

Mert Okumus - 2023

# BUILDING A SMART WORLD

WITH PRECISE GEOSPATIAL INFORMATION

CHCN  AV

# ABOUT CHC NAVIGATION

SERVING THE GEOSPATIAL INDUSTRIES AROUND THE WORLD



“ Recognized as one of the **fastest growing** company in the geospatial industry, we provide precise positioning and navigation solutions to **7 geospatial industries** in more than **120 countries**.

*“Our customers are the driving force behind our development.”*

# GLOBAL SUPPORT. ANYTIME, ANYWHERE

MARKETING AND SUPPORT CENTERS FOR PARTNERS AND USERS

## **China**

28 Branches\*

450+ Partners

## **Overseas**

7 Subsidiaries / Rep Offices

250+ Partners

## **Research**

4 R&D Centers



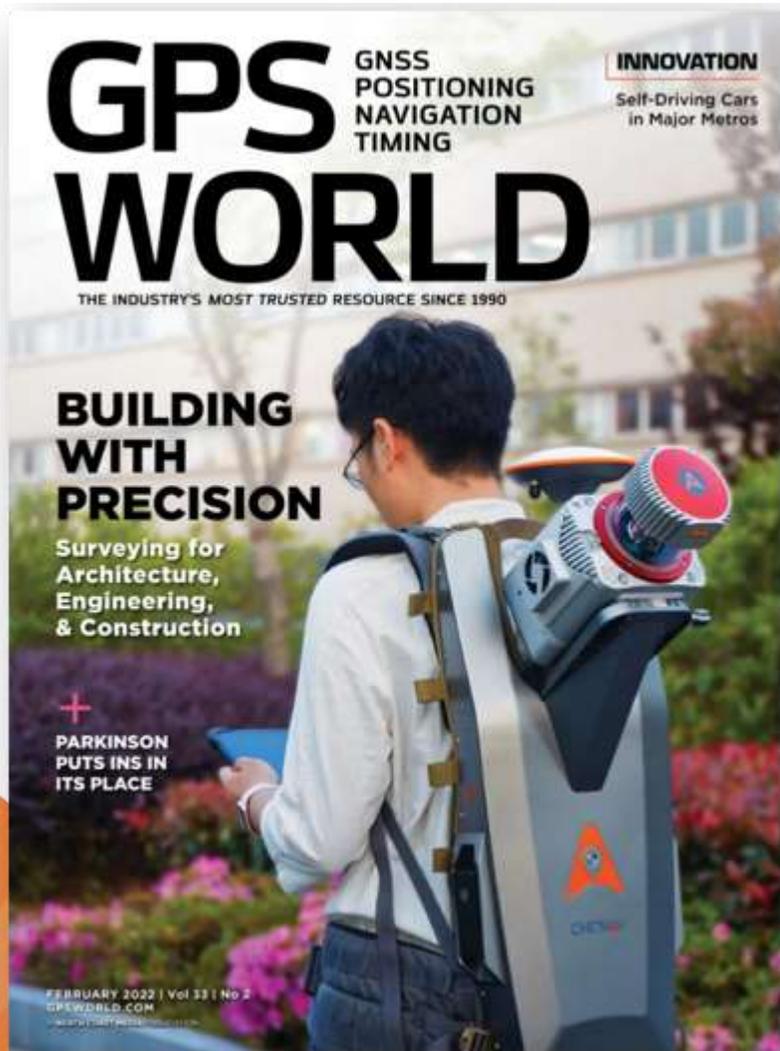
\* covering all Chinese provinces

# HUNDREDS OF SOLUTIONS FOR OUR CLIENTS

150 000+ USERS, 100+ SOLUTIONS, 1 000+ APPLICATIONS



# WE INCREASE OUR MARKET RECOGNITION



# 2022 NEW CHCNAV HEADQUARTERS (SHANGHAI)

80,000+ SQM TO FOSTER OUR GLOBAL BUSINESS GROWTH AND R&D INNOVATIONS



# 2022 NEW CHCNAV R&D CENTER (WUHAN)

32,000+ SQM R&D HUB TO CONSOLIDATE OUR TECHNOLOGIES ASSETS



# GLOBAL SOLUTIONS FOR GNSS SURVEYING

FROM GEODETIC SURVEY TO CONSTRUCTION SITES



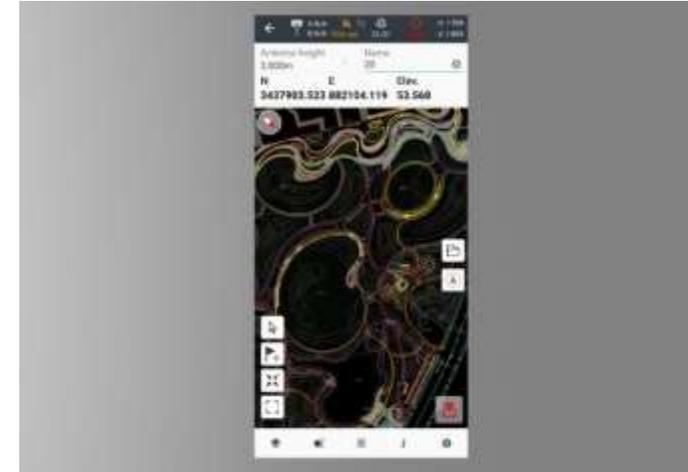
## GNSS RECEIVERS

Highly cost-effective with latest GNSS and MEMS IMU fusion



## DATA CONTROLLER

Rugged for any field work in any conditions



## SURVEYING SOFTWARE

Easy workflow supporting industry CAD formats

# RUGGED ANDROID PLATFORMS

BOOST PRODUCTIVITY OF MOBILE WORKFORCE



## ANDROID TABLETS

Crispy display with high resolution map rendering



## HIGH-ACCURACY

Bring centimeter accuracy at users' fingertips



