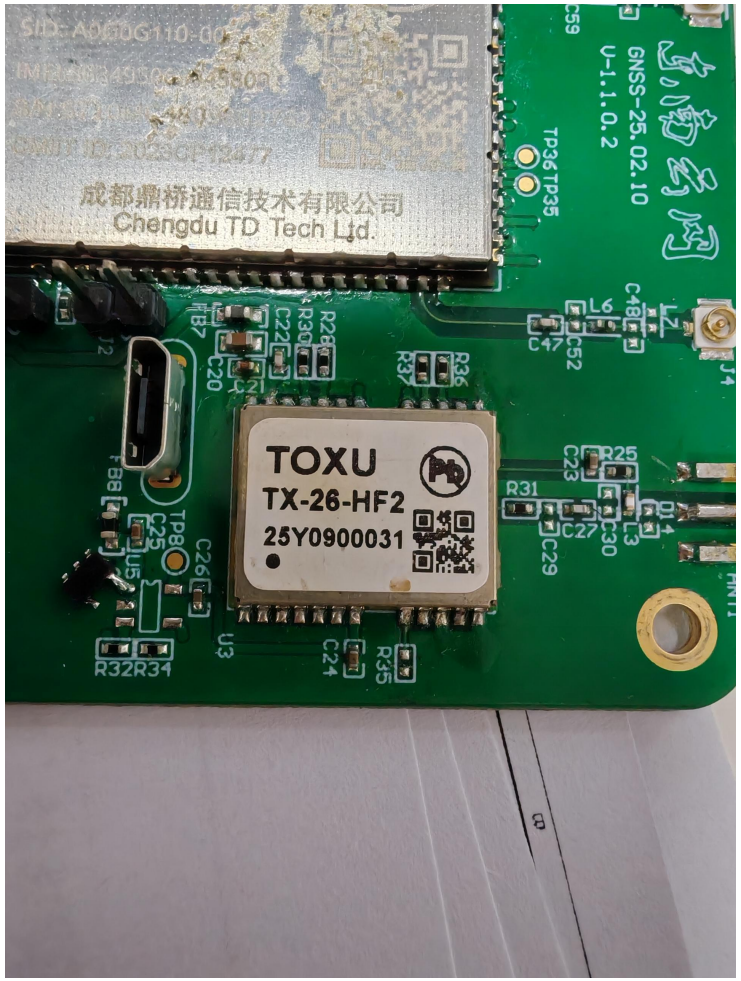
6.CIDI GNSS+V2X+4G Shark fin Antenna

Shipment		2021~2025 10K/Month
	Function	AM/FM+GNSS
	Frequency	AM FM: AM: 520-1710khz / FM: 87.5-108 MHz GNSS: 1561MHz to 1576MHz
	Gain	GNSS:28±3dB AM： 520 kHz to 1710 kHz FM： 76.0 MHz to 107.9 MHz
	Voltage	GNSS :3.3~5V AM/FM: 12±3V
	Cable	4G/GNSS: RG174 CABLE AM/FM: 1.5C-2V
	Connector	GNSS: FAKRA C code AM/FM: JASO
	Waterproof level	IP67



6.JinLong GNSS+V2X+4G Antenna

Shipment		2021~2025 10K/Month
	Function	AM/FM+GNSS
	Frequency	AM FM: AM: 520-1710khz / FM: 87.5-108 MHz GNSS: 1561MHz to 1576MHz
	Gain	GNSS:28±3dB AM： 520 kHz to 1710 kHz FM： 76.0 MHz to 107.9 MHz
	Voltage	GNSS :3.3~5V AM/FM: 12±3V
	Cable	4G/GNSS: RG174 CABLE AM/FM: 1.5C-2V
	Connector	GNSS: FAKRA C code AM/FM: JASO
	Waterproof level	IP67



Anti-Drone Solution

Counter-drone (counter-UAS) solutions are multi-layered technologies that detect, identify, and neutralize unauthorized drones via radar, RF monitoring, AI classification, and methods like jamming or precision interceptors, safeguarding critical sites and airspace while balancing security with regulatory compliance.

