

YTTEK Company Profile & Satellite Business

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YTTEK VISION

tomorrow's wireless, today

Encapsulates the pioneering strides in today's wireless technology. By maintaining a forward-thinking approach, we offer innovative solutions that preempt future demands, representing progress in the current landscape. Our commitment lies in pioneering the latest in communication technology, ensuring clients have access to cutting-edge solutions in the present moment.

YTTEK

over 10 Years experiences in mmWave communication total solution



2014  Team Formed ITRI, Taiwan

with MTK 39GHz pre-5G system

With Qualcomm FSM100xx

2019 Founding Zhubei, Taiwan

YTTEK +NXP + Anokiwave Small cell solution

NXP LA1224, BonnyRigg/3.5GHz

2022  A-Run Funding

2024 CES V2S demo in AUO booth

High speed satellite modem in situ run in TASA

One stop shop service:

- Algorithm → Architect design → System level specification
- System integration
- On-site testing → Merchandising

Algorithm

Architect design

System integration

Algorithm
Optimization

FPGA / SOC
BB
Implementation

SDR platform



Novel Antenna
design

RF FE



Payload (Cubesat & UAV)



High Speed Satellite Modem



R&D

Fab.

Telco.

Satcom

How YTTEK can "Enabling Customer to Succeed"

R&D

- ✓ Advanced development kit assist Academic and R&D
- ✓ Affordable instrument significantly enhance the efficiency of R&D validation of new products.



Fab.

- ✓ Affordable Instrument level line test solution significantly enhance the efficiency and reduce the test cost



Telco.

- ✓ Offer NRE turn-key 5G FR2 ISC design for customer time to market
- ✓ 5G FR2 + LC RIS private-network total solutions improve deployment much easier, much lower cost and power consumption for ESG compliance



Satcom

- ✓ For Space Agency: SDR-based high speed satellite receiver speed up the verification and validation of the specific mission of the satellite launch
- ✓ Operator : Provide SDR-based space-qualified Payload and Modem solutions to shorten dev. period
- ✓ User Terminal user: AESA and SOTM solutions.



4 Application Domain



4 Product Series

R&D



LABLINK

Fab.



VIEWLINK

Telco.



GROUNDLINK

Satcom



SPACELINK

SDR Platform

(Flexible Optimal
Research Computed
Emulator)

Payload

(Payload For CubSat &
UAV)

RF FE

(mmWave Front-End)

RIS

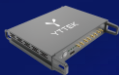
(Liquid Crystal
Reconfigurable
Intelligence Surface)

SDR Platform



LABLINK

.FORCE™



56 MHz, 100 MHz 300M-6GHz
400 MHz 10M-9GHz



VIEWLINK

.FORCE PRO™



Instrument level
5G NR Test items Complies



GROUNDLINK

.LOAD G



Commercial grade UAV payload
S-Band Frequency-Hopping
(1.6GHz~2.6GHz)

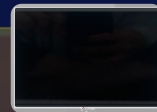
.BEAM G

**NXP
S**



28GHz ISC
IP65 Rated / EIRP>58 dbm

.RIS G



24 inch, Steerable by L.C.
242x137 Element



SPACELINK

.FORCE S™



CCSDS Satellite Modem
(TASA approval)

.LOAD S™



Space-Grade
X-Band Payload

Payload

RF FE

.BEAM™



Circular & Linear pol.
8~64 Element optional

RIS

.RIS™

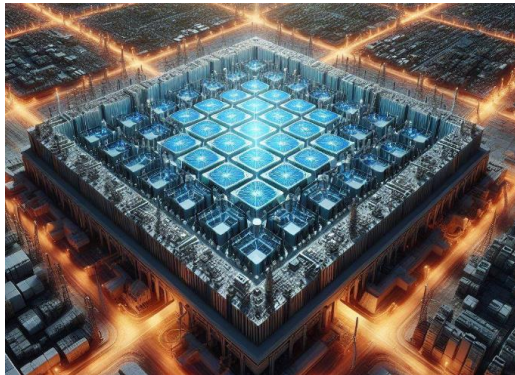


10x10 cm², Steerable by L.C.
20x20 element / power<500 mW

YTTEK Comprehensive Solution for B5G/6G



YTTEK Solutions of Satellite Communication



**Electronically
Steerable Antenna**



Payload



**Ground Station/
User Terminal**

Antenna Array for LEO Communication

5G FR2 CPE FEM

16-element



5G FR2 ISC FEM

64/128-element



Ka LEO FEM

1024-element



2024 YTTEK's Position in Payload Products



PAYLOAD
Space grade compliance



SATELLITE



UAV



Space-qualified Hardware - Cube Size (under 1U)

Support BW

Output Power

Support Frequency

40MHz

2W

1.6GHz~2.6GHz

High-speed
Frequency Hopping

200MHz

5W

7.9GHz~8.5GHz (X-Band)

LEO Communication for Car Application in CES 2024



- Up link: Ka band
Down link: K band

- Payload:
Ka: 256-element
K: 64-element

- User terminal
Ka: 384-element
K: 32-element

.FORCE S

High Speed Satellite MODEM



Successfully decode transfer frame

- Support wide range band: 10MHz~9GHz
- RF recorder, max. sample rate 500MSPS, last 600 seconds
- QPSK, 8PSK, 16-QAM, 16-APSK, 32-APSK, 64-APSK Mod/Demod
- Convolutional code, RS code, turbo code and LDPC code
- Compliant with CCSDS 131.0-B-4, CCSDS 131.2-B-1

YTTEK

Takeaways

- YTTEK is a company providing the wireless communication system based on SDR
- YTTEK provides affordable non-signaling test instruments for WiFi, 5G NR, and Satellite
- YTTEK provides payload for both Satellite and UAV
- YTTEK provides high speed satellite receiver for ground station
- YTTEK cooperates with AUO to jointly develop the satellite modem for smart mobility application



YTTEK

tomorrow's wireless, today