## EXTENDED COMPATIBILITY

Google Mobile Service Certified

# MAPPING & GEOSPATIAL

GROUND AND AIRBORNE 3D MASS DATA ACQUISITION

MULTI-PLATFORM  
LIDAR SYSTEMS

-

3D MOBILE  
MAPPING SYSTEMS

-

PROFESSIONAL  
DRONES



# HIGH-ACCURACY 3D REALITY CAPTURE

PREMIUM SOLUTIONS FOR TERRESTRIAL 3D MASS DATA ACQUISITION



## MULTI-PLATFORM LiDAR SYSTEM

Flexible design to fit most applications  
for exceptional return on investment



## 3D TERRESTRIAL REALITY CAPTURE SYSTEM

Single and dual-head laser scanner  
with 360° HDR panoramic camera.



## POINT CLOUD SOFTWARE

From mission planning to  
automated features extraction

# AIRBORNE LiDAR SYSTEMS

ALPHA AIR SERIES FOR AERIAL MAPPING APPLICATIONS



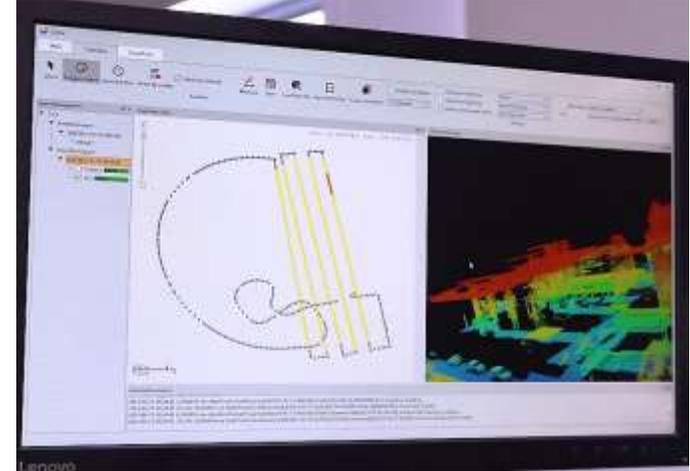
## AIRBORNE LiDAR SYSTEM

Premium ultra long-range laser scanner for high-altitude LiDAR mapping over large areas.



## COMPACT LiDAR+RGB SYSTEM

All-in-one, lightweight system with high-performance laser scanner, professional 26 MP camera and inertial navigation system for quality data collection.



## COMPLETE SOFTWARE SOLUTION

CHCNAV Software Suite  
CoPre and CoProcess

# PROFESSIONAL DRONES PLATFORMS

MULTI-ROTOR AND FIXED-WING DRONES WITH HIGH PAYLOAD AND LONG ENDURANCE



## LONG ENDURANCE VTOL UAV

150 mins endurance and  
up to 20 km<sup>2</sup> coverage per flight



## PROFESSIONAL MULTI-ROTOR DRONE

High payload capacity with extended  
flight time to cover large areas in a  
single mission



## SMART FLIGHT OPERATION

Conduct automated flight missions  
and manage flight data in the cloud to  
efficiently manage aerial survey  
workflow.

