



深圳北斗天芯科技有限公司（简称“北斗天芯”）是一家专注于卫星通信抗干扰技术研发的国家高新技术企业，技术团队拥有20年北斗卫星体系建设经验。公司致力于提供全自研、全国产的卫星通信抗干扰产品和解决方案，服务于无人机、空中出租车、物流配送等工业及商业领域。

北斗天芯的愿景是结合卫星导航与抗干扰技术，为低空经济提供安全、可靠的导航服务，确保其安全、稳定、可持续发展。公司拥有强大的研发团队，研发出适应低空需求的高精度定位产品，如芯片、板卡和模组，确保在复杂地形、电子干扰环境下的稳定导航信号。

作为低空经济领域卫星通信抗干扰技术的领先供应商，北斗天芯持续优化产品与服务。公司团队以创新、协作、诚信为准则，作为低空经济领域的重要参与者和推动者，为中国智造贡献力量。

Shenzhen Tenet Silicon System & Technology Co., Ltd. (referred to as "Tenet Silicon") is a national high-tech enterprise focusing on the research and development of anti-interference technology for satellite communications. The technical team has 20 years of experience in building BeiDou satellite system. The company is committed to providing fully self-developed and nationally produced satellite communication anti-interference products and solutions, serving industrial and commercial fields such as drones, air taxis, logistics and distribution.

Tenet Silicon's vision is to combine satellite navigation and anti-interference technology to provide safe and reliable navigation services for the low-altitude economy to ensure its safe, stable and sustainable development. The company has a strong R&D team to develop high-precision positioning products that meet low-altitude needs, such as chips, boards and modules, to ensure stable navigation signals in complex terrain and electronic interference environments.

As a leading supplier of satellite communication anti-interference technology in the low-altitude economy field, Tenet Silicon continues to optimize its products and services. The company's team takes innovation, collaboration and integrity as the criterion, and serves as an important participant and promoter in the low-altitude economy field, contributing to China's intelligent manufacturing.



双频八通道抗干扰终端

Dual frequency 8 channel anti-interference terminal

参数 Parameter

抗干扰能力:

单干: $\geq 95\text{dBc}$

三干: $\geq 85\text{dBc}$

干扰类型:

带限高斯白干扰、扩频匹配谱干扰

脉冲干扰、扫频干扰

混合干扰

抗干扰空域、方位: $0\sim 360^\circ$ 、俯仰 $-90\sim 90^\circ$

体积: $130\times 135\times 38\text{mm}$

功耗: $\leq 10\text{W}$ (常温)

重量: $\leq 400\text{g}$

射频输出说明:

输出信号频率: $1575.42\text{MHz}\setminus 1268.52\text{MHz}$

输出信号带内功率: $-70\sim -60\text{dBm}$

输出阻抗: 50Ω

Anti-interference capability:

ISR: Single $\geq 95\text{dBc}$

Three $\geq 85\text{dBc}$

Interference Type:

Band-limited Gaussian white noise interference,

Spread spectrum matched filter interference

Pulse interference, sweep interference

Mixed interference

Anti-interference airspace\orientation:

$0^\circ\sim 360^\circ$, pitch: $-90^\circ\sim 90^\circ$

Volume: $130\times 135\times 38\text{mm}$

Power consumption: $\leq 10\text{W}$ (room temperature)

Weight: $\leq 400\text{g}$

RF output description:

Output signal frequency: $1575.42\text{MHz}\setminus 1268.52\text{MHz}$

In-band power of output signal: $-70\sim -60\text{dBm}$

Output impedance: 50 ohms

【TX-007Pro-8CH-DF-WG-DR】



描述

本产品型号为TX-007Pro-8CH-DF-WG-DR。服务于无人机、无人车等可靠导航等领域,保护用户终端免受各类无意干扰、恶意攻击,大幅提升PNT信息安全。

The product model TX-007Pro-8CH-DF-WG-DR is designed to serve reliable navigation in fields such as drones and unmanned vehicles. It protects user terminals from various unintentional interferences and malicious attacks, significantly enhancing PNT (Positioning, Navigation, and Timing) information security.

