



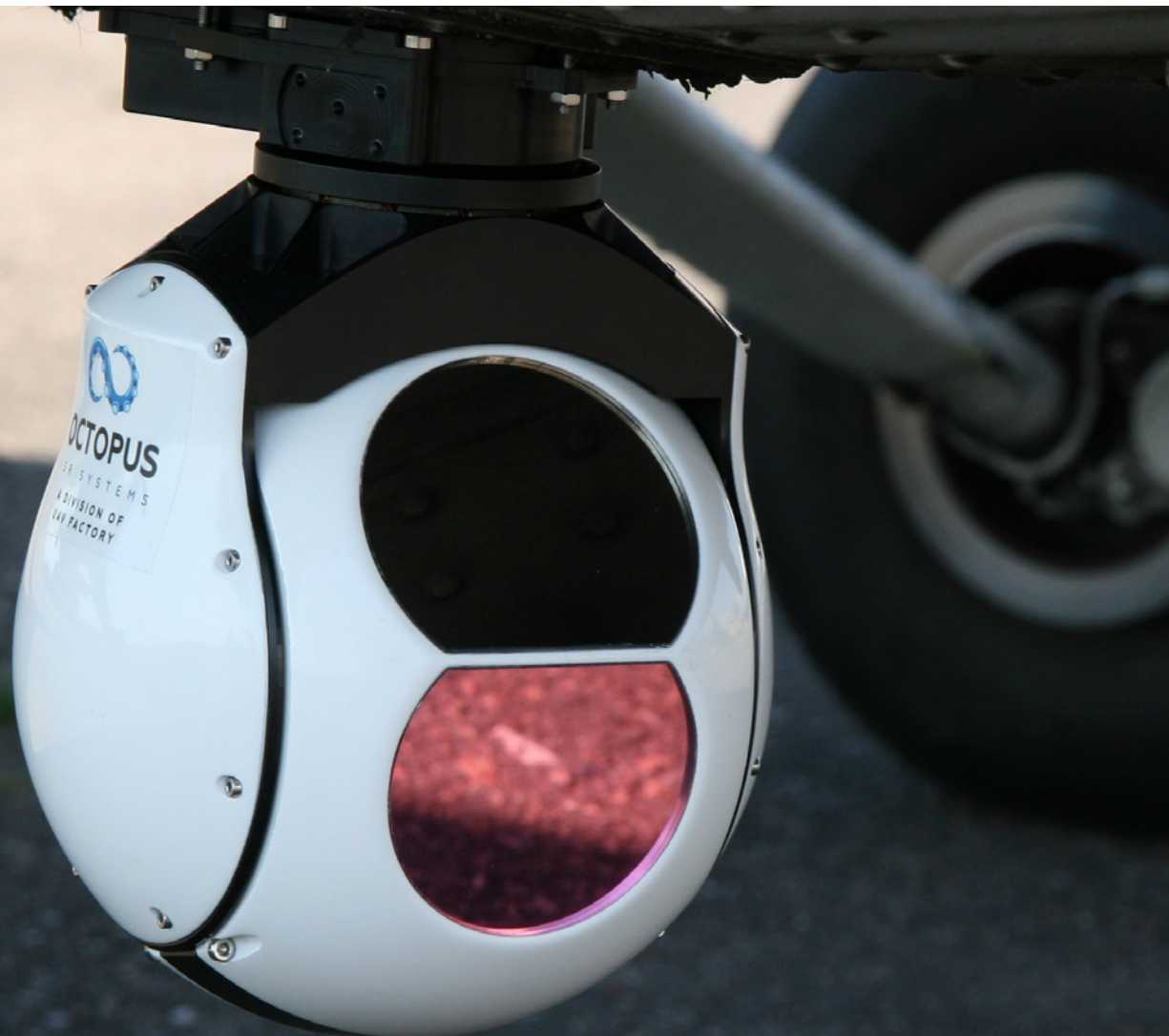
OCTOPUS

ISR SYSTEMS

A DIVISION OF
UAV FACTORY

EPSILON 140 DUAL SENSOR PAYLOAD

Dual sensor, high performance gyro-stabilized gimbal



THE MOST ADVANCED MICRO GIMBAL FOR LONG-RANGE SURVEILLANCE

- // Day and night integrated sensors
- // Ultimate stability at 30x optical zoom
- // Supreme image quality with 720p HD day sensor
- // Global shutter sensor for exceptional image clarity
- // Industry leading surveillance range with unique 60mm IR lens

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ONBOARD IMAGE PROCESSING

Epsilon 140 has state of the art onboard image processing capability. The onboard processing leads to a rock-solid target tracking performance and eliminates any communication latency issues. Its processed video reduces the data rate and requires lower bandwidth datalinks, which is of an extreme importance for modern UAVs. The video stream along with snapshots can be stored in HD quality onboard the Epsilon 140

TARGET TRACKING

Epsilon 140 is capable of hands-free tracking of moving objects. The operator can allocate the target and zoom in, while the onboard processor will hold the target in the center of the video screen, regardless of the aircraft movement direction. This is a fundamental feature for long-range surveillance, monitoring applications and law enforcement applications. Target tracking is paramount in applications where the aircraft is moving, and when the object of interest is moving relative to the ground.