# 2023 PRODUCTS PORTFOLIO

MORE PRODUCTS FOR DIFFERENT MARKET AREAS



ALPHA3D



ALPHA3D DUAL



ALPHA3D-L DUAL



ALPHAAIR 450



ALPHAUNI 300



ALPHAUNI 900



ALPHAUNI 1300



ALPHAUNI 10



ALPHAAIR 10



ALPHAUNI 20



BB4 UAV



P330 PRO



BB4 MINI



ALPHAAIR 1400



ALPHAAIR 2400



COPRE 2.7



COPROCESS

# ALPHAUNI SERIES

MOST FLEXIBLE INSTALLATION

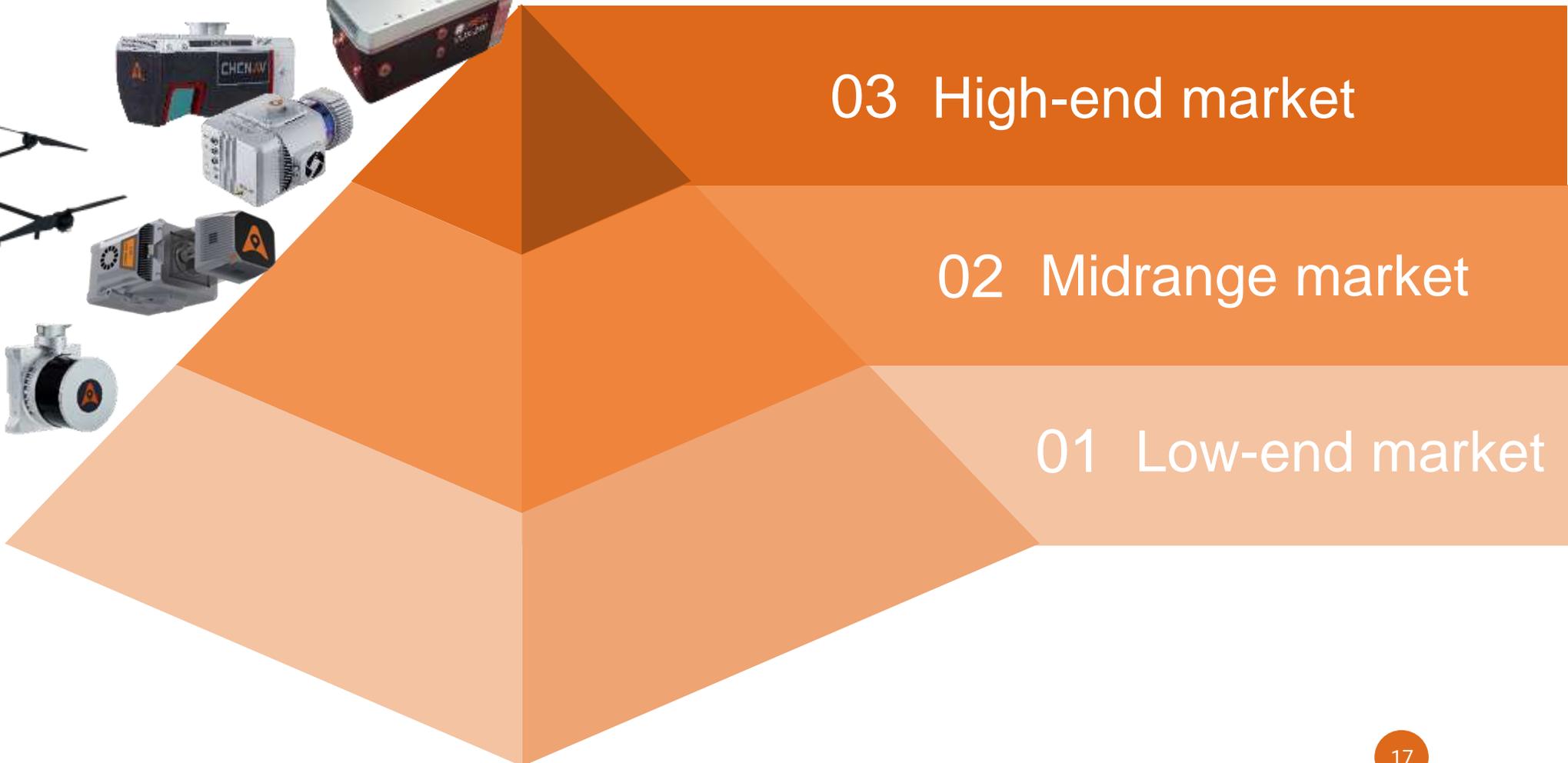


AIRBORNE

VEHICLE

BACKPACK

# CHCNAV M3D ABSOLUT POSITIONING



# ALPHA3D – DATA QUALITY



# CHC ALPHAIR 450

DATA QUALITY



# CHC ALPHAUNI 200 OVERVIEW

DATA QUALITY



# | From Latvia



# | From Latvia



# | From Latvia



# | From Latvia



# MARINE SURVEY & CONSTRUCTION

ADVANCED UNMANNED USV FOR HYDROGRAPHIC SURVEY

“ High-performance marine drones, rugged GNSS positioning and heading sensors, and echo sounders offer complete solutions to marine surveying and construction professionals.