TOXU®

Full Aircraft Model Jamming
Covers more than 98% of the drone models on the market

Customize On Demand
Customize channel frequency

Long-Lasting
Built-in high-quality battery, long usage time

Multi-band Jamming
RC and VTX Signal Under FCC/ CE/SRRC/MIC

Easy to Carry
Portable design, lightweight equipment easy operation, high mobility

Intelligent Heat Dissipation
Intelligent cooling system, stable system operation

HERE`S THE KEY INFORMATION

TOXU®

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Customize On Demand
Customize channel frequency

Omni-directional Transmission
Meeting the needs of multi-faceted protection

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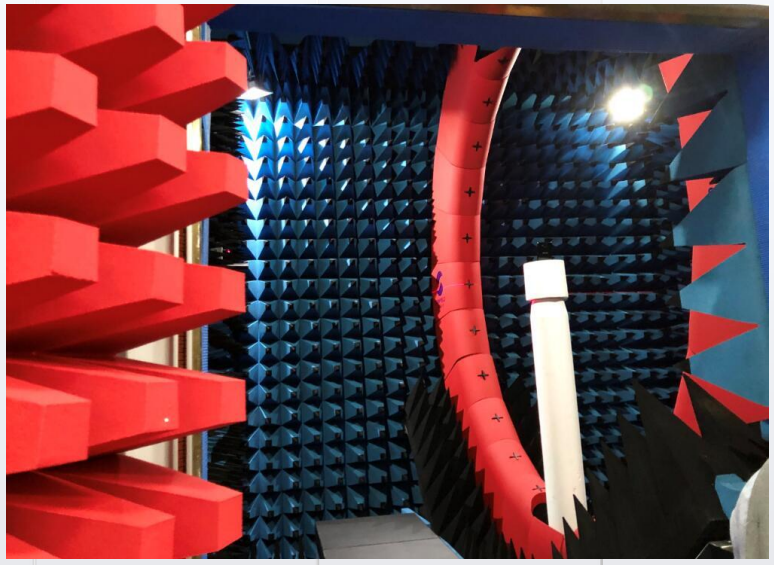
HERE`S THE KEY INFORMATION

Section Overview



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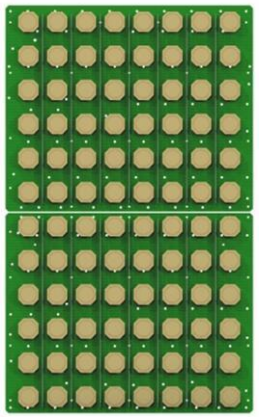
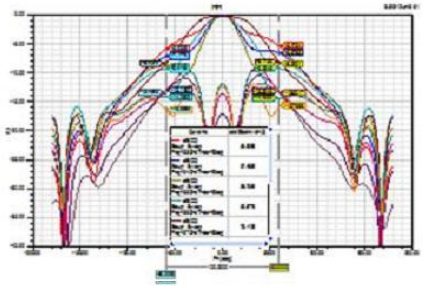
04 / PART

