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Driving the future of LEO & UAV communications with YTTEK

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The next battlefield:
sky & space


Signals are under attack
Taiwan has about 15 international submarine cables, 7 of which are broken.
Broken cables
台灣對外連線狀況
8
正常
7
斷線
15
總計
2026/01/22 08:59:35

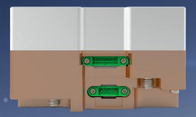

The invisible threats
exist in war


and natural disasters

Satcom under pressure

Challenges & Solutions

Resilient satcom architecture



SDRspace
CubeSat
Communication
Payload

Service link

Feeder link

PlusSDR
Software-Defined
Radio Platform

HyperSDR
High-speed
Satellite Transceiver

User terminal

Ground station

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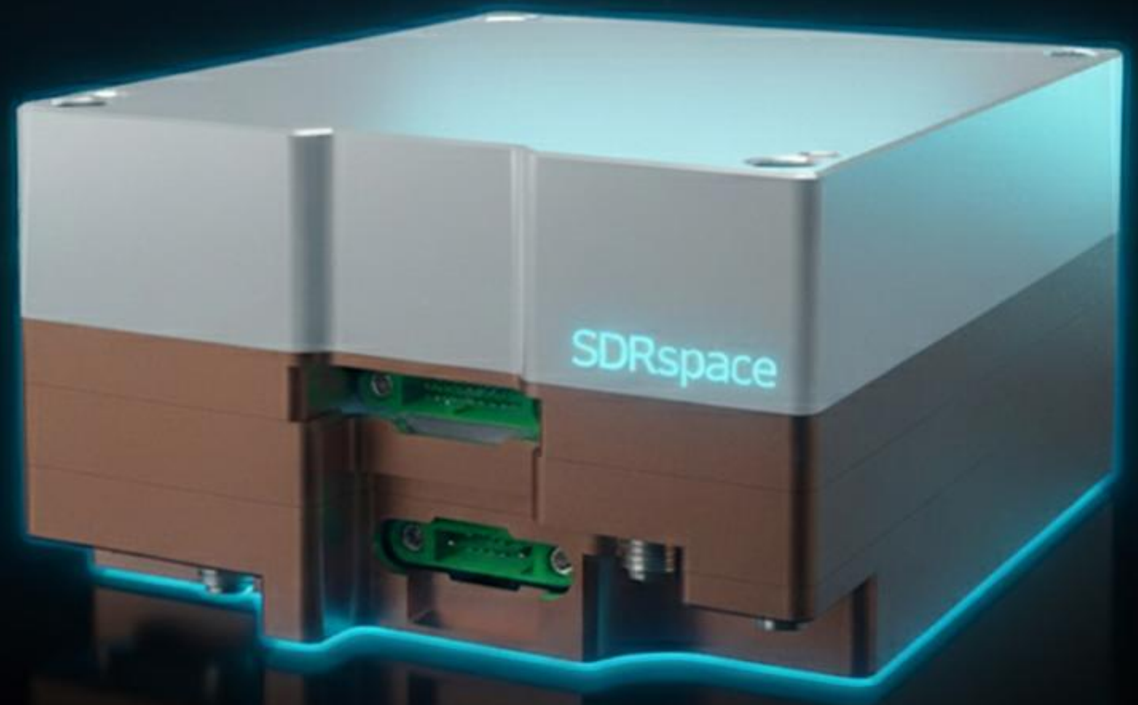
The answer is right here.