# MARINE SURVEY & CONSTRUCTION

ADVANCED UNMANNED USV FOR HYDROGRAPHIC SURVEY

SINGLE- AND  
MULTIBEAM  
MARINE DRONES

-

ECHO SOUNDERS



# PRODUCTS FROM MARINE DIVISION

APACHE SERIES SOLUTION

Model

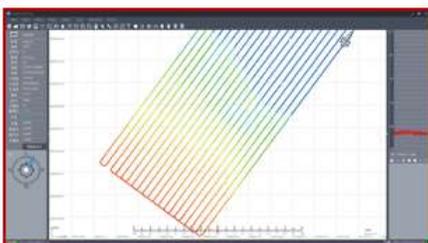
APACHE 3



Sensors

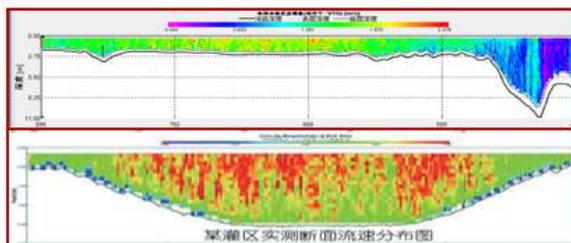


Application



Bathymetric Survey

APACHE 4



Hydrological Survey

APACHE 6



Integrated solution for land and underwater



# UNMANNED SURVEY VESSELS

PORTABLE USV ENABLE HYDROGRAPHIC SURVEY, ANYWHERE



## HIGH PERFORMANCE

—  
Portable single-beam USV  
for bathymetric survey



## OPTIMIZED FOR NORBIT ECHOSOUNDERS

—  
The ultimate solution for  
high-resolution bathymetry



## HYDROGRAPHIC SOLUTION

—  
Integrated echosounder to cut down  
mobilization cost by 20%

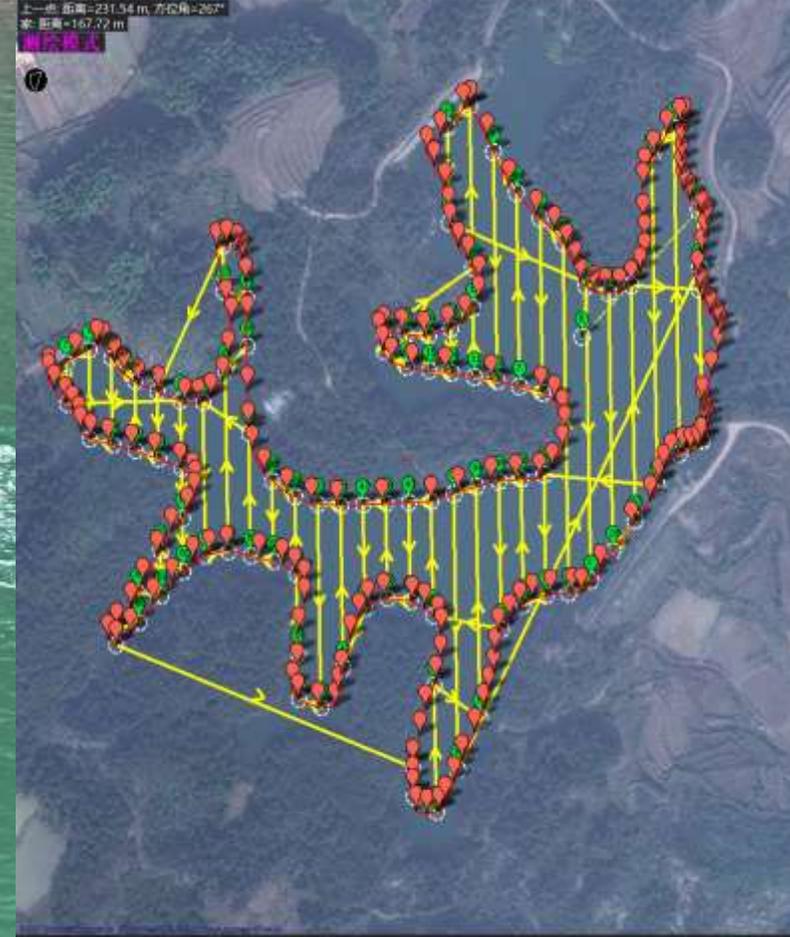
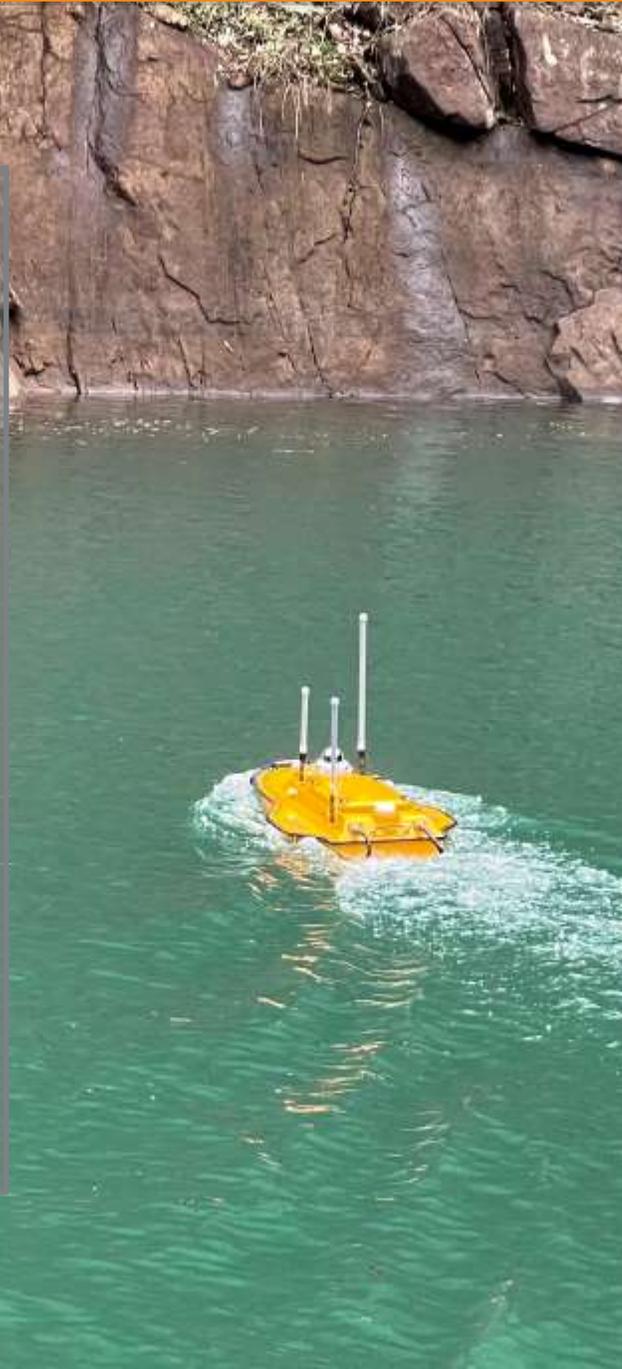
## Reservoir Capacity Monitoring

