

SPECIFICATIONS

System Parameters	System accuracy	Plane 5cm, Elevation 5cm ^[1]
	Weight of instrument	2.6Kg/3.1Kg (with orthphoto camera)
	Size	313.5×142.1×231.2mm
	Supply voltage	24V (15-28V)
	Data storage	512G (Support 1T)
	Copy speed	160M/s
	Operating temperature	-20°~+50°
	Power	60W
IP	IP64	
Laser scanner	Laser class	1 (in accordance with IEC 60825-1:2014)
	Max. range	1500m (reflectivity >80%)
	Maximum scan rate	2 000 000 pts/sec
	Scan speed	Up to 100 scans/sec
	Accuracy ^[2]	15mm ^[2]
	Precision ^[3]	5mm
	Multiple cycles	7 times
	Echo	16 times
Field of view	0°~360°	

Positioning and Attitude System	GNSS	GPS:L1,L2,L5 GLONASS:L1 BEIDOU:B1,B2,B3 GALILEO:E1,E5a,E5b QZSS:L1 C/A,L5
	Attitude accuracy	Roll/Pitch: 0.005° ; Heading: 0.010° ;
	Position accuracy	Plane : 0.01m ; Elevation : 0.02m ;
	IMU update rate	600Hz
Camera	Image resolution	45MP
	Focal length	21mm/35mm
	COMS	36*24mm (8192*5460)
	Size of Pixel	4.4µm
	Field of view	81*59.5/54.3*37.8
Photo interval	1s	
Platform	Mlti	Support Drone, Car, Backpack
Software	CoPre preprocessing software	Support: Data copy, POS solution, correction and adjustment, point cloud generation
	CoProcess post-processing software	Terrain Module, Road Design Module, Intelligent Extraction Module, Volume Module

*Specifications are subject to change without notice.

[1] The accuracy is measured under the conditions of the China Survey Calibration Field, the flight height is 150m, and the speed is 7m/s.

(2) Accuracy is the degree of conformity of a measured quantity to its actual (true) value.

(3) Precision is the degree to which further measurements show the same results

© 2022 Shanghai Huace Navigation Technology Ltd. All rights reserved. The CHC and CHC logo are trademarks of Shanghai Huace Navigation Technology Limited. All other trademarks are the property of their respective owners. Revision January 2022.

CHCNAV · ALPHAUNI 20

WWW.CHCNAV.COM | SALES@CHCNAV.COM

CHC Navigation Headquarter
Shanghai Huace Navigation
Technology Ltd.
599 Gaojing Road, Building D,
Shanghai, 201702, China
+86 21 54260273

CHC Navigation Europe
Infopark Building, Sétány 1,
1117 Budapest, Hungary
+36 20 235 8248
+36 20 5999 369
info@chcnv.eu

CHC Navigation USA LLC
6380 S. Valley View Blvd
Suite 246 Las Vegas,
NV 89118 USA
+1 480 399 9533

CHC Navigation India
409 Trade Center, Khokhra
Circle, Maninagar East,
Ahmedabad, Gujarat, India
+91 90 99 98 08 0



AU20
Multi-Platform Lidar System

AU20 SOLUTION

AU20 is a new generation of long-range high-precision LiDAR measurement system independently developed by CHC. It has the characteristics of strong penetration, high precision, multi-platform, high efficiency and high cost performance. The AU20 scene has strong applicability and good stability, and can be widely used in real 3D, terrain mapping, water conservancy survey, traffic survey, electric power inspection, mine surveying, natural resource survey, emergency mapping and other fields.



