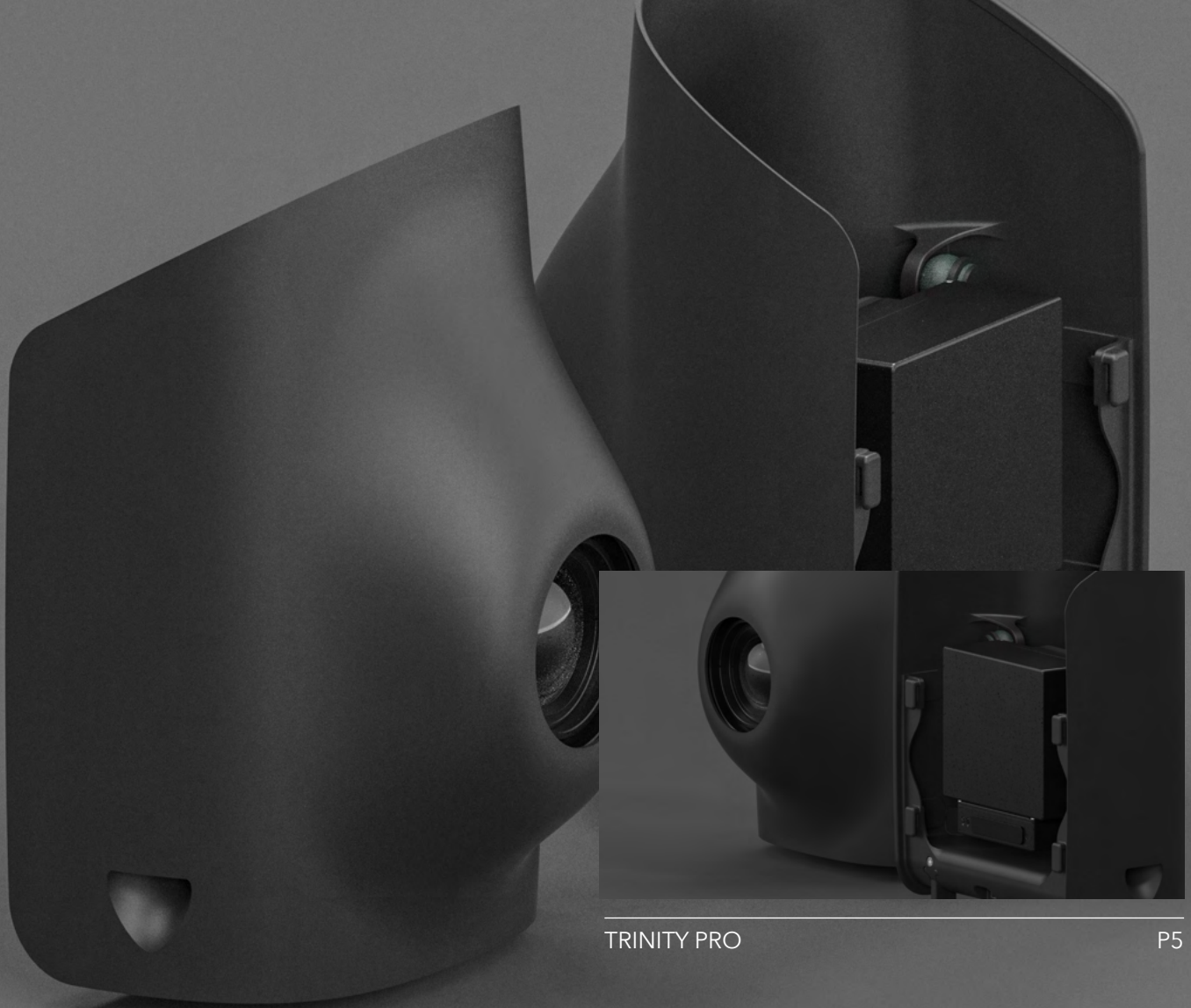




TrinityTM Pro

Cameras

Fully integrated, easy to swap and well protected



Phase One P5

Medium Format RGB Camera

The Phase One P5 is the revolutionary flagship 128 MP Medium Format camera that transcends its role as a mere camera – it's a survey-grade instrument set to redefine the way you capture.



Achieve exceptional results, down to 0.5 cm RMS XY/Z* absolute accuracy, making your data impeccably trustworthy. When paired with the Trinity Pro, the P5 swiftly covers large areas with survey-grade precision, significantly reducing time and costs compared to conventional methods.