### Difficulties:

1. There is no manned ship
2. Communication is blocked

### APACHE 3 SOLUTION

1. 1 m length and less than 20kg
2. Two operating modes: manual + automatic
3. Two transmission methods: 4G + network bridge



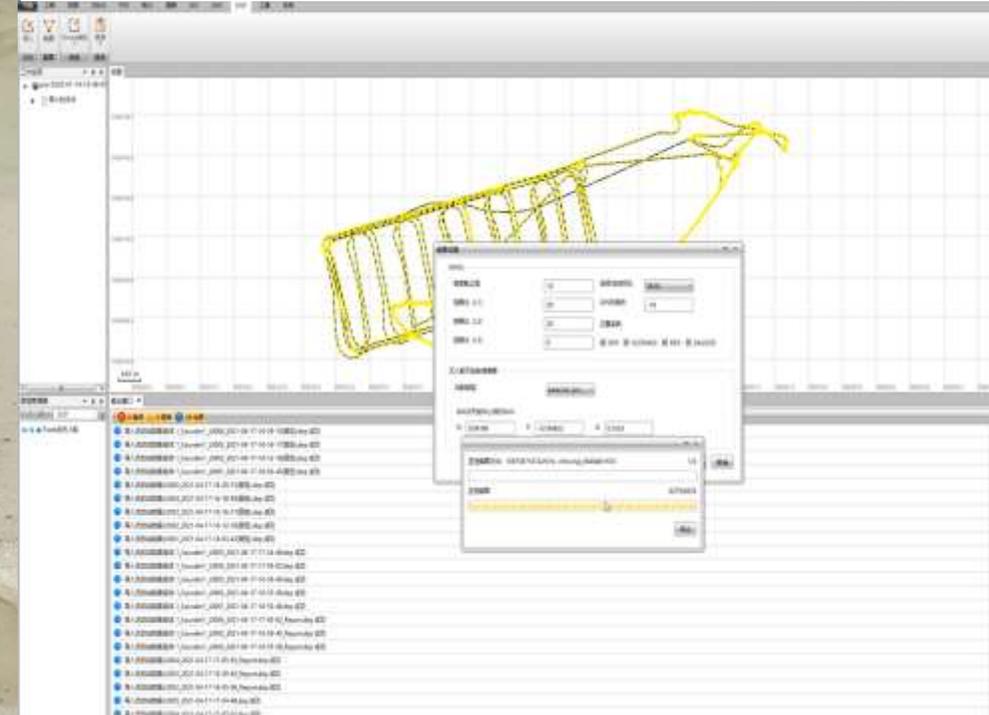
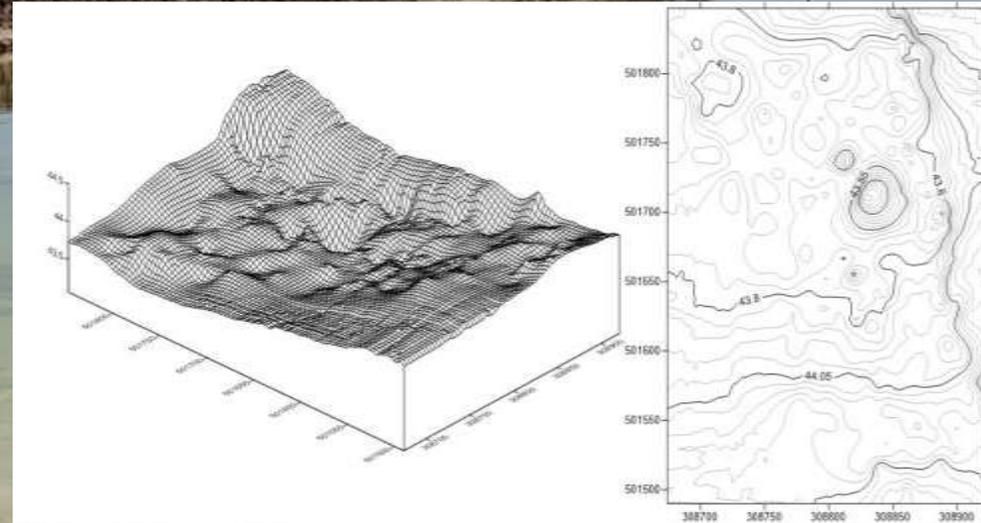
# Salt Lake Underwater Topographic Mapping