Strong Penetration



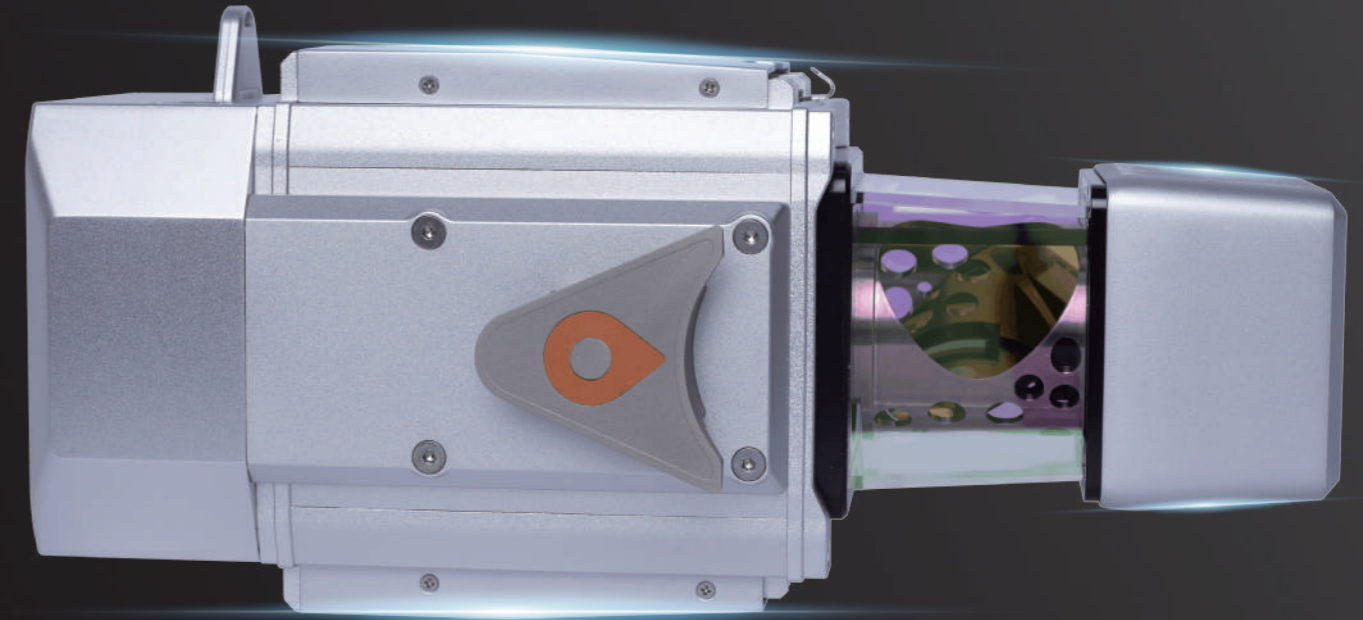
High Precision



Multi-Platform



High Efficiency



Key Features



High Scan Rate :
2 000 000 pts/sec



Multiple echos :
16 times returns



multiple cycles :
7times



hHgh precision :
Repeated ranging
accuracy:5mm



Multi-Platform :
360° ; Airborne, Vehicle,
Backpack



Long Range :
1500m



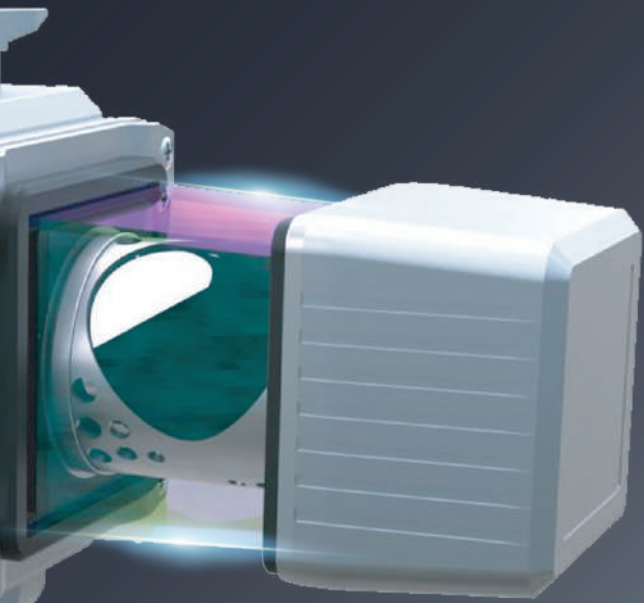
Highly integrated :
Cable-free, quick-release
design