LEO payload:
Where the challenge lies

SDRspace

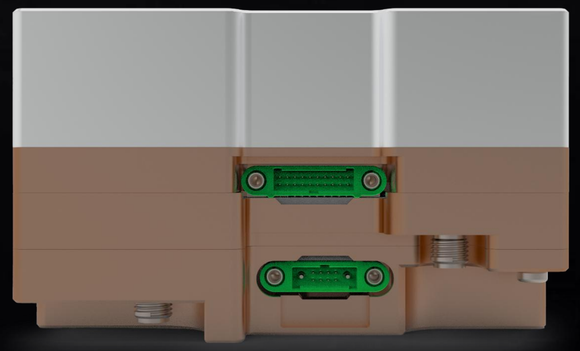
Satellite communication payload

- X / Ku
- Ku / Ku
- K / Ka



Launching 2026

to secure our flight heritage



HyperSDR

High-speed satellite transceiver

2.4 Gbps

ultra-fast
throughput
per channel

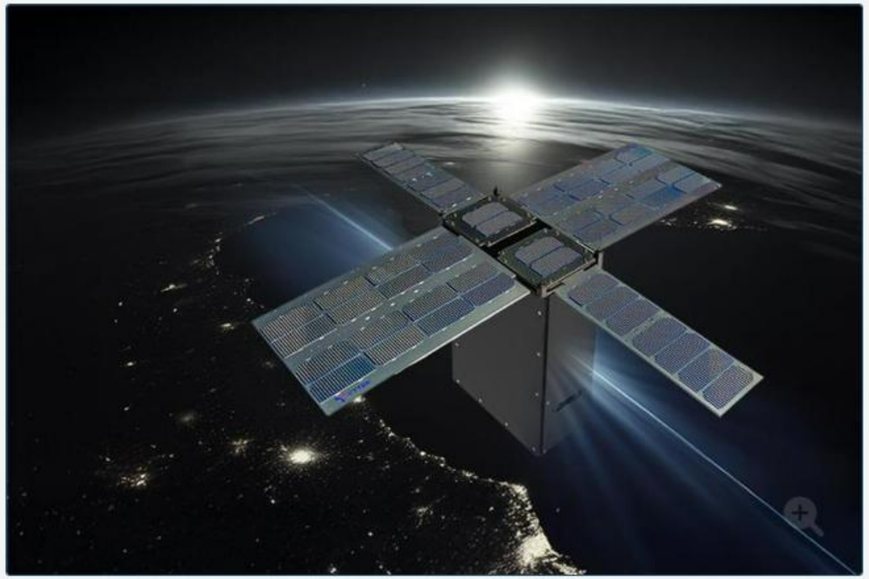
TASA 1B LEO Communication Payload

工商時報 即時 › 要聞 › 證券 › 金融 › 理財 › 產業 › 房市 › 國際 › 兩岸 › 言論 › 樂活 ›

低軌衛星通訊研發再進階 円通科技推動 B5G 關鍵模組落地

2026.01.16 / 16:44 / 工商時報 文 / 李翊榛

#円通科技 #TASA #CesiumAstro #低軌衛星



円通科技搶進 B5G 低軌通訊衛星國家隊，助攻台灣太空通訊自主化。圖 / 円通科技提供

隨著低軌衛星成為新世代通訊關鍵基礎建設，台灣亦加速布局B5G 低軌衛星通訊自主能力。國家太空中心（TASA）推動的「Pathfinder 通訊酬載基頻模組雛型體開發」計畫，自今年6月完成決標後，研發進程持續推進。由無線通訊領導廠商円通科技（YTTEK）承攬之關鍵通訊模組，近期已完成關鍵設計階段，正式進入原型.實作與驗證階段。

