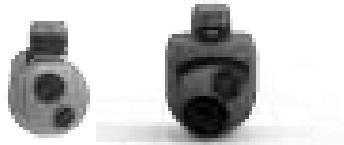
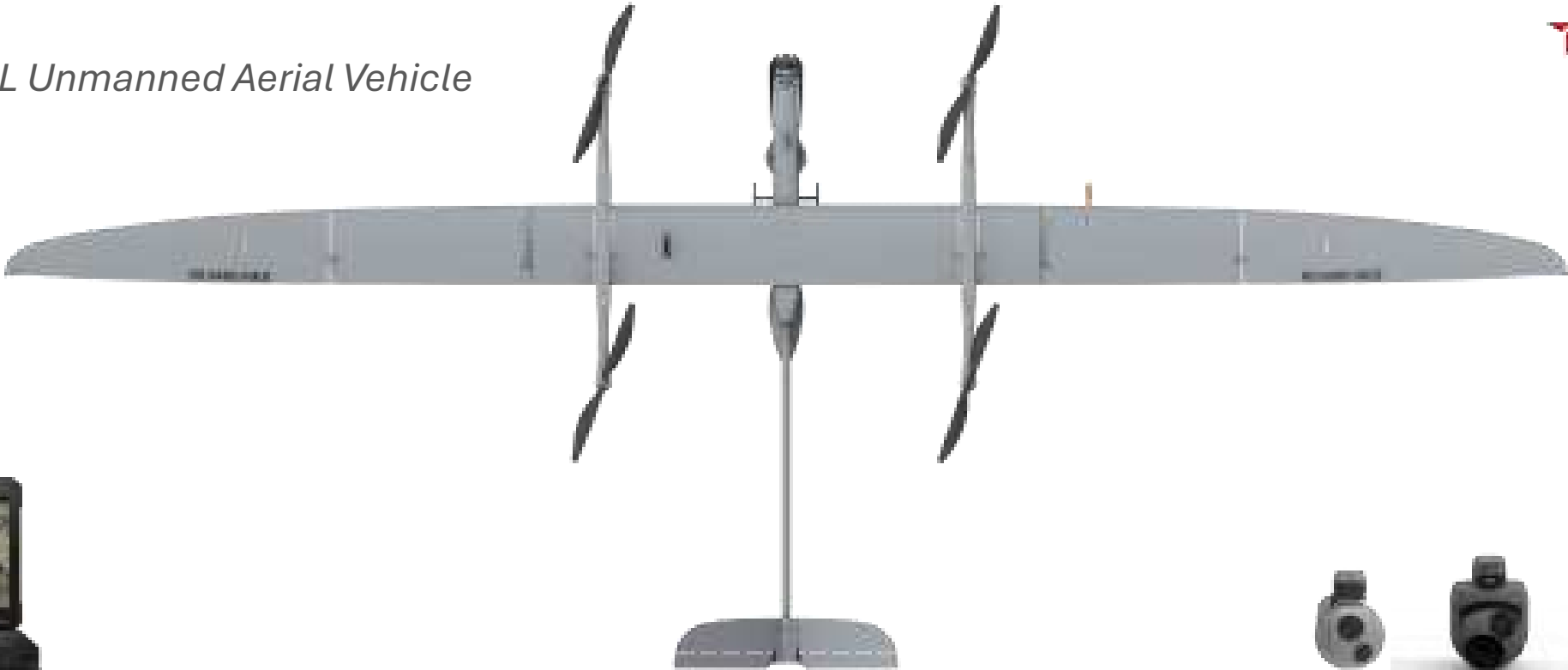


EOS C VTOL Unmanned Aerial Vehicle



PERFORMANCE		
Endurance	Up to 3h with payload	
Maximum distance	190 km	118 miles
Communication range (RLOS)	50 km	31 miles
Cruise speed	61 km/h	33 kts
Max speed	90 km/h	48 kts
Service ceiling (AMSL)	4500 m	15 000 ft
Max takeoff altitude (AMSL)	3500 m	11 000 ft
Precipitation	10 mm/h	0.4 inches/h
Wind penetration	16 m/s	31 kts
Vertical flight wind tolerance	12 m/s	23 kts
Temperature	-20°C..+50°C	-4°..+122°F
PHYSICAL		
Wingspan	5 m	196.8 inches
Overall length	1.8 m	70.8 inches
Overall height	0.45 m	17.7 inches
Payload capacity	1.1 kg	2.42 lbs
Mass (MTOW)	14.2 kg	31.1 lbs
Environmental Protection	IP54, resistancy to sand, dust and vibration	