## Difficulties:

1. Shallow water
2. Accuracy

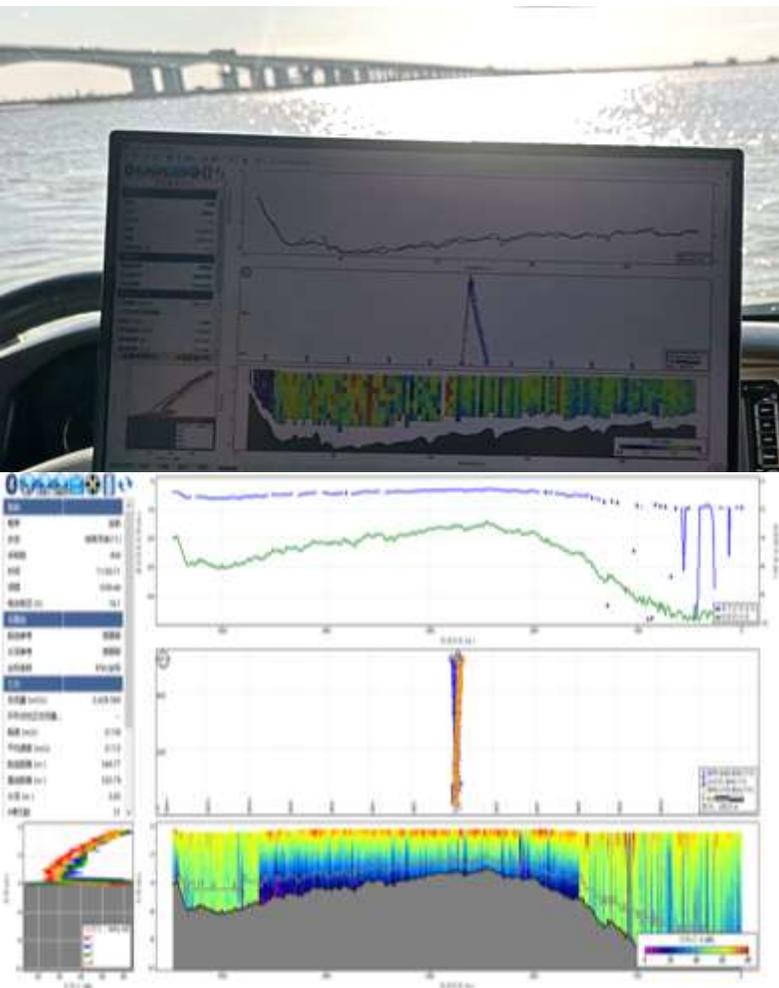
## APACHE 3 Solution

1. Shallow draft
2. Integrated D230 + IMU + GNSS



# HYDROLOGICAL STATION FLOW FORECASTING

HYDROLOGICAL SURVEY IN BRIDGE MAINTENANCE (CHINA)