國家太空中心

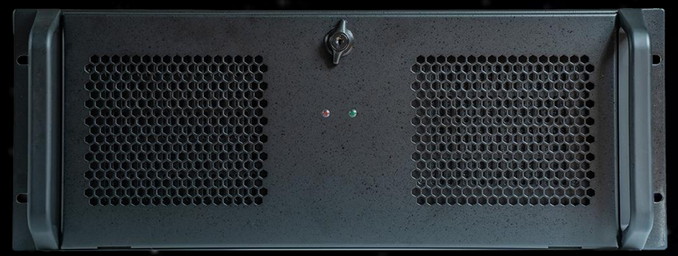
決標公告

標案案號	TASA-P-1140273
標案名稱	Pathfinder通訊酬載基頻模組雛型體開發
標的分類	財物類
採購金額	新臺幣 49,800,000 元
採購金額級距	公告金額以上未達查核金額之採購
預算金額	新台幣 49,800,000 元
招標方式	公告招標
決標方式	評審標
招標狀態	第1次公告 第0次修正
聯絡人	古先生
電話	(03)5784208轉6707
傳真	(03)5784234
電子郵件信箱	kuku@tasa.org.tw
招標單位地址	新竹市科學園區展業一路9號8樓
決標日期	民國114年 06月 26日
底價金額是否公告	底價公開
底價金額	48,894,762
決標金額是否公告	決標金額公開
決標金額	48,894,762
得標廠商名稱	円通科技股份有限公司
附加說明	
新增/更正日期	民國114年07月08日 08時32分

TASA

Mission-Proven

Successfully decoded signals from TASA's Formosat-5.



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But what about here on earth?