四通道抗干扰终端

Four channel anti-interference terminal

参数 Parameter

抗干扰能力:

单干: $\geq 95\text{dBc}$

三干: $\geq 85\text{dBc}$

干扰类型:

带限高斯白干扰、扩频匹配谱干扰

脉冲干扰、扫频干扰

混合干扰

抗干扰空域、方位: $0\sim 360^\circ$ 、俯仰 $-90\sim 90^\circ$

体积: $100\times 100\times 25\text{mm}$

功耗: 7.2W (常温,含定位模块)

重量: $\leq 300\text{g}$

Anti-interference capability:

ISR: Single $\geq 95\text{dBc}$

Three $\geq 85\text{dBc}$

Interference Type:

Band-limited Gaussian white noise interference,

Spread spectrum matched filter interference

Pulse interference, sweep interference

Mixed interference

Anti-interference airspace\orientation:

$0^\circ\sim 360^\circ$, pitch: $-90^\circ\sim 90^\circ$

Volume: $100\times 100\times 25\text{mm}$

Power consumption: 7.2W (room temperature, including positioning module)

Weight: $\leq 300\text{g}$

【TX-008Pro-B1L1-100-12V】



描述

本产品型号为TX-008Pro-B1L1-100-12V,为100mm口径的高集成度超小型阵列天线抗干扰终端。主要服务于中小型无人机,保护用户终端免受各类无意干扰、恶意攻击,大幅提升PNT信息安全。

The product model TX-008Pro-B1L1-100-12V is a highly integrated ultra-compact antenna array terminal with a 100mm aperture designed to resist interference. It primarily serves small to medium-sized drones, protecting user terminals from various unintentional interferences and malicious attacks, significantly enhancing PNT (Positioning, Navigation, and Timing) information security.





双频八通道抗干扰终端

Dual frequency 8 channel anti-interference terminal

【TX-009-8CH-BD-WG-DT】



参数 Parameter

抗干扰能力:

单干: $\geq 95\text{dBc}$
三干: $\geq 85\text{dBc}$

Anti-interference capability:

ISR: Single $\geq 95\text{dBc}$
Three $\geq 85\text{dBc}$

干扰类型:

带限高斯白干扰、扩频匹配谱干扰
脉冲干扰、扫频干扰
混合干扰

Interference Type:

Band-limited Gaussian white noise interference,
Spread spectrum matched filter interference
Pulse interference, sweep interference
Mixed interference

抗干扰空域、方位: $0\sim 360^\circ$ 、俯仰- $90\sim 90^\circ$

体积: $150\times 130\times 26.5\text{mm}$

功耗: $\leq 17\text{W}$ (常温)

重量: $\leq 500\text{g}$

Anti-interference airspace\orientation:

$0^\circ\sim 360^\circ$, pitch: $-90^\circ\sim 90^\circ$

Volume: $150\times 130\times 26.5\text{mm}$

Power consumption: $\leq 17\text{w}$ (room temperature)

Weight: $\leq 500\text{g}$

射频输出说明:

输出信号频率: $1575.42\text{MHz}\setminus 1268.52\text{MHz}$

输出信号带内功率: $-70\sim -60\text{dBm}$

输出阻抗: 50Ω

RF output description:

Output signal frequency: $1575.42\text{MHz}\setminus$
 1268.52MHz

In-band power of output signal: $-70\sim -60\text{dBm}$

Output impedance: 50 ohms

描述

本产品型号为TX-009-8CH-BD-WG-DT, 是一款面向民用无人机、行业用户需求的小型化卫星导航抗干扰一体机, 支持BDS-B1、BDS-B3、GPS-L1频点信号接收, 支持B1/B3/L1抗宽带干扰能力, 抗最大干扰数3。内部集成天线阵列、抗干扰组件以及卫星导航接收机, 服务于无人机、无人车等可靠导航等领域, 保护用户终端免受各类无意干扰、恶意攻击, 大幅提升PNT信息安全。

The product model TX-009-8CH-BD-WG-DT is a compact satellite navigation and anti-interference integrated system tailored for civilian drones and industrial users. It supports dual-frequency signal reception of BeiDou-3 RNSS B1/B3 and features anti-wideband interference capability on B1/B3 frequencies with a maximum interference tolerance of 3. Internally integrated with antenna arrays, anti-interference components, and satellite navigation receivers, it serves reliable navigation in fields such as drones and unmanned vehicles, protecting user terminals from various unintentional interferences and malicious attacks, significantly enhancing PNT (Positioning, Navigation, and Timing) information security.