light weight :
2.6Kg

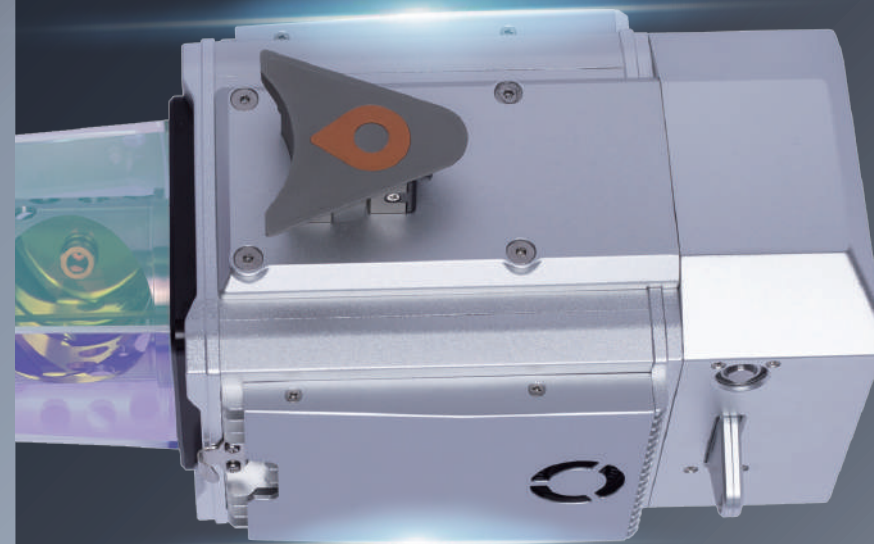


IP Level :
IP64



High Scan Rate:

2 000 000 pts/sec



multiple cycles

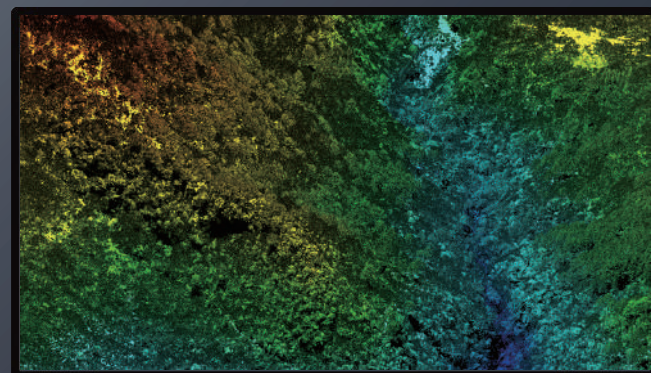
Supports 7 multi-cycle data solutions



multiple echoes

16 times returns

Penetrating vegetation to obtain DEM



High precision

Repeated ranging accuracy

5mm





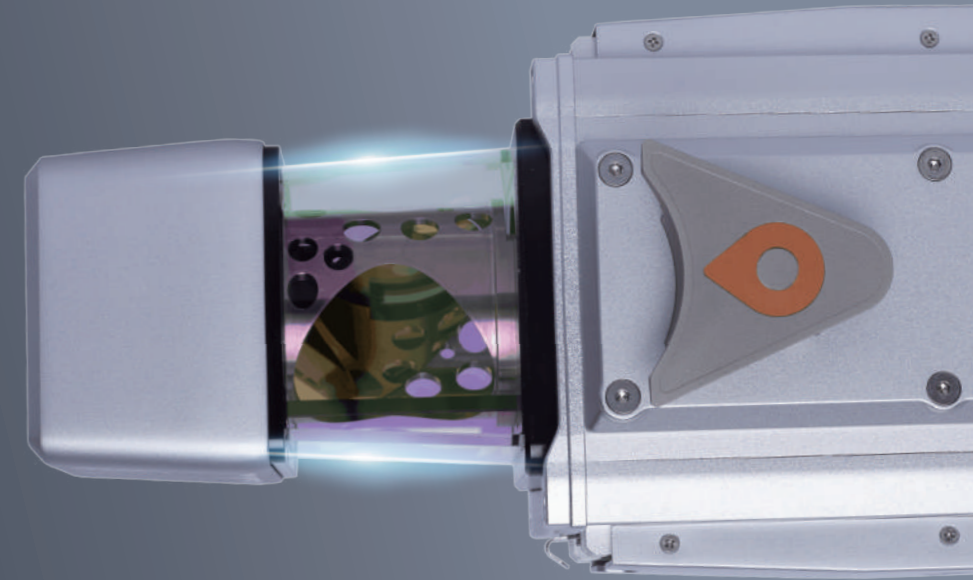
Multi-platform

360° , Various work scenarios



long range

1500m ranging
Working in high drop areas~



EUNIVERSAL
INSTALLATION



Fly up to 45 mins



Fly up to 2 hours

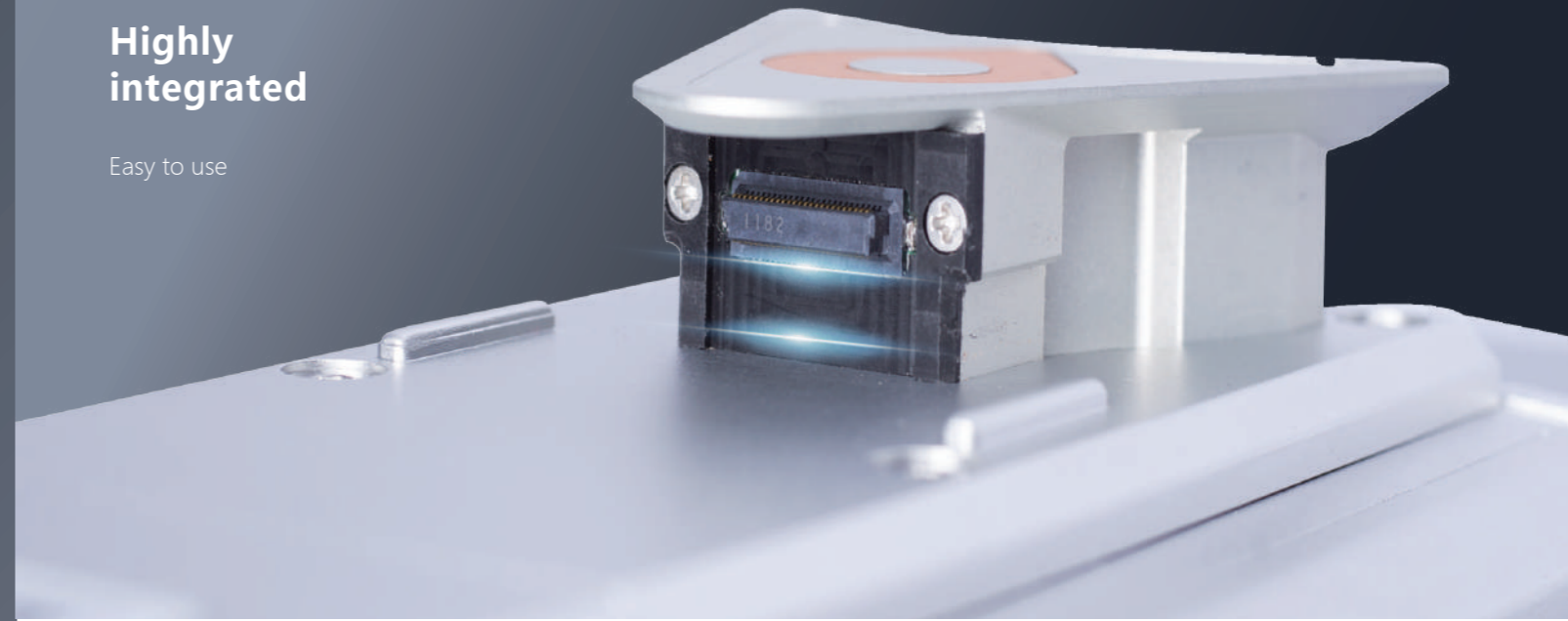


Daily work efficiency: 150~200km



Highly integrated

Easy to use