COMMUNICATION	
Frequency	2.2-2.5 GHz or 4.4-4.9GHz
Bandwidth	5/10/20 MHz
Encryption	AES-256
Range	Up to 50 km RLOS
Type	Digital, MIMO / MANET / MESH
Anti-jamming	Optional CRPA GPS
FLIGHT CONTROL	
Autopilot	Fully autonomous Waypoint navigation Fly-by-camera mode Geo-fencing
Safety	Programmable failsafe Automatic: return to home
Failsafe routes	Dead reckoning Continuous health monitoring Servo and ESC feedback

OPERATIONAL	
Deployment	Vertical takeoff and landing
Takeoff/landing site	Obstacle free area 10x10 m
Instrumentation	GPS/GLONASS/GALILEO Barometric altimeter, radar altimeter Pitot tube with drain Inertial Navigation System (INS) Servo feedback and logging ESC telemetry and logging
Propulsion	Fully electric / battery powered
Air Traffic Control transponder	Optional Mode-S / ADS-B Out
Emergency tracking	Optional GSM / GPS tracker
Visibility	LED Navigation and anti-collision lights IR strobe / light
Battery	Lithium-polymer smart battery with BMS Automatic self storage feature
Features	Fire support utility, video on map Reporting, image analytics tools Video recording and instant playback

PAYLOAD eOpic-5	
Visible light optical zoom 36X LWIR sensor (SD Thermal) NIR mode	
PAYLOAD eOpic-6	
Visible light optical zoom 55X / 36X LWIR / SWIR sensor (Zoom Thermal / HD Thermal / SD Thermal) NIR mode Optional Laser Designator 30mJ / 50mJ / other Optional Laser Range Finder	
IMSI Catcher	
2G(GSM), 3G(UMTS), 4G(LTE) & 5G(NR) > 1000 cellular handsets per minute	
SOFTWARE FEATURES	
Target tracking, scene tracking and shared POI's Geo-pointing, geo-referencing and area measurement Multilayer view including 3D map and Picture-in-Picture Laser Target Designation for stationary and moving targets Target engagement with Autotracker; Call for fire; etc	

eOPIC-5

THREOD
SYSTEMS



Imaging payload

2-axis gyro stabilized gimbal
Excellent image quality
Outstanding accuracy
Day and night imaging
Moving map software
Call for fire and adjustment

Full HD TV sensor

30X optical, 3X digital zoom
Resolution 1920x1080
HFOV 63.7° - 2.3°
DRI: 14/6/2.5 km human
22/12/6 km vehicle
NIR low light mode

LWIR thermal sensor

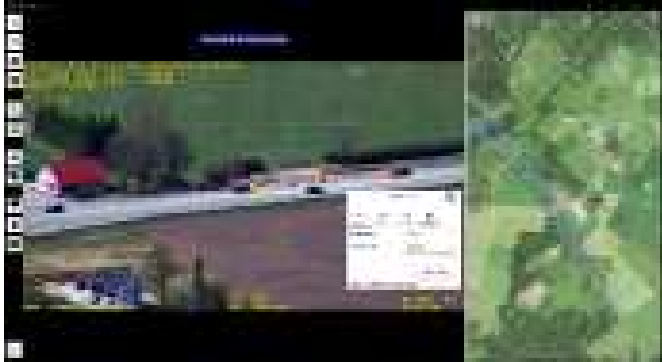
8X digital zoom
Resolution 640x512
HFOV 18°
DRI: 1280/320/160 m human
3850/950/295 m vehicle

Video

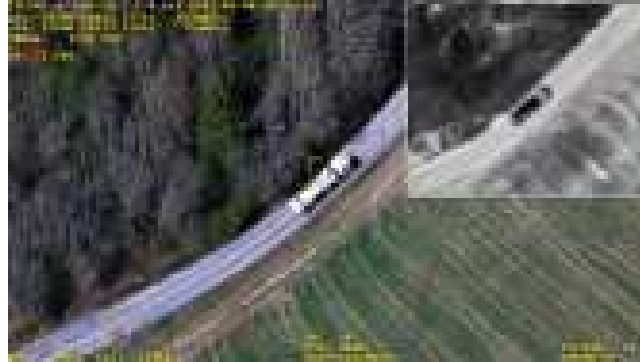
1920x1080p 30 fps
H.264/H.265 encoding
Ethernet MPEG-TS output
High quality on-board recording
STANAG 4609 KLV metadata
Unicast/multicast streaming