## Difficulties

—  
River width: 1 km

Current flow: stable

Temperature:  $-10^{\circ}\text{C}$

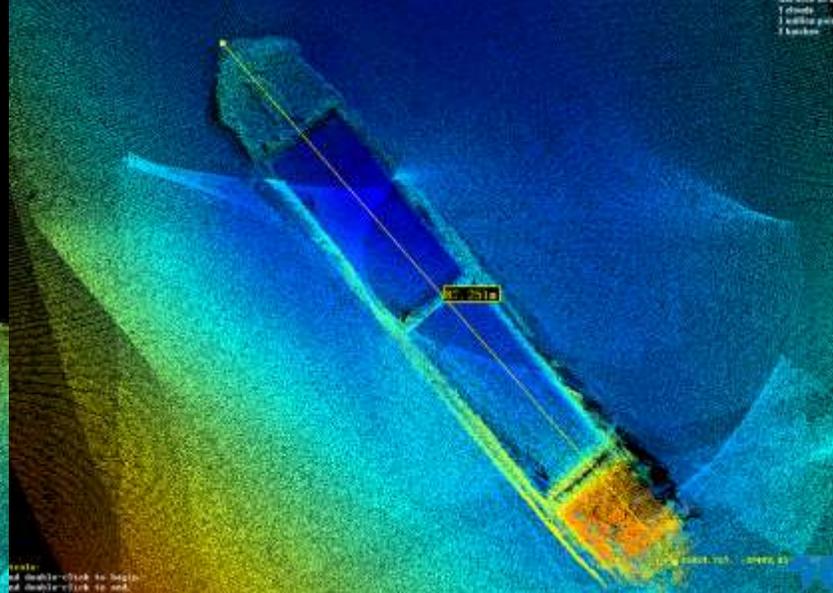
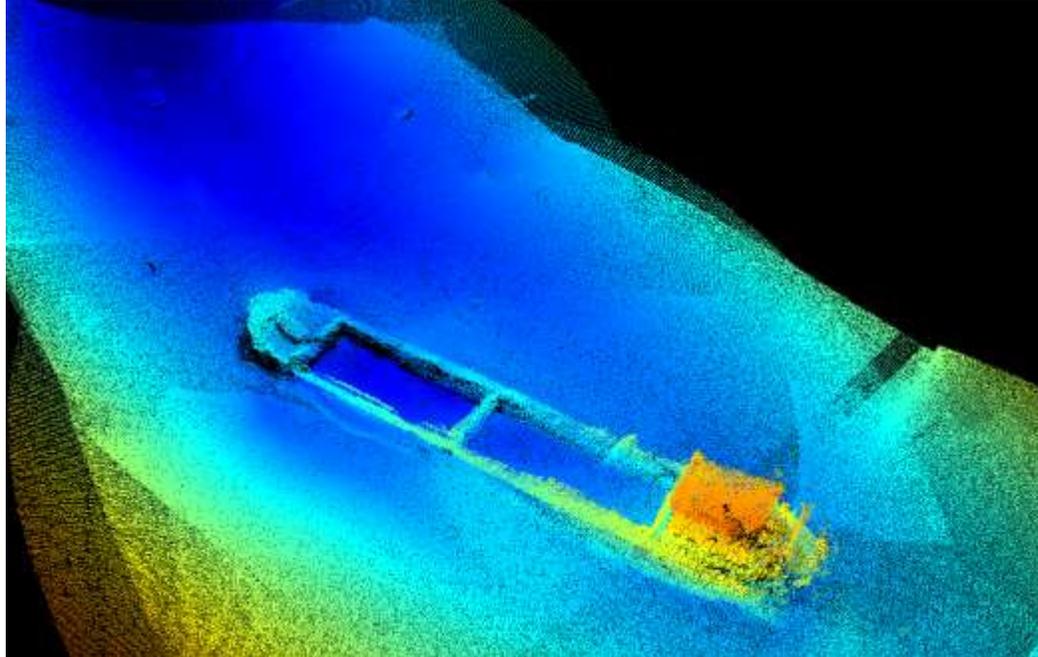
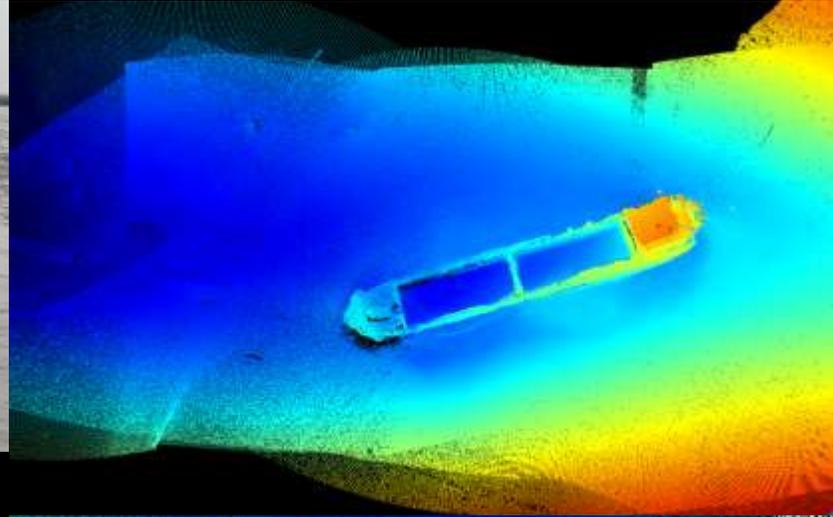
—  
APACHE 4 Solution

Remote operation  
from the car.