light weight

The lidar host weighs only 2.6Kg
Improve endurance and improve
flight efficiency



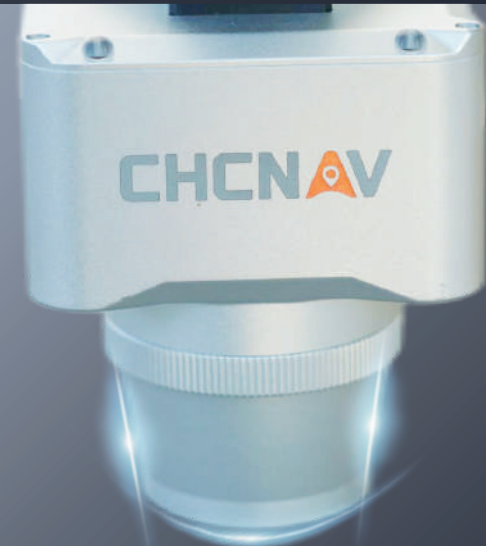
IP64

No fear of rain and fog
Operate in the night



Full frame industrial camera

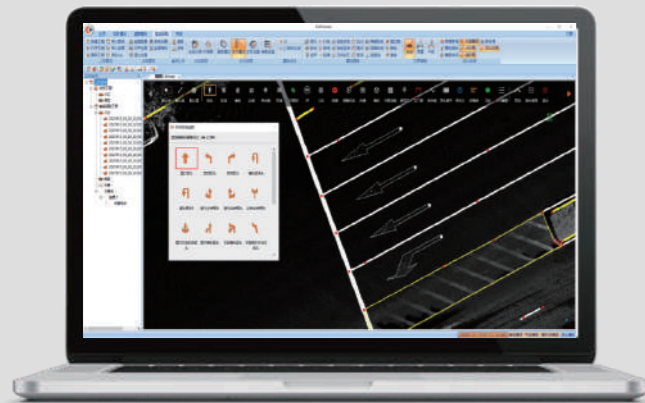
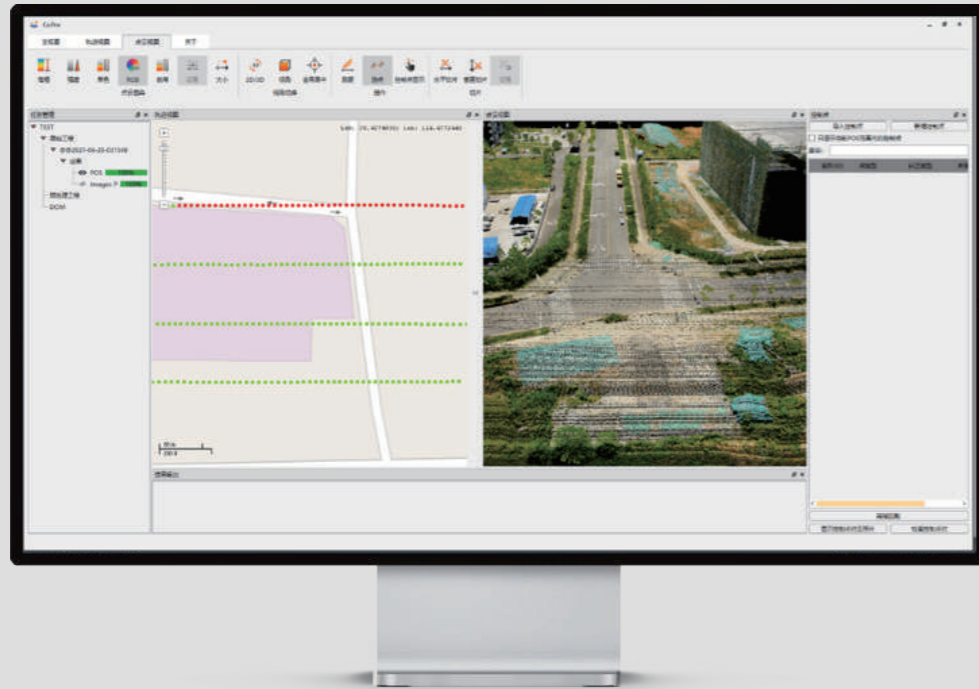
Capture photos at the same time
High-precision color point cloud and DOM results



OPERATING EFFICIENCY

Laser opening angle : 90° , Overlap of point clouds: 50%;
Speed of roto-drone:10m/s , Flight time :55min ; Speed of fix wing: 20m/s , Flight Time:120min.