Features

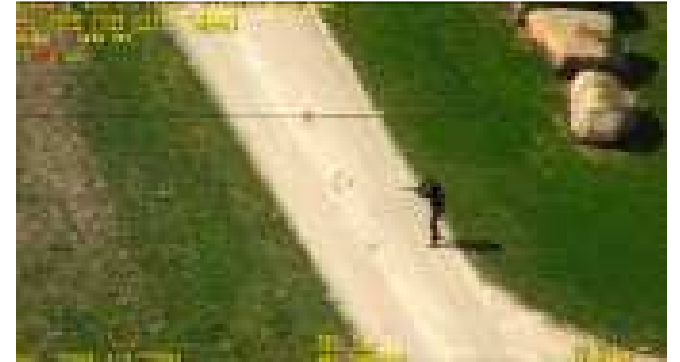
Moving target tracking
Scene tracking
Geo-pointing
Picture-in-Picture
On-board DEM
Integrated INS/GPS



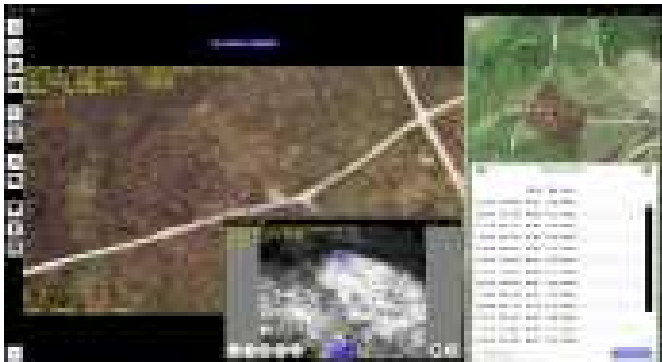
Measure distances and bearing directly on the video, visualize sensor coverage history on map



Picture-in-picture



30X optical zoom FullHD TV camera



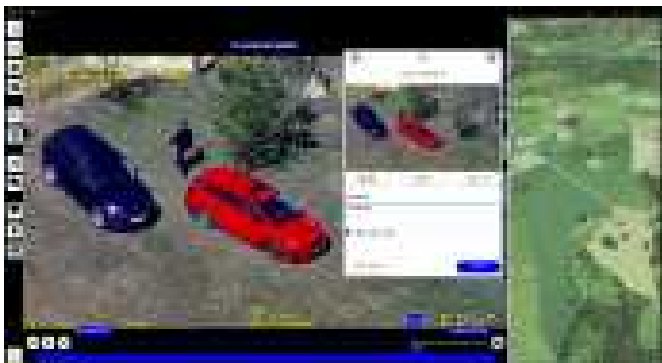
Search archived footage for specified coordinates and view results side-by-side with live mission



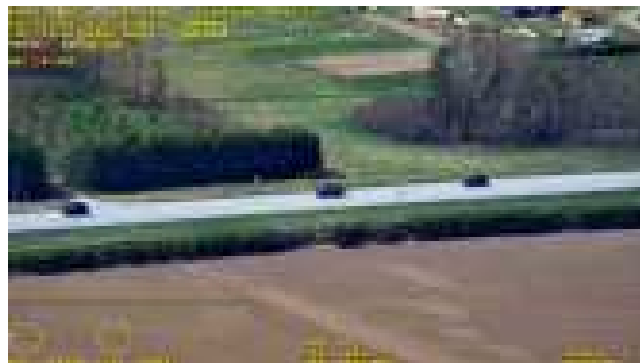
Display the full resolution video on map in real-time



TV camera in near infrared (NIR) mode for low light mode



Create searchable bookmark tags to organize archived and live footage



Track moving targets



LWIR thermal camera

CONTACT:

Website www.thread.com
Email sales@thread.com



Imaging Payload

2-axis gyro stabilized gimbal
Laser Target Designation
Excellent image quality
Outstanding accuracy
Day and night imaging
Moving map software
Call for fire and adjustment
Optional laser pointer/illuminator

