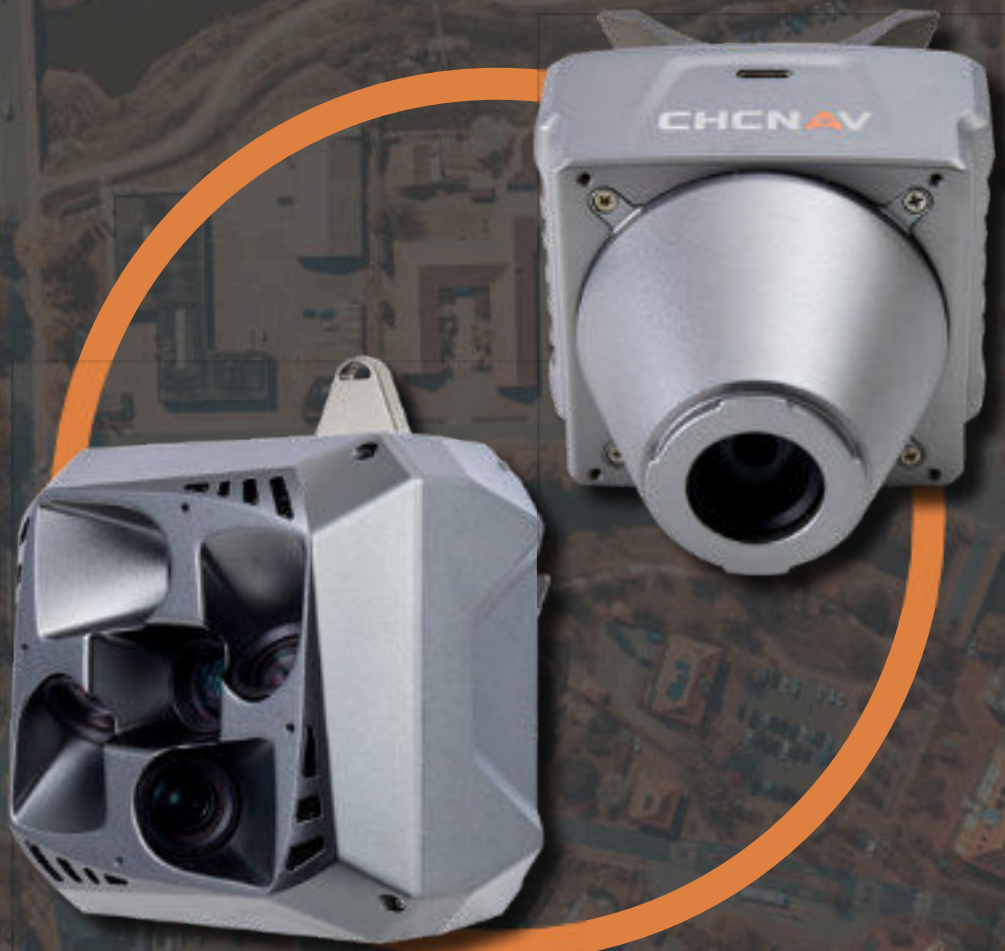
CHCNAV

C5&C30

AERIAL SURVEY CAMERAS



MAPPING
& GEOSPATIAL

CHCNAV

ORTHOGRAPHIC & OBLIQUE CAMERAS FOR AERIAL SURVEYS

The CHCNAV's C5 and C30 are advanced cameras designed to provide high-quality imaging solutions for photogrammetric applications and to complement LiDAR survey data. The C5 orthographic camera system features a full-frame, fixed-focus camera with a larger sensor, allowing a larger area to be covered per photo, resulting in more detailed and accurate orthophotos. The low-distortion aerial survey lens built into the C5 camera increases the accuracy of survey to deliver reliable results. The C30 is a professional, high-performance, lightweight oblique photogrammetry system developed by CHCNAV. Its advanced design allows it to capture clear and accurate oblique photos.The C5 and C30 cameras are compatible with CHCNAV's BB4 mini and P330 Pro UAVs, the DJI M300 RTK, and other fixed-wing and rotor UAV platforms, providing a high degree of flexibility and versatility in installation. They can also be mounted directly on CHCNAV's AlphaUni series LiDARs.

COMPACT AND LIGHT

Optimal setup without weighing down the UAV

The C5 camera is a highly efficient and lightweight system for aerial surveys, weighing only about 290 grams for increased flight endurance. Its compact size of 75 x 63.5 x 102.5 mm allows easy integration into UAVs. The C30 camera's weight is about 600 grams with a size of 110x108x85 mm, and it is the smallest and lightest industry-grade camera that can be mounted on most UAVs. The advanced and lightweight design of both cameras matches the mounting requirements of various UAVs available on the market and ensures it does not impact the drone's performance or manoeuvrability.

UNIVERSAL INSTALLATION

Easy integration into existing UAV platforms

The C5 and C30 cameras' design makes them compatible with a wide range of fixed-wing and rotor UAVs. Both cameras are supported by the CHCNAV's BB4 Mini and P330 Pro drones, as well as the DJI's M300 RTK. The Alphaport (quick-mount hardware interface) allows the C5 and C30 to be easily mounted into various UAVs and can also be converted into the DJI Skyport connector for even extended compatibility.

INTEGRATED QUICK-RELEASE INTERFACE

Fast and easy installation

Aplhaport provides a speedy and secure way to install and disconnect cameras to and from UAVs without additional tools or complicated procedures. In addition, Alphaport includes power and data communications, reducing wiring and connections' complexity. As a result, a more efficient and productive workflow that ensures the camera remains stable and secure even in challenging weather conditions is achieved.