*Using high precision PPK and accurate ground control points.

The electronic global shutter, combined with metrically calibrated lens and sensor, reduces the necessity for extensive software corrections caused by pixel distortion, ensuring the preservation of high-quality data.

Phase One P5

Technical Specifications



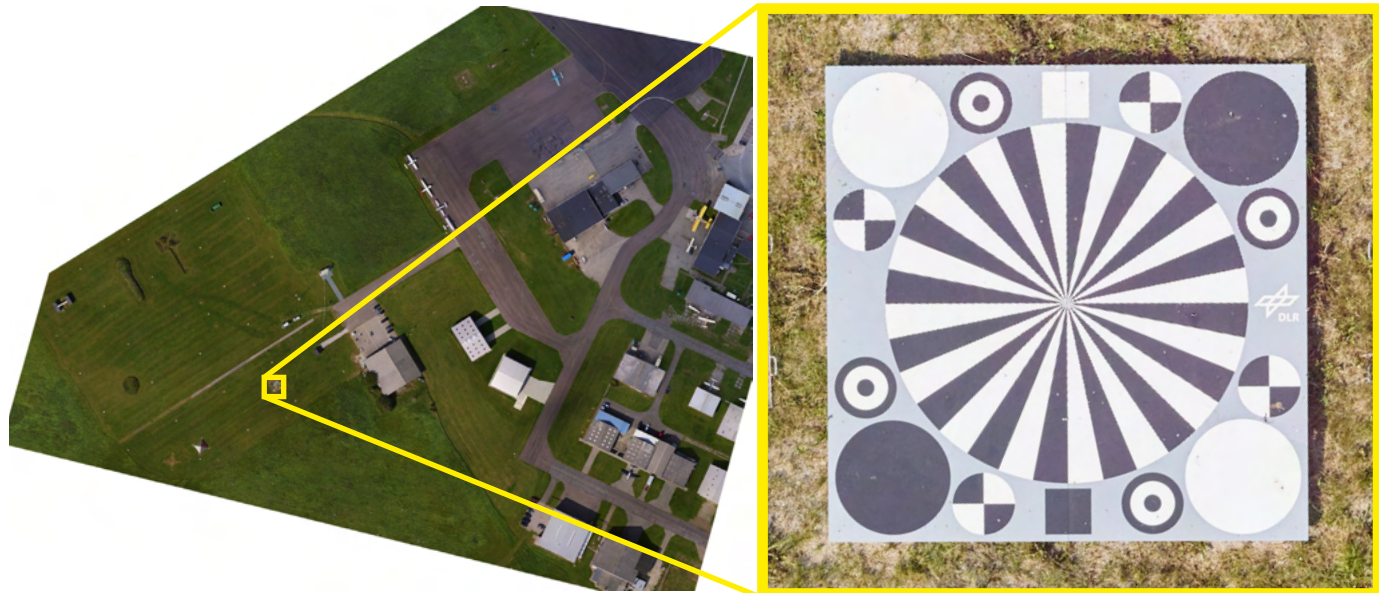
Sensor Resolution	128 MP
Sensor Type	CMOS
Sensor Size	Medium Format
Shutter Type	Electronic Global Shutter
Dynamic Range	80 dB
Max Frame Rate	4 fps
Storage	CF Express Card, up to 2TB
Lens Options	80 mm (HFOV: 32° VFOV: 23) 35 mm (HFOV: 66° VFOV: 49)

80 mm Option	GSD @60 m GSD @120 m Coverage @60 m AGL Coverage @120 m AGL	0.26 cm/px 0.52 cm/px 67 ha (0.26 cm/px GSD, 70% overlap) 135 ha (0.51 cm/px GSD, 70% overlap)
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35 mm Option	GSD @60 m GSD @120 m Coverage @60 m AGL Coverage @120 m AG	0.59 cm/px 1.18 cm/px 154 ha (0.59 cm/px GSD, 70% overlap) 309 ha (1.18 cm/px GSD, 70% overlap)
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Sample Data

	Flight Altitude 60 m 197 ft. AGL		GSD 0.26 cm/px		Area 14 ha
	Flight Speed 18 m/s		Images 1804		Flight Time 12.40 min





TRINITY PRO

SONY ILX-LR1

Sony ILX-LR1

RGB Camera

The SONY ILX-LR1 camera, with its cutting-edge high-accuracy capabilities and expansive coverage, seamlessly integrates into Quantum Systems drones and allows direct camera control, while delivering exceptional image quality.