Visible Camera Options

Global Shutter FullHD
55X Optical Zoom (@720p)
36X Optical Zoom (@1080p)
Global Shutter FullHD
36X Optical Zoom (@720p)
28X Optical Zoom(@1080p)

Thermal Imager Options

5X Optical Zoom SD LWIR
640x512, HFOV 32°-5°
Fixed Focal Length HD LWIR
1280x1024, HFOV 21°
Fixed Focal Length SD LWIR
640x512, HFOV 18°
HD SWIR, HFOV 6°

Laser Suite

Laser Target Designator
Wavelength 1064nm
Power >50mJ or >30mJ
Divergence <1mRad or <0.5mRad
Repetition rate 8-22 pulse/sec
STANAG 3733 Compatible
Optional HD SWIR See-Spot

Video

1920x1080p 30 fps
H.264/H.265 encoding
Ethernet MPEG-TS output
High quality on-board recording
STANAG 4609 KLV metadata
Unicast/multicast streaming
Supports 3 independent streams



eOPIC-6-ISR-HD
55X Optical Zoom Visible Camera
Fixed FOV HD LWIR Thermal Camera



eOPIC-6-ISR-Z
36X Optical Zoom Visible Camera
5X Optical Zoom LWIR Thermal Camera



eOPIC-6-ISR-LC
55X Optical Zoom Visible Camera
Fixed FOV SD LWIR Thermal Camera



eOPIC-6-ISTAR-VISLWIR
36X Optical Zoom Visible Camera
Fixed FOV Thermal Camera
30mJ or 50mJ Laser Target Designator
STANAG 3733



eOPIC-6-ISTAR-VISSWIR
36X Optical Zoom Visible Camera
Fixed FOV SWIR Camera & See-Spot
30mJ or 50mJ Laser Target Designator
STANAG 3733



eOPIC-6-ISTAR-TIS
5X Optical Zoom LWIR Thermal Camera
30mJ or 50mJ Laser Target Designator
STANAG 3733

eOPIC-8

THREOD
SYSTEMS



Imaging payload

- 2-axis gyro stabilized gimbal
- Excellent image quality
- Outstanding accuracy
- Day and night imaging
- Moving map software
- Call for fire and adjustment

Full HD TV sensor

- 36X optical, 3X digital zoom
- Resolution 1920x1080
- HFOV 52°-1.9°
- DRI: 14/6/2.5 km human
- 22/12/6 km vehicle
- NIR low light mode

MWIR thermal sensor

- 14X optical, 3X digital zoom
- Resolution 640x512
- HFOV 28°-1.9°
- DRI: 9/2/1.2 km human
- 16/7/5 km vehicle

LRF

- Laser Range Finder
- Wavelength 1535nm
- IEC 60825-1 Class I
- Pulse rate 3-6Hz
- Range limits 10-15,000m
- Accuracy up to $\pm 1m$

Video

- 1920x1080p 30 fps
- H.264 encoding
- Ethernet MPEG-TS output
- High quality on-board recording
- STANAG 4609 KLV metadata
- Unicast/multicast streaming

eOPIC-8

SPECIFICATION

Stabilisation and Steering	
Stabilisation	2 Axes with mechanical Gyro Stabilisation
Azimuth Range	Continuous 360 °
Elevation Range	Elevation Range: +20 ° to - 110 °
Slew Rate	Slew rate > 400 °/ s
Maximum Airspeed	200 Kts
System Specification	
Weight	<6kg
Dimensions	285 mm (H) x 220 mm (D) Turn Radius <220 ± 1mm
Power	28VDC , 22-32VDC according to MIL-STD-740F 70W (Typ.), 110W (Max.)

SENSOR SUITE

MWIR Zoom	
Type	MWIR, 3-5µm Cooled Infra Red Imager
Resolution	640 x 512 pixels
Fields-of-View	1.9° to 28° continuous zoom
Digital Zoom	4x
HD Color Zoom	
Type	High Definition 435 nm – 680nm Colour Band
Resolution	1920 x 1080 pixels detector
Fields-of-View	1.9° to 52° continuous zoom
Optical Zoom	36x

LASER RANGE FINDER

Wavelength	1535 nm
Accuracy	± 1m to ± 3m
Laser type	ErGass (diode pumped)
Max. measuring rate	3-6 Hz
Laser class	IEC 60825-1 Class 1
Range limit	10 to 15,000m
Extended target	8.7km
NATO target	5.1km
Man size Target	2.9km
Multiple target discrimination	20m
Multiple target range logic	First, second and last target