UAV missions under threat

Challenges & Solutions

Challenges for UAV communication payload

Specification

Reliability

Survivability

Flight Time

Size

Electronic Warfare

Distance

Weight

Hostile Environment

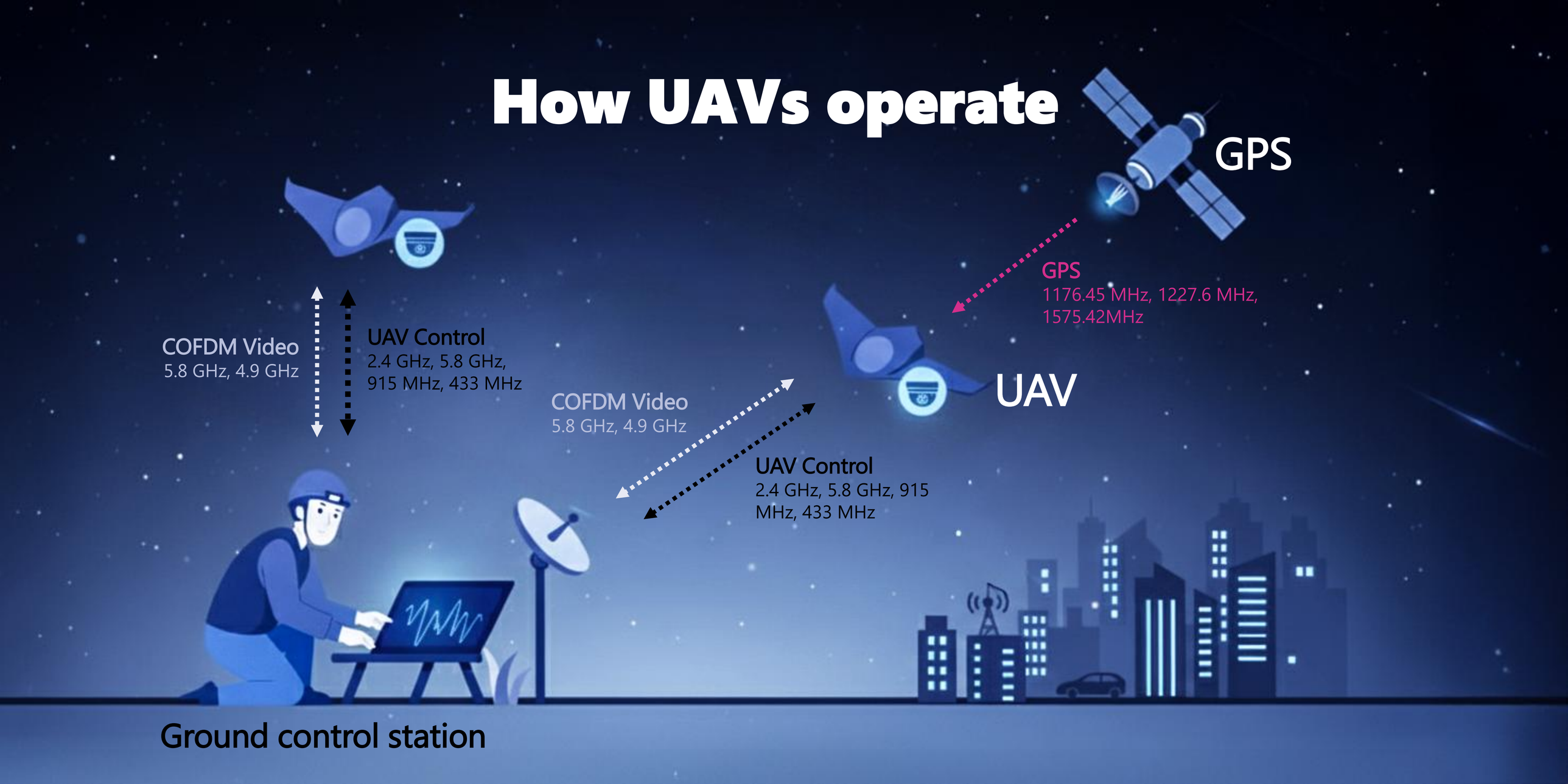
Jamming

Security

Stealth

Heat dissipation

Interference


How UAVs operate
GPS
GPS
1176.45 MHz, 1227.6 MHz,
1575.42MHz
UAV
COFDM Video
5.8 GHz, 4.9 GHz
UAV Control
2.4 GHz, 5.8 GHz,
915 MHz, 433 MHz
COFDM Video
5.8 GHz, 4.9 GHz
UAV Control
2.4 GHz, 5.8 GHz, 915
MHz, 433 MHz
Ground control station

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When UAV signals face jamming

By jamming communication signals it forces drones to either fall, return to base or...

Counter-UAV systems

From individual to system-level equipment

Handheld jammers

High-power RF amplifiers for close-range, rapid response scenarios

Fixed/Vehicle systems

High-power transmitters integrated with radar, optical sensors for permanent security

UAV jamming & defense

Definition: Overwhelming target signals with high-power RF transmission, disrupting normal operations