双频八通道抗干扰终端

Dual frequency 8 channel anti-interference terminal

【TX-009Pro-8CH-BD-WG-DT】



参数 Parameter

抗干扰能力:

单干: $\geq 105\text{dBc}$
三干: $\geq 95\text{dBc}$

Anti-interference capability:

ISR: Single $\geq 105\text{dBc}$
Three $\geq 95\text{dBc}$

干扰类型:

带限高斯白干扰、扩频匹配谱干扰
脉冲干扰、扫频干扰
混合干扰

Interference Type:

Band-limited Gaussian white noise interference,
Spread spectrum matched filter interference
Pulse interference, sweep interference
Mixed interference

抗干扰空域、方位: $0\sim 360^\circ$ 、俯仰- $90\sim 90^\circ$

体积: $150\times 130\times 26.5\text{mm}$

功耗: $\leq 17\text{W}$ (常温)

重量: $\leq 500\text{g}$

Anti-interference airspace\orientation:

$0^\circ\sim 360^\circ$, pitch: $-90^\circ\sim 90^\circ$

Volume: $150\times 130\times 26.5\text{mm}$

Power consumption: $\leq 17\text{w}$ (room temperature)

Weight: $\leq 500\text{g}$

射频输出说明:

输出信号频率: $1575.42\text{MHz}\setminus 1268.52\text{MHz}$

输出信号带内功率: $-70\sim -60\text{dBm}$

输出阻抗: 50Ω

RF output description:

Output signal frequency: $1575.42\text{MHz}\setminus$
 1268.52MHz

In-band power of output signal: $-70\sim -60\text{dBm}$

Output impedance: 50 ohms

描述

本产品型号为TX-009Pro-8CH-BD-WG-DT, 是一款面向民用无人机、行业用户需求的小型化卫星导航抗干扰一体机, 支持BDS-B1、BDS-B3、GPS-L1频点信号接收, 支持B1/B3/L1抗宽带干扰能力, 抗最大干扰数3。内部集成天线阵列、抗干扰组件以及卫星导航接收机, 服务于无人机、无人车等可靠导航等领域, 保护用户终端免受各类无意干扰、恶意攻击, 大幅提升PNT信息安全。

The product model TX-009Pro-8CH-BD-WG-DT is a compact satellite navigation and anti-interference integrated system tailored for civilian drones and industrial users. It supports dual-frequency signal reception of BeiDou-3 RNSS B1/B3 and features anti-wideband interference capability on B1/B3 frequencies with a maximum interference tolerance of 3. Internally integrated with antenna arrays, anti-interference components, and satellite navigation receivers, it serves reliable navigation in fields such as drones and unmanned vehicles, protecting user terminals from various unintentional interferences and malicious attacks, significantly enhancing PNT (Positioning, Navigation, and Timing) information security.



三频八通道抗干扰终端

Three frequency 8 channel anti-interference terminal

参数 Parameter

抗干扰能力:

单干: $\geq 105\text{dBc}$

三千: $\geq 95\text{dBc}$

干扰类型:

带限高斯白干扰、扩频匹配谱干扰

脉冲干扰、扫频干扰

混合干扰

抗干扰空域、方位: $0\sim 360^\circ$ 、俯仰- $90\sim 90^\circ$

体积: $150\times 130\times 21\text{mm}$

功耗: $\leq 12\text{W}$ (常温)

重量: $\leq 400\text{g}$

射频输出说明:

输出信号频率: $1561.098\text{MHz}\setminus 1575.42\text{MHz}\setminus 1602\text{MHz}$

输出功率: $-70\sim -60\text{dBm}$

输出阻抗: 50Ω

Anti-interference capability:

ISR: Single $\geq 105\text{dBc}$

Three $\geq 95\text{dBc}$

Interference Type:

Band-limited Gaussian white noise interference,

Spread spectrum matched filter interference

Pulse interference, sweep interference

Mixed interference

Anti-interference airspace\orientation:

$0^\circ\sim 360^\circ$,pitch: $-90^\circ\sim 90^\circ$

Volume: $150\times 130\times 21\text{mm}$

Power consumption: $\leq 12\text{w}$ (room temperature)

Weight: $\leq 400\text{g}$

RF output description:

Output signal frequency: $1561.098\text{MHz}\setminus$

$1575.42\text{MHz}\setminus 1602\text{MHz}$

RF output power: $-70\sim -60\text{dBm}$

Output impedance: 50 ohms

[TX-009Pro-8CH-G1-WG-DT]



描述

本产品型号为TX-009Pro-8CH-G1-WG-DT,是一款面向民用无人机、行业用户需求的小型化卫星导航抗干扰一体机,支持BDS-B1、GPS-L1、GLONASS-G1三频点信号接收,支持三系统同时抗宽带干扰能力,抗最大干扰数3。内部集成天线阵列、抗干扰组件以及卫星导航接收机,服务于无人机、无人车等可靠导航等领域,保护用户终端免受各类无意干扰、恶意攻击,大幅提升PNT信息安全。

The model of this product is TX-009Pro-8CH-G1-WG-DT.It is a miniaturized satellite navigation anti-jamming all-in-one machine designed for the needs of civilian unmanned aircraft and industry users.It supports the signal reception of three frequency points:BDS-B1,GPS-L1,and GLONASS-G1.It supports the simultaneous anti-wideband interference capability of the three systems,and the maximum number of anti-jamming is 3.It integrates an antenna array,anti-jamming components, and a satellite navigation receiver internally.It serves in fields such as reliable navigation for unmanned aircraft and unmanned vehicles,protects user terminals from all kinds of unintentional interferences and malicious attacks,and significantly improves the security of PNT information.

四通道抗干扰终端

Four channel anti-interference terminal

参数 Parameter

抗干扰能力:

单干: $\geq 95\text{dBc}$

双干: $\geq 85\text{dBc}$

三千: $\geq 80\text{dBc}$

干扰类型:

带限高斯白干扰、扩频匹配谱干扰

脉冲干扰、扫频干扰

混合干扰

抗干扰空域、方位: $0\sim 360^\circ$ 、俯仰- $90\sim 90^\circ$

体积: $65\times 65\times 21\text{mm}$

功耗: $\leq 6\text{W}$ (常温)

重量: $\leq 130\text{g}$

射频输出说明

输出信号频率: $1575.42\text{MHz}\setminus 1561.098\text{MHz}$

输出信号带内功率: $-75\sim -85\text{dBm}$

输出阻抗: 50Ω

Anti-interference capability:

ISR: Single $\geq 95\text{dBc}$

Two $\geq 85\text{dBc}$

Three $\geq 80\text{dBc}$

Interference Type:

Band-limited Gaussian white noise interference,

Spread spectrum matched filter interference

Pulse interference, sweep interference

Mixed interference

Anti-interference airspace\orientation:

$0^\circ\sim 360^\circ$, pitch: $-90^\circ\sim 90^\circ$

Volume: $65\times 65\times 21\text{mm}$

Power consumption: $\leq 6\text{w}$ (room temperature)

Weight: $\leq 130\text{g}$

RF output description:

Output signal frequency: $1575.42\text{MHz}\setminus 1561.098\text{MHz}$

In-band power of output signal: $-75\sim -85\text{dBm}$

Output impedance: 50 ohms

[TX-S65-4CH-SNB]