The camera harnesses advanced sensor technology and processing power, resulting in a compact and light-weight solution that elevates project efficiency. Additionally, users have the flexibility to customize settings to

suit any mission, reducing data load and streamlining workflows, while maintaining image quality. This makes it an ideal choice for commercial mapping missions.

Sony ILX-LR1

Technical Specifications



Sensor Resolution	61.0 MP (9504 x 6336 px)
GSD @100 m AGL	1.57 cm/px
GSD @120 m AGL	1.88 cm/px
Coverage @120 m AGL	491 ha (1.88 cm/px GSD, 70% overlap)
Coverage with 0.7 cm/px GSD	184 ha (@45 m AGL, 70% overlap)
Sensor type	Exmor R CMOS
Sensor format	35 mm full frame
Sensor size	35.7 x 23.8 mm
Lens	f=24 mm, F2.8
Payload weight (ready to fly)	600 g

Sample Data

	Flight Altitude 100m 328 ft. AGL		GSD 1.57 cm/px		Area 60 ha		Overlap 79%
	Flight Speed 17 m/s		Images 973		Flight Time 17 min		





Qube 640

LiDAR Scanner

The Qube 640 is a LiDAR sensor with a 176° FOV, integrated colorization through an 8 MP camera, enhanced vegetation penetration and vertical scanning.



The Qube 640 is co-developed with YellowScan for Trinity Pro and Tactical drones. It features a selectable FOV (field of view) of up to 176°. Combined with Trinity's capabilities, it enables 32 km corridor scanning with one single flight. At 120° FOV, it improves productivity by 50% compared to its predecessor, the Qube 240.

The sensor ensures improved vegetation penetration, detailing foliage and trunks, and facilitates vertical scanning applications with reduced outer edge mismatches, thanks to the new IMU. An integrated 8 MP RGB camera enables LiDAR capture and colorization in the same flight.

Qube 640

Technical Specifications



Scanner
GNSS Inertial Solution
Integrated Camera
Laser Range
Precision ^{1,3}
Accuracy ^{2,3}
Scanner FOV
Shots per Second
Echoes per Shot
Center Point Density @100 m
Max. Data Points Generated ⁴

Hesai XT32M2X
 SBG Quanta Micro
 8 MP (for colorization purposes)
 300 m
 3 cm
 2.5 cm
 176° x 40.3°
 640 000 points/sec
 Up to 3
 34 -100 points/sqm
 1 920 000 points/sec

¹ Precision, also called reproducibility or repeatability, accounts for the variation in successive measurements taken on the same target.

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

³ 1 sigma @50 m, Nadir.

⁴ Triple Echo.

Sample Data



Flight Altitude
 75 m | 246 ft. AGL



FOV
 120°



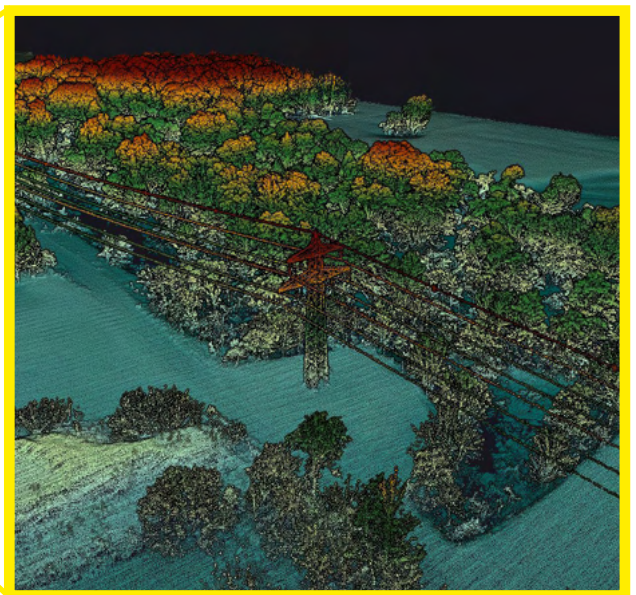
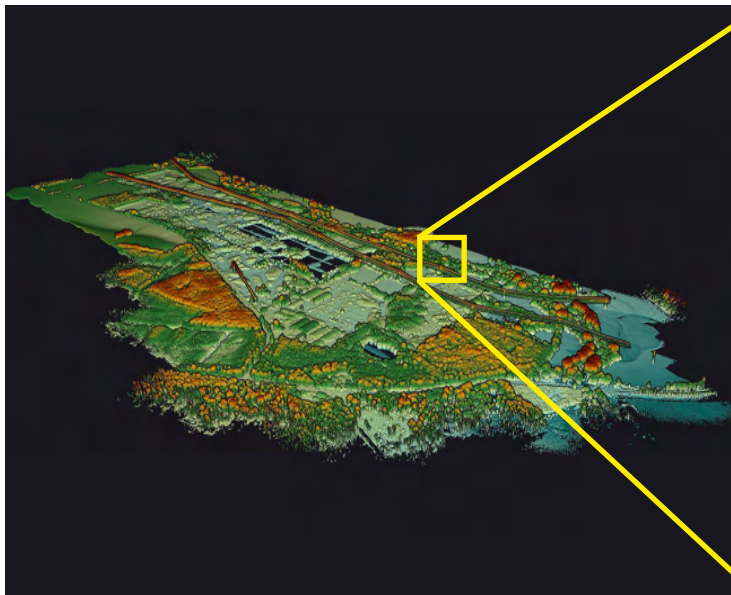
Flight Time
 42 min