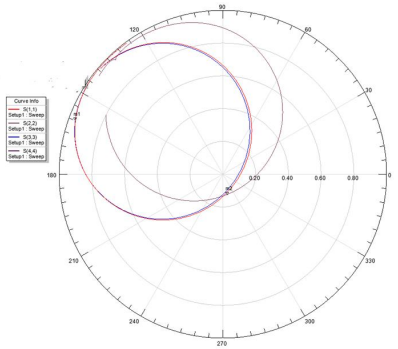
NEXT CHAPTER

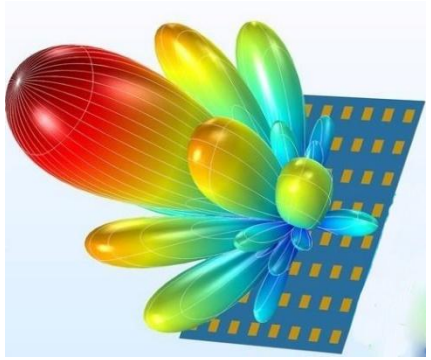
R&D Capability support

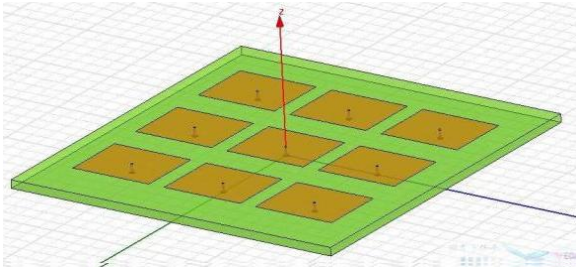
Antenna simulation

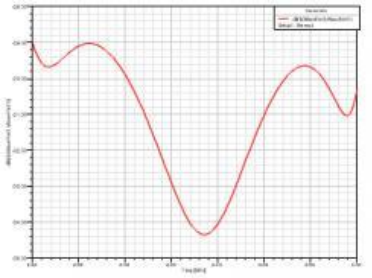


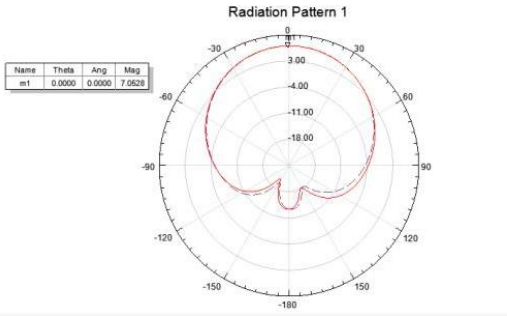


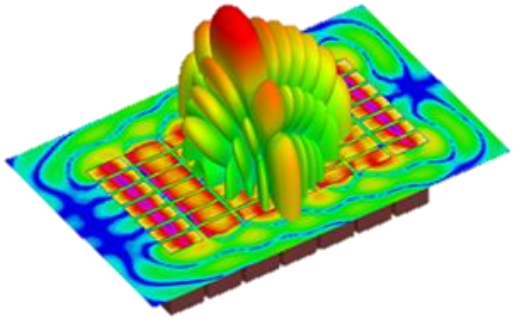






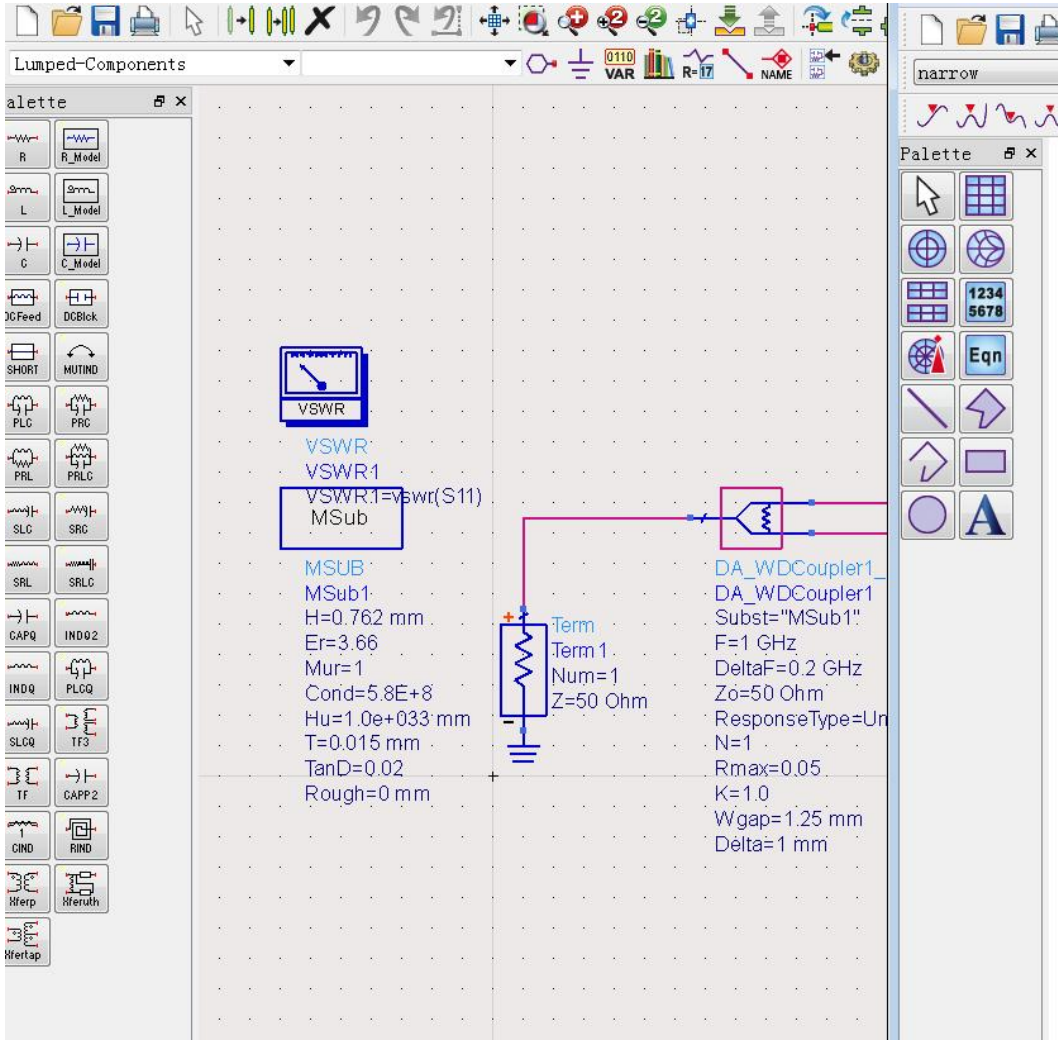


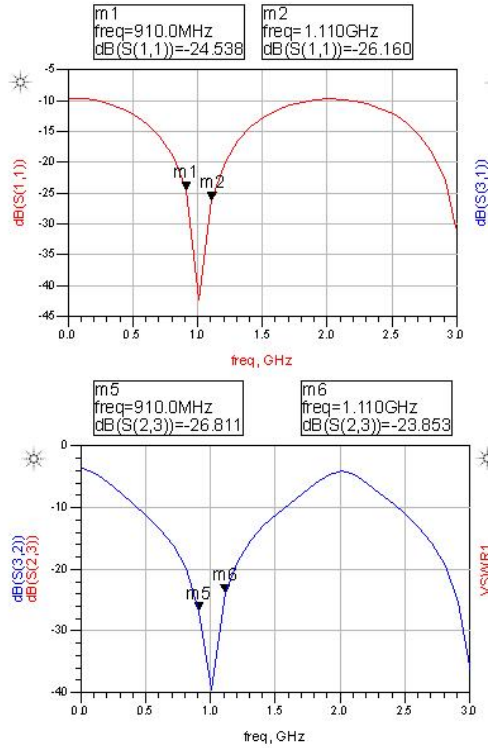


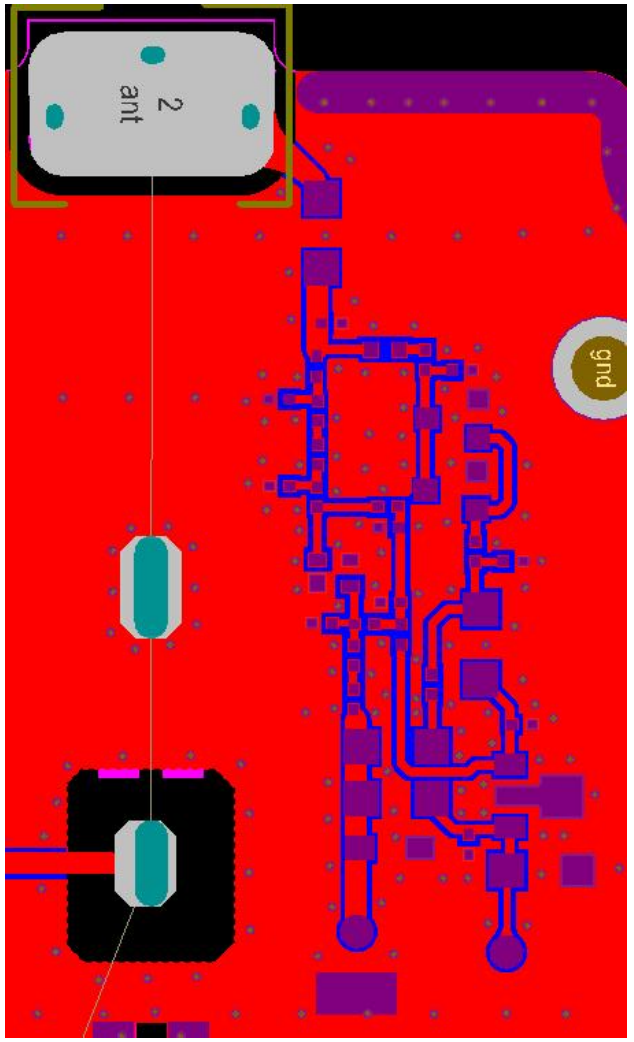


1.HFSS modeling → 2.Simulated VSWR → 3.Antenna result output → 4.Simulated Antenna 3D Pattern

Simulation design







HFSS electromagnetic field simulation + ADS circuit optimization, accurate simulation, accelerated R&D process.