RETRACTION MECHANISM

Epsilon 140 is available with a lightweight retraction mechanism as well as matched vibration isolators. The retraction mechanism weight is 420 grams, with a rugged design and is suitable for high acceleration catapult launches and parachute recoveries.

DIRECT DRIVE STABILIZATION

Direct drive torque motor stabilization produces stable video even at 30x optical zoom or up to 1.3° vertical field of view.

DUAL SENSOR OPTIONS

Epsilon 140 is available with multiple sensors, including global shutter HD daylight sensor, as well as a high sensitivity 640x480 IR night sensor with a unique 60mm IR lens.

ELECTRONIC VIDEO STABILIZATION

Electronic stabilization with roll correction, removes the high frequency jitter often found on small unmanned aircraft platforms. This significantly reduces the operator workload and allows to concentrate on the mission objective.

SCENE STEERING

Epsilon will automatically hold the video centered on the scene, independent of the aircraft movement, even at tele-zoom setting.

NON ITAR

Epsilon 140 is a non-ITAR product and is freely available worldwide

RUGGED AND LIGHTWEIGHT DESIGN

You can operate the Epsilon 140 in any conditions – IP64 rated, it is environmently sealed construction and will protect electronics from dust and heavy rain. Robust aluminum structure is optimized for demanding applications where the gimbal needs to handle shock and rapid accelerations. Epsilon 140 will handle routine parachute recoveries, net recoveries, belly landings and catapult launches with ease.

H.264 INTERNAL ENCODER

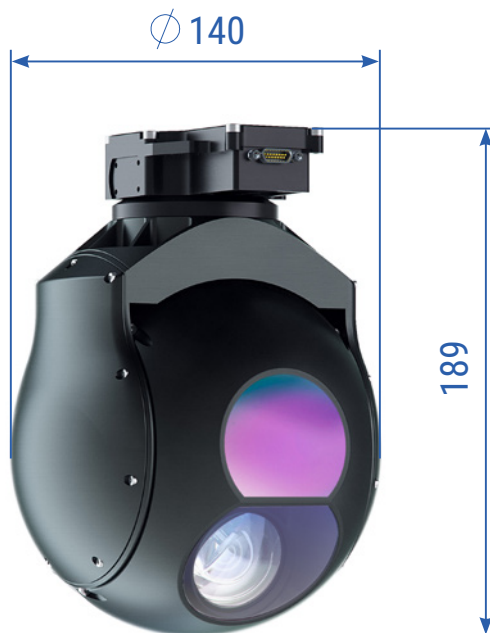
The video is encoded with H.264 compression format to support IP datalink options and to reduce datalink system bandwidth requirement.

PLUG AND PLAY

Simply connect the Epsilon 140 to a power, network and serial communication cable – and its ready to use. No need for any additional time consuming integration.

System specifications

Stabilization	<250 μ rad
Weight	1570 grams
Size	140mm diameter x 189mm
Environmental Protection	IP64 rated
Operating Temperature	-25 to +50° C
Rotation Limits	360° continuous pan -90° to +45° elevation
Slew rate	120 deg/sec
Power	40W peak, 20W typical
Input Voltage	24 Volts
Video Out	Digital H.264 encoded video Analog PAL or NTSC
Control Interface	RS 232



Onboard Image Processor Specifications

Object tracking	Yes
Software stabilization with rotation correction	Yes
HD Video output	720p HD output
H.264 encoding	Yes
Onboard Video Recording/ Snapshots	32 Gb onboard memory
Moving Target Indicator	Yes
Video Enhancement	Yes

HD DAYLIGHT SENSORS

Parameter	Sensor #1
Sensor name	Hitachi DISC120R
Type	EO sensor
Global shutter	Yes
Vertical FOV	37.9°-1.3°
Resolution	HD 720p
Optical zoom	30x

IR NIGHT SENSORS

Parameter	Sensor #1	Sensor #2
Type	LWIR uncooled	LWIR uncooled
Resolution	640x480	640x480
Lens focal length	60 mm	25mm
Vertical FOV	7.7°	18.1°
Frame rate	24fps	24fps
Human target detectability	2000 meters	833 meters

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