Flight Speed
 18 m/s



Area
 170 ha





Oblique D2M

Five-Lens RGB Camera

The Oblique D2M is a powerful oblique imaging system consisting of five high-resolution multidirectional cameras, making it the ideal tool for large scale 3D photogrammetry.



A fast trigger interval along with custom high-speed storage provides class-leading time efficiency without compromising data quality. The payload combines four oblique and one NADIR camera to capture complex

geometries with ease. This ensures remarkable detail even on slanted surfaces and makes Oblique D2M destined for 3D mesh generation of high-rise areas, industrial environments, archaeological sites and alike.

Oblique D2M

Technical Specifications



GSD	1.50 cm @100m AGL
Cameras	1 x NADIR, 4 x oblique
Sensor Resolution	26 MP (6252 x 4168 px)
Total Resolution	130 MP
Trigger Interval	≥ 0.8 seconds
Sensor Type	CMOS
Sensor Format	APS-C
Sensor Size	23.5 x 15.6 mm
Focal Length	25 mm NADIR, 35 mm (oblique)
Payload Weight RTF	833.7 g
Flight Time	60 minutes
Storage	High speed data storage device (640 GB)

Sample Data



Flight Altitude

120 m | 393 ft AGL



Flight Speed

17 m/s



GSD

1.8 cm/px

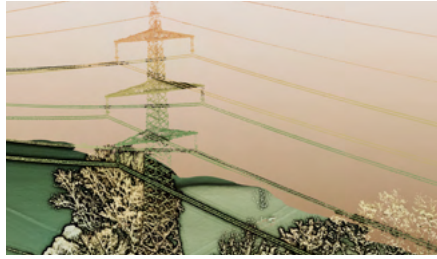


Applications



Surveying & GIS Services

- Cadastre
- Detail surveying
- Asset management
- City mapping / digital twin



Energy & Telecom

- Solar panel inspection
- Powerline inspection
- Infrastructure planning & mapping
- Infrastructure inspections



Agriculture

- Weed management
- Crop disease / pest monitoring
- Animal counting
- Plant counting



Mining

- Progress monitoring
- Volume / stockpile calculations
- Exploration mapping
- Environmental impact monitoring



Construction & Infrastructure

- Road / Rail design
- Pipeline inspection
- Construction monitoring
- Topographic surveys



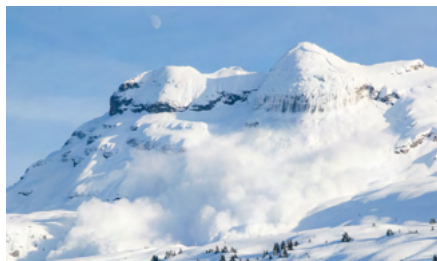
Conservation & Environment

- Erosion mapping
- Coastal monitoring
- Deforestation assessment
- Species & habitat mapping



Forestry

- Plant counting / inventory
- Crop health
- Survival assessment
- Engineering management



Public Safety

- Search & rescue
- Damage & infrastructure assessment
- Flood assessment mapping
- Post disaster assessment & mapping