AU20	Scan Rate kHz	Max Range m	Flight Atitidue m	Operation Area / per flight Km ²	Point Density pts/m ²	Result
multi-rotor drone	2000	500	177	3.9	282	1 : 500
	1500	576	204	4.5	184	1 : 500
	1000	706	250	5.5	100	1 : 1000
	800	790	279	6.1	72	1 : 1000
	500	1000	354	7.8	35	1 : 1000
	400	1120	396	8.7	25	1 : 1000
	300	1220	431	9.5	17	1 : 2000
	200	1320	467	10.3	11	1 : 2000
	100	1500	530	11.7	5	1 : 2000
Fix wing	2000	500	177	17.5	141	1 : 500
	1500	576	204	20.2	92	1 : 500
	1000	706	250	24.8	50	1 : 1000
	800	790	279	27.6	36	1 : 1000
	500	1000	354	35.1	18	1 : 1000
	400	1120	396	39.2	13	1 : 1000
	300	1220	431	42.7	9	1 : 2000
	200	1320	467	46.2	5	1 : 2000
	100	1500	530	52.5	2	1 : 2000



CoPre

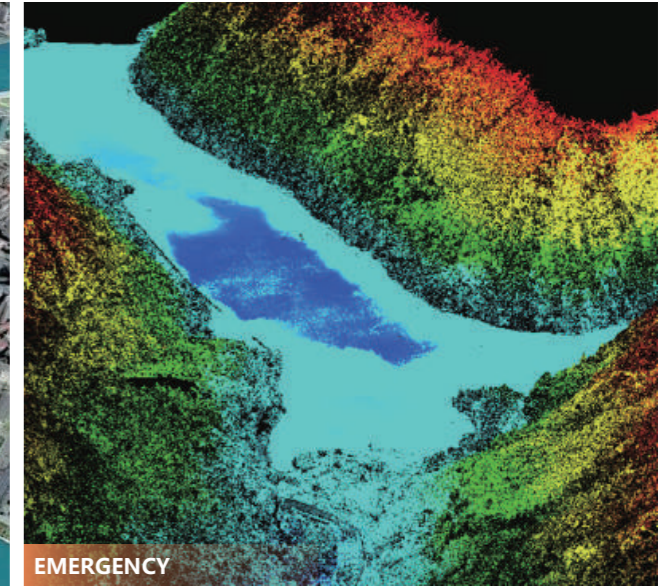
One-stop data processing, data copying, POS calculation, one-click color point cloud and DOM result generation, point cloud accuracy optimization and quality inspection.

CoProcess

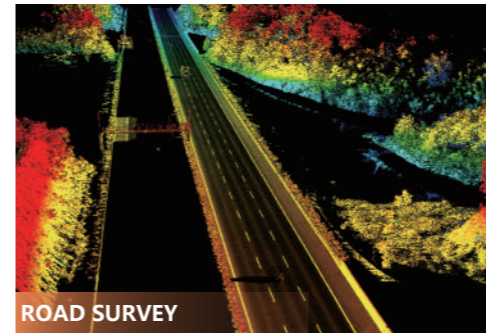
Rapid processing of massive data, one-click generation of DEM, rapid generation of transverse and longitudinal sections, rapid extraction of urban components, rapid calculation of piles, etc.



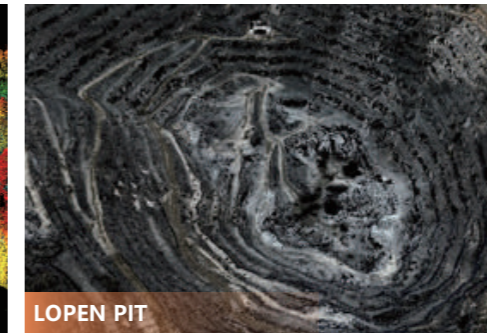
MAPPING



EMERGENCY



ROAD SURVEY



LOPEN PIT



NATURE RESOURCES



WATER CONSERVATION



POWER LINE



TOPOGRAPHY