描述

TX-S65-4CH-SNB超小型化抗干扰一体机,为65mm口径的高集成度超小型阵列天线抗干扰终端。是一款面向中小无人机等行业用户需求的卫星导航抗干扰一体机,支持B1/L1频点信号的抗宽带干扰能力和定位功能。内部集成天线阵列、抗干扰组件以及卫星导航接收机,具有小型化、轻量化、低成本等特点。

The TX-S65-4CH-SNB miniaturized anti-interference all-in-one machine is an anti-interference terminal with a highly integrated miniaturized array antenna designed to meet the needs of industry users such as small and medium-sized unmanned aircraft,supporting the anti-wideband interference capability and positioning function of B1/L1 frequency point signals.It integrates the antenna array,anti-interference components and satellite navigation receiver internally,featuring miniaturization,lightweight and low cost.



双频点双抗天线终端

Dual frequency dual anti-function terminal

参数 Parameter

抗干扰能力:

单干: $\geq 105\text{dBc}$
三干: $\geq 95\text{dBc}$

Anti-interference capability:

ISR: Single $\geq 105\text{dBc}$
Three $\geq 95\text{dBc}$

抗欺骗性能:

输出残留欺骗信号 CN0: $\leq 20\text{dB}$

Anti-spoofing performance:

Output residual spoofing signal CN0: $\leq 20\text{dB}$

干扰类型:

带限高斯白干扰、扩频匹配谱干扰
脉冲干扰、扫频干扰
混合干扰

Interference Type:

Band-limited Gaussian white noise interference,
Spread spectrum matched filter interference
Pulse interference, sweep interference
Mixed interference

抗干扰空域、方位: $0\sim 360^\circ$ 、俯仰 $-90\sim 90^\circ$

Anti-interference airspace\orientation:

$0\sim 360^\circ$,pitch: $-90\sim 90^\circ$

体积: $150\times 130\times 22\text{mm}$

Volume: $150\times 130\times 22\text{mm}$

功耗: $\leq 13\text{W}$ (常温)

Power consumption: $\leq 13\text{w}$ (room temperature)

重量: $\leq 520\text{g}$

Weight: $\leq 520\text{g}$

射频输出说明:

输出信号频率: $1561.098\text{MHz}\backslash 1575.42\text{MHz}$
输出功率: $-70\sim -60\text{dBm}$
输出阻抗: 50欧姆

RF output description:

Output signal frequency: $1561.098\text{MHz}\backslash$
 1575.42MHz
RF output power: $-70\sim -60\text{dBm}$
Output impedance: 50 ohms

【TX2501-AJS-4CH-DPA】



描述

TX2501-AJS-4CH-DPA小型化双抗一体机是一款面向民用无人机、行业用户需求的小型化卫星导航抗干扰抗欺骗一体机,支持北斗三号GPS L1和BDS B1i双频点信号接收,支持抗宽带干扰能力,抗最大干扰数3,支持抗欺骗能力。内部集成天线阵列、抗干扰组件以及卫星导航接收机,具有小型化、轻量化、低成本等特点。

The TX2501-AJS-4CH-DPA miniaturized dual-antenna integrated device is a compact satellite navigation system designed for civilian drones and industry users. It supports dual-frequency signal reception of BDS B1i and GPS L1, has anti-broadband interference capability with a maximum interference count of 3, and offers anti-spoofing capabilities. The device integrates an antenna array, anti-jamming components, and a satellite navigation receiver, featuring miniaturization, lightweight design and low cost.

小型化7阵元多系统卫星导航抗干扰一体机

Mini-7-element multi-system satellite navigation Anti-jamming ALL-IN-ONE

参数 Parameter

抗干扰能力:

单干: $\geq 110\text{dBc}$
三干: $\geq 100\text{dBc}$
六干: $\geq 90\text{dBc}$

Anti-interference capability:

ISR: Single $\geq 110\text{dBc}$
Three $\geq 100\text{dBc}$
Six $\geq 90\text{dBc}$

干扰类型:

带限高斯白干扰、扩频匹配谱干扰
脉冲干扰、扫频干扰
混合干扰

Interference Type:

Band-limited Gaussian white noise interference,
Spread spectrum matched filter interference
Pulse interference,sweep interference
Mixed interference

抗干扰空域、方位: $0\sim 360^\circ$ 、俯仰 $-90\sim 90^\circ$

Anti-interference airspace\orientation:

$0\sim 360^\circ$,pitch: $-90\sim 90^\circ$

体积: $\Phi 220\times 29.5\text{mm}$

Volume: $\Phi 220\times 29.5\text{mm}$

功耗: $\leq 25\text{W}$

Power consumption: $\leq 25\text{w}$

重量: $\leq 1200\text{g}$

Weight: $\leq 1200\text{g}$

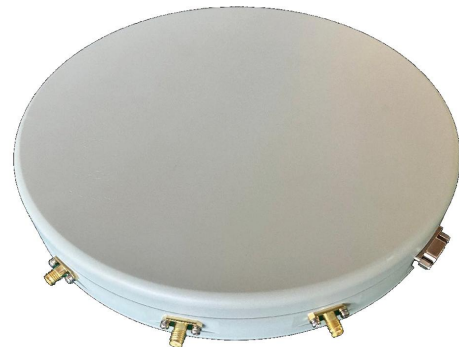
射频输出说明:

输出信号频率: $1561.098\text{MHz}\backslash 1575.42\text{MHz}\backslash$
 1602MHz
输出功率: $-70\sim -60\text{dBm}$
输出阻抗: 50欧姆

RF output description:

Output signal frequency: $1561.098\text{MHz}\backslash$
 $1575.42\text{MHz}\backslash 1602\text{MHz}$
RF output power: $-70\sim -60\text{dBm}$
Output impedance: 50 ohms

【TX2504-3T7A21C-WG-DT】



描述

小型化7阵元多系统卫星导航抗干扰一体机是一款面向民用无人机、行业用户需求的小型化卫星导航抗干扰一体机,支持BDS+GPS+GLONASS+GALILEO,支持抗宽带干扰能力,抗最大干扰数6。内部集成天线阵列、抗干扰组件以及卫星导航接收机,具有小型化、轻量化、低成本等特点。

The miniaturized 7-element multi-system satellite navigation anti-jamming integrated device is a compact satellite navigation anti-jamming integrated device designed for civilian drones and industry users. It supports BDS + GPS + GLONASS + GALILEO, with anti-broadband jamming capability and a maximum interference resistance of 6. The device integrates an antenna array, anti-jamming components, and a satellite navigation receiver, featuring miniaturization, lightweight design, and low cost.

穿越机专用超小型抗干扰终端

Ultra-compact Anti-jamming Terminal Designed for FPV Drones

参数 Parameter

抗干扰能力:

单干: 65dBc

体积:

Φ46mm x18mm

功耗: ≤60mA@5V

重量: 32±1克

信号输出说明:

BDS, GPS, GLONASS, Galileo

单点定位精度:

未受干扰: 水平 1.5 m
高程 2.5 m
受干扰: 水平≤10米
高程≤10米

Anti-Jamming Capability:

Single: 65dBc

Measurement:

Φ46mm x18mm

Power Consumption:

≤60mA@5V

Weight: 32±1g

Signal Output Description:

BDS, GPS, GLONASS, Galileo

Single-point Positioning Accuracy:

Jamming-free: Horizontal 1.5m, Vertical: 2.5m
With Jamming: Horizontal ≤10m, Vertical≤10m

【SX003-InfoxDome-ONE-FPV】



描述 Description

本产品融合接收GNSS全频点及深耦合组合导航算法，实现高精度定位与抗干扰。支持ASIL B功能安全，有效应对信号干扰、遮挡、多路径等苛刻环境，提供连续、实时、可信的高精度定位与可靠抗干扰效果。

This product integrates all GNSS frequency bands and combined deep-coupled navigation algorithms, delivering high-precision positioning and anti-jamming. ASIL B functional safety compliant, it overcomes signal interference, obstruction, and multi-path in harsh environments to provide continuous, real-time, reliable positioning and robust anti-jamming performance.