PLUG-IN MEMORY CARD

Keep data secure and easily accessible

Specific high-speed data transfer options are available from the C5 and C30 cameras to ensure efficient and reliable access to your data. The C5 camera features 256 GB internal memory with a transfer rate of up to 80 Mb/s via a USB-C connection. The C30 camera comes with a 640 GB plug-in memory card for fast copy speeds of up to 300 Mb/s and easy transfer of images directly from the memory card to your computer. With the C5 and C30 cameras, large amounts of data can be transferred quickly and easily without performance issues.

EFFICIENT WORKFLOW

Field-to-finish turnkey solution

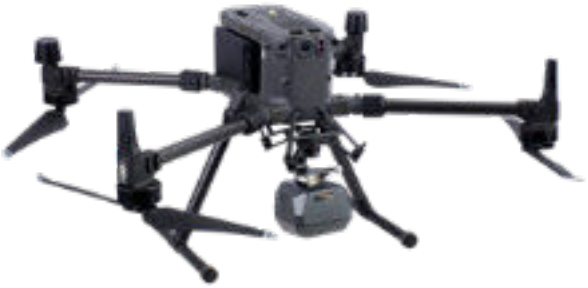
The CHCNAV's comprehensive portfolio of LiDAR and aerial camera solutions enable users to develop their geomatics services further. The CHCNAV's CoPre software is an integrated field-to-finish solution for processing aerial imagery and LiDAR data captured in a single flight. With CoPre, large volumes of data can be efficiently processed and analysed, generating accurate and actionable insights in less time.

SUPPORT FOR USE WITH CHCNAV LIDARS

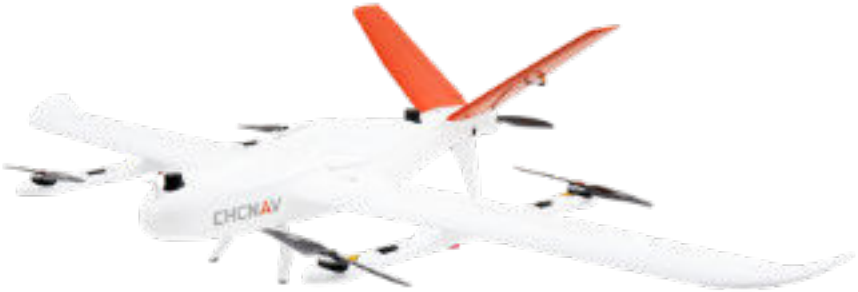
All-in-one solution for aerial surveying

The C5 and C30 cameras give maximum flexibility for photogrammetric applications. They can be used independently on RTK-enabled drones to capture high-resolution imagery or installed directly on the CHCNAV's LiDAR series to colorise point cloud data. This feature allows seamless imagery and LiDAR data integration for a more complete view of the surveyed area.

WORKING EFFICIENCY



DJI M300 RTK + C30 (flight speed 8 m/s, brand new battery)				
GSD	cm/px	1.5	3	5
Flying altitude	m	100	200	332
Single flight image data	num	5360	2650	1580
Single flight working area	km^2	0.33	0.6	1.1
TOF	min		28	



P330 Pro + C30 (flight speed 21 m/s, brand new battery)				
GSD	cm/px	3		5
Flying altitude	m	200		332
Single flight working area	km^2	3.2		5.73
TOF	min		86	

Industrial camera

Low lens distortion and optimised imaging sharpness result in high-quality aerial photos that improve the accuracy of aerial surveys.

Ready for 3rd party UAVs

Supports self-developed "A" connector and easily converts to a DJI Skyport connector to match the mounting requirements of various UAVs.

Independent storage

Up to 300 Mb/s for fast and efficient data transfer, saving time and increasing productivity.

Connected HW + SW

Up to a 10% increase in aerial triangulation measurement pass rate, resulting in more reliable results and improved survey quality.

SPECIFICATIONS

C30 Camera

Product

Shutter life	200 000 times exposures
Sensor size	23.5 x 15.7 mm
Pixel size	3.76 μ
Image size	6252 x 4168 px (3:2)
Num. of lenses	5
Focal length	25 mm / 35 mm
Angle of lens	45° / 90°
Effective pixels	130 MP (26 MP x 5)
Minimum interval	0.8 s
Shutter speed	1/50~1/20000
Aperture	F5.6
ISO	100~3200

Physical

Data copy speed	300 Mb/s
Data storage	External Unified Storage Module 640 Gb (128 Gb*5)
Size (L x W x H)	110 x 108 x 85 mm (4.33" x 4.25" x 3.35")
Weight	605 g (21.34 oz) with transfer interface
Environment	Operating: -20°C to + 50°C (-4°F to +122°F) Storage: -20°C to + 60°C (-4°F to +140°F)

Power Supply

Power consumption	25 W
Voltage	12 - 27 V

Others

Data process	CoPre (Copy + Aerotriangulation + Modelling)

C5 Camera

Product

Shutter life	200 000 times exposures
Sensor size	36 x 24 mm
Pixel size	4.4 μ
Image size	8184 x 5460 px (3:2)
Num. of lenses	1
Focal length	35 mm
FOV(°)	54.3 x 37.8
Effective pixels	45 MP
Minimum interval	1 s
Shutter speed	1/50~1/20000
Aperture	F5.6
ISO	100~3200

Physical

Data copy speed	80 Mb/s
Data storage	Internal Storage Module 256 Gb
Size (L x W x H)	75 x 63.5 x 102.5 mm (2.95" x 2.50" x 4.04")
Weight	290 g ± 5 g (10.23 oz ±0.18 oz)
Environment	Operating: -20°C to +50°C (-4°F to +122°F) Storage: -20°C to +60°C (-4°F to +140°F)

Power Supply

Power consumption	10 W
Voltage	12 - 27 V

Others

Data process	CoPre (Copy + Aerotriangulation + DOM)

* All specifications are subject to change without notice.