CONTACT:

Website www.threod.com
Email sales@threod.com

eOPIC-8-ISR & ISTAR



Imaging payload

- 2-axis gyro stabilized gimbal
- Excellent image quality
- Outstanding accuracy
- Day and night imaging
- Moving map software
- Call for fire and adjustment

Full HD TV sensor

- 36X optical, 3X digital zoom
- Resolution 1920x1080
- HFOV 52°-1.9°
- DRI: 16/7/3 km human
- 27/13/7 km vehicle
- NIR low light mode

MWIR thermal sensor

- 15X optical, 4X digital zoom
- Resolution 640x512
- HFOV 28°-1.9°
- DRI: 9/2/1.2 km human
- 16/7/5 km vehicle

Laser Suite

- Laser target designator
- Wavelength 1064nm
- Power >50mJ
- Divergence $\leq 0.4\text{mRad}$
- Repetition rate 8-22 pulse/sec
- Code compatibility user defined

Video

- 1920x1080p 30 fps
- H.264 encoding
- Ethernet MPEG-TS output
- High quality on-board recording
- STANAG 4609 KLV metadata
- Unicast/multicast streaming

eOPIC-8-ISR & ISTAR

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Resolution	640 x 512 pixels
Fields-of-View	1.9° to 28° continuous zoom
Optical zoom	15x
Digital Zoom	4x
HD Color Zoom	
Type	High Definition 435 nm - 680nm Colour Band
Resolution	1920 x 1080 pixels detector
Fields-of-View	1.9° to 52° continuous zoom
Optical Zoom	36x

TARGET ENGAGEMENT

Non-Eye Safe designation and Range Finding	
NATO Targets	Between 2.5 and 4.5 km
Detection	> 8km
Moving Target	Engagement with Autotracker

LASER SUITE

Eye Safe Laser Range Finder (LRF)	
Wavelength	1572 nm Class -1M
Pulse Rate	1-10 Hz
Resolution	2m
Accuracy	± 5m
Laser Target Designator	
Wavelength	1064 nm
Power	> 50mJ, Constant over -25°C > T _{ambient} < 55°C
Repetition Rate	8-22 Pulse/sec
Divergence	≤ 0.4mRad
Code Compatibility	User defined

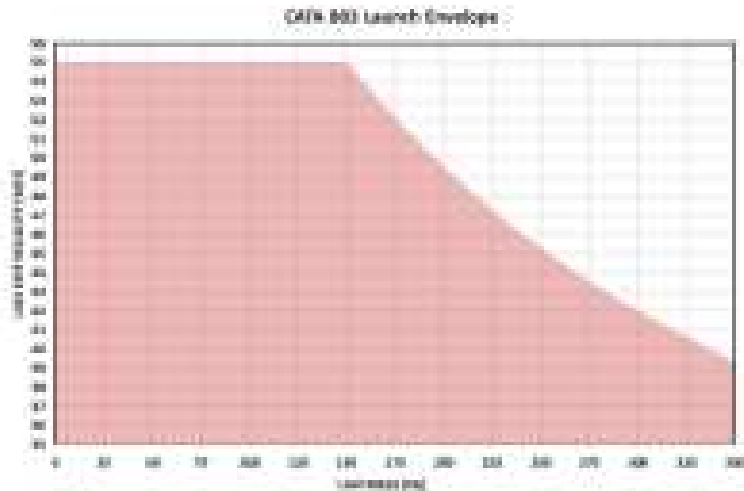
CONTACT:

Website www.threod.com
Email sales@threod.com

CATA LAUNCHER

THREOD
SYSTEMS





PERFORMANCE

UAV mass	Up to 350 kg (see graph)
Launch Speed	≤ 55 m/s (see graph)
Launch Angle	8° to 13°
Operating Temperature	-20 °C to +50 °C

PHYSICAL

Deployed length	16.8 m	55.1 ft
Transportation length	7 m*	23 ft
Transportation with	2.2 m	7.2 ft
Empty weight	< 3100 kg	

OPERATIONAL

Deployment	To launch ready < 4 min
Launch recovery	< 4 min
Remote Control Panel	Wired 20m or Wireless 100m*
Maximum road speed	90 km/h



CONTACT

Website	www.threod.com
Email	sales@threod.com