Flow error: 0.4%



# SHIPWRECK SCANNING BY APACHE6



# USV ALL OVER THE WORLD

MORE THAN 50 NATIONS AND DISTRICTS



# PRECISION AGRICULTURE

ENABLE PRECISION FARMING TO FARMS OF ALL SIZES

AUTOSTEERING  
SYSTEMS WITH  
CENTIMETER  
ACCURACY  
PASS-TO-PASS



# GNSS AUTOSTEERING SYSTEMS

RELIABLE AND AFFORDABLE AUTO STEERING KITS WITH NO HIDDEN COST



## EASY TO USE

—  
Intuitive AgNav software to control all operations at users' fingertips



## 2.5 CM ACCURACY PASS TO PASS

—  
Retrofit kit for the most popular brands of tractors



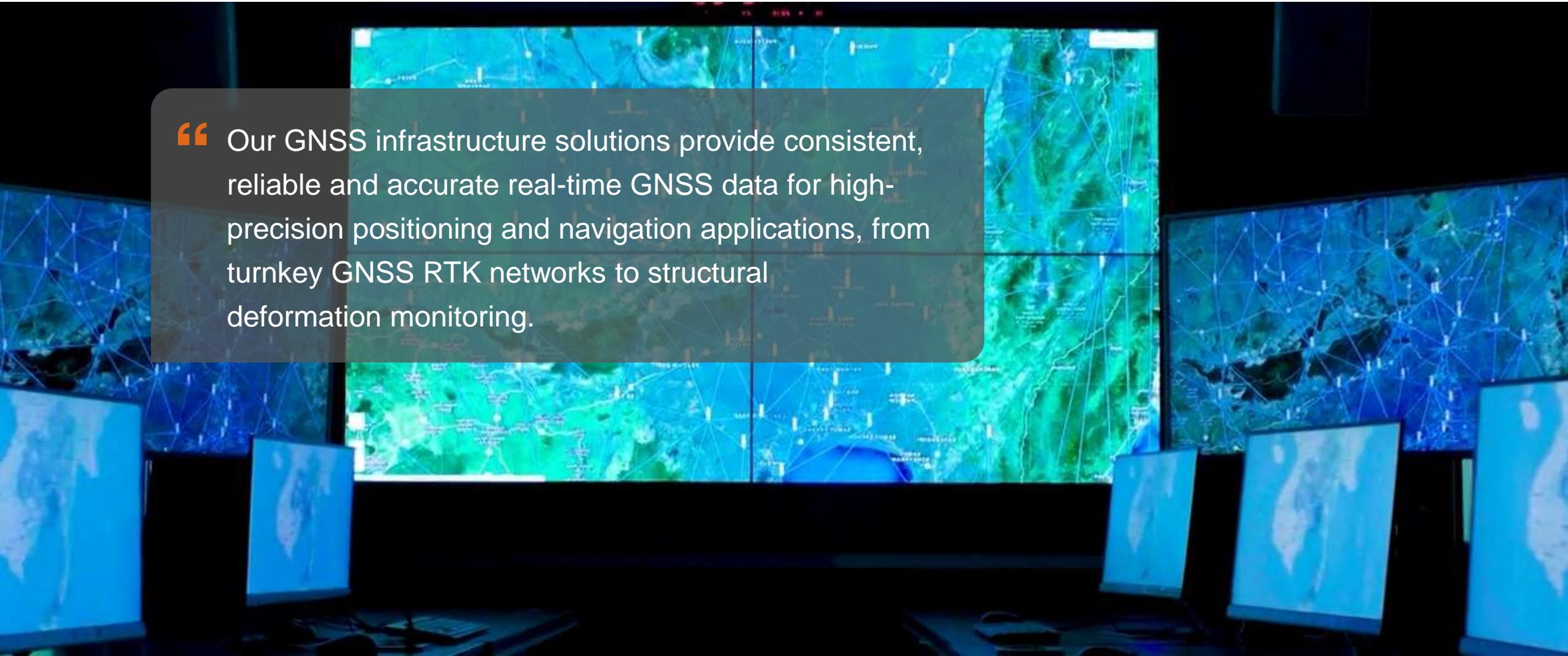
## ALL-IN-ONE

—  
Operates with any GNSS RTK correction sources via its enhanced connectivity modules.

# GNSS INFRASTRUCTURE

GNSS RTK NETWORKS AND DEFORMATION MONITORING

“ Our GNSS infrastructure solutions provide consistent, reliable and accurate real-time GNSS data for high-precision positioning and navigation applications, from turnkey GNSS RTK networks to structural deformation monitoring.



# GNSS INFRASTRUCTURE

GNSS RTK NETWORKS AND DEFORMATION MONITORING

CORS AND RTK  
GNSS NETWORKS

-

REALTIME  
MONITORING  
SOFTWARE

-

TURNKEY  
SOLUTIONS



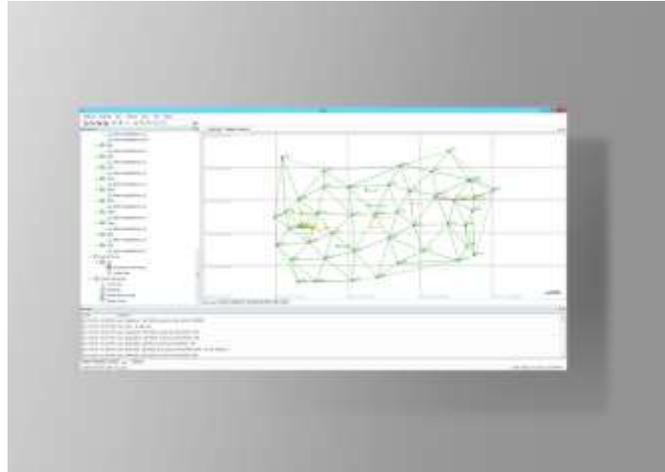
# GNSS MONITORING AND RTK NETWORKS

LOCAL, REGIONAL AND NATION-WIDE GNSS INFRASTRUCTURES



## GEODETIC GNSS RECEIVER

Uninterrupted performances for geodetic and scientific applications



## SERVER-BASED GNSS NETWORK SOFTWARE

Advanced real-time RTK network and monitoring software



## GEODETIC GNSS ANTENNAS

Compact and rugged antennas for demanding applications



# THANK YOU

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CHCNAV

Make your work more efficient



## STAY IN TOUCH WITH US



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