Control link disruption

UAV loses operator command authority

Video feed interference

Operator loses first-person view capability

GPS spoofing/ jamming

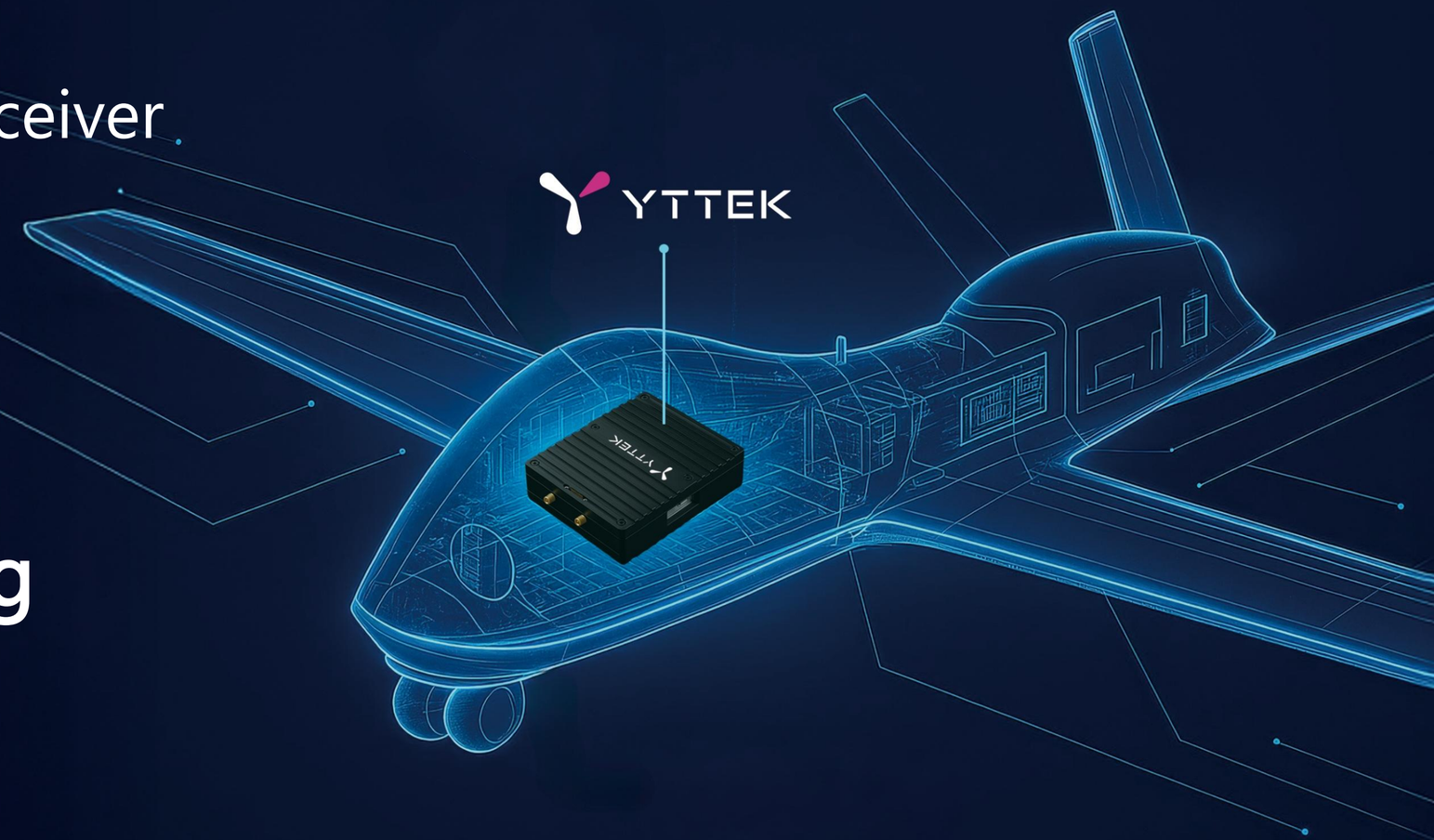
UAV loses precise positioning, causing navigation failure

SDRone

UAV communication transceiver

Operating band
960 – 1215 MHz

Frequency switching
30 MH – 6 GHz



Taiwan’s first

SDR-based
Anti-jamming
UAV communication

2024 US-Taiwan International Forum
on Unmanned Vehicle Technologies & Application

YTTEK : Wireless communication SDR expert

SDR Platform

PluSDR

SDR Platform
- 400 MHz, 10M-15GHz
- Matlab, C++, Python
- compliance

PluSDR

SDR Platform
- 100 MHz, 300M-6GHz
- Matlab, C++, Python
- compliance

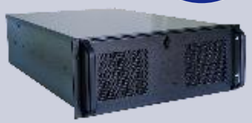
PluSDR Lite

SDR Platform
- 100 MHz, 300M-6GHz
- 134.7 x 86 x 45.6 mm, 270g

SATCOM

HyperSDR

Satellite Ground Station Modem
- 400 MHz, 10M-15GHz
- CCSDS / DVB-S2
- Edge computing
- TASA Approved



SDRspace

Satellite Communication Payload
- X / Ku-Band
- Ku / Ku-Band
- 0.6U (10 x 10 x 6 cm^3)

UAV

SDRone Uno

UAV Communication Module
L-Band, ISM band
Singal band

SDRone Duo

UAV Communication Module
L-Band, ISM band
Dual band

SDRone Vario

UAV Communication Module
Multiple band switching

SDRone Swarmio

UAV Communication Module
L-Band, ISM band
Swarm, Ad-Hoc typology

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SDR Experts

- SDR powers our innovation
- 2026: Satcom payload launch — flight heritage secured
- TASA mission-proven satellite transceiver
- Taiwan’s first SDR anti-jamming UAV communication transceiver

Question & Discussion

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www.yttek.com


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