Testing resources

Testing facilities

OTA darkroom (10kHz-40GHz) + environmental laboratory (salt spray/vibration/high and low temperature) provide comprehensive testing to ensure product performance.

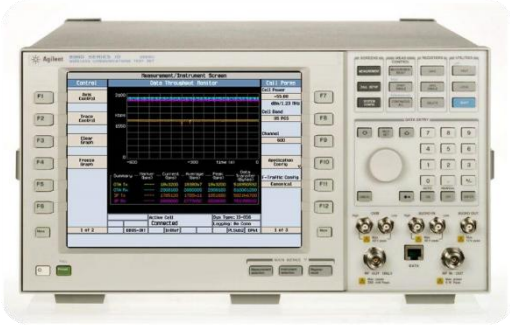
TOXU®

CLEAR & CONCISE

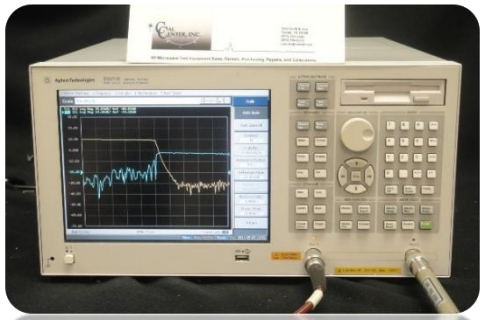
Electronic Performance Test Instrument

Uxm-5g-wireless-test-platform

CMW500-wireless-test-platform



E5071B Keysight Network Analyzers



E5071C Keysight Network Analyzers

8753ES Network Analyzers

8594E Signal-generators

Section Overview

TOXU®

05 / PART

NEXT CHAPTER

Why TOXU?

TOXU®

vertical integration

Vertical integration of antenna → cable → connector → module provides a one-stop solution and reduces customer costs.

1.30-year legacy in the antenna industry, with profound expertise in R&D and manufacturing.
2.Proven partnerships with Fortune Global 500 enterprises, including Huawei, Luxshare, and Amphenol.
3.Leading-edge microwave anechoic chambers, excelling in 5G general-purpose testing capabilities.
4.IATF 16949 certification, meeting rigorous quality standards for automotive applications.
5.Customized patented solutions for customer product protection, safeguarding innovations

THANK YOU

TOXU®

PRESENTATION
TITLE