

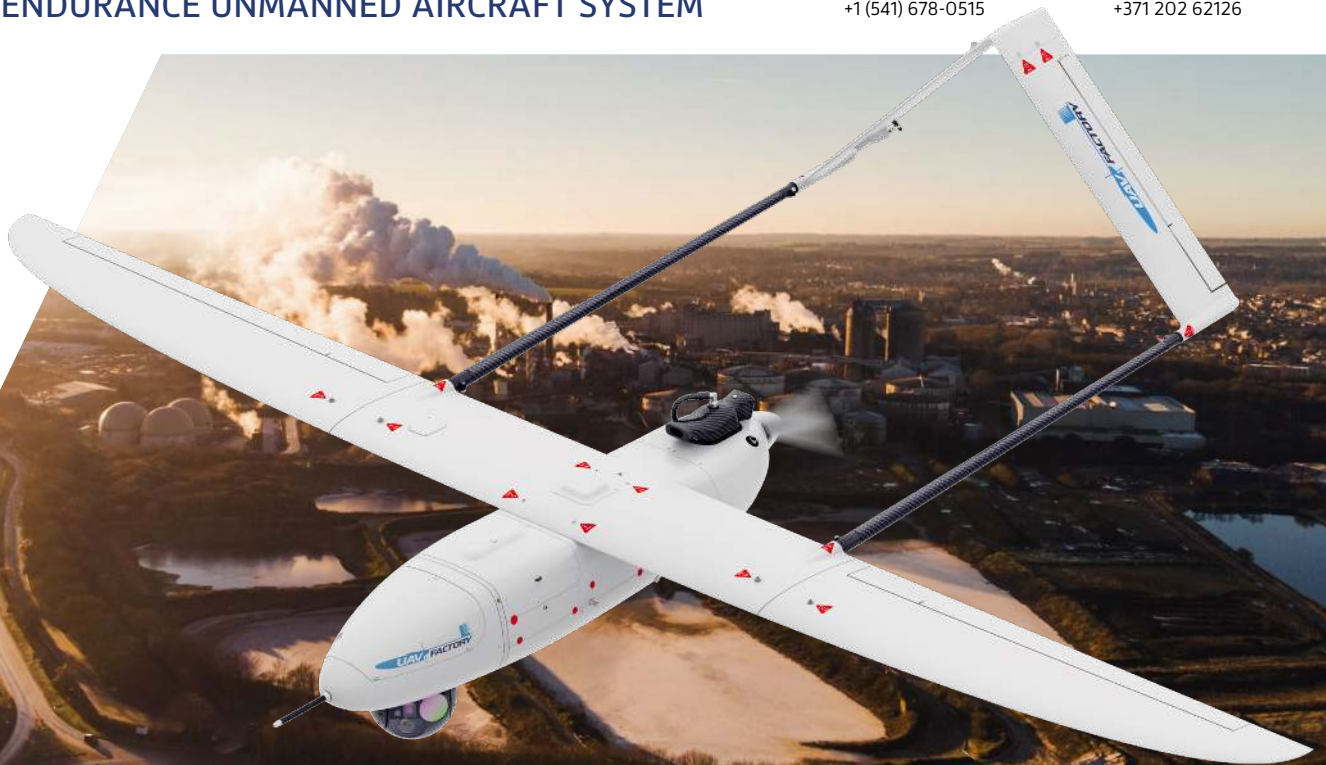
PENGUIN C Mk 2 UAS

LONG ENDURANCE UNMANNED AIRCRAFT SYSTEM



UAV Factory USA LLC
2777 NW Lolo Dr, Suite 130,
Bend, Oregon, 97703
+1 (541) 678-0515

UAV Factory Ltd. Europe
1 Jaunbridagi, Marupe
LV-2167, Latvia
+371 202 62126



**Small UAS unmatched in: long endurance,
under 25 kg / 55 lbs, small logistic footprint
and cost effective for commercial operations**

Key Features

- ▶ **Best Reliability In Class**
- ▶ **Best Cost Efficiency**
- ▶ **20 hours Flight Endurance with Payload**
- ▶ **100 km / 62 mi Range**
- ▶ **Crew of Two**
- ▶ **Operational & Maintenance Training**
- ▶ **Runway Independent**
- ▶ **MISB Compliant Video Stream**



UAVFACTORY – your reliable partner

Founded in 2009
ISO9001:2015 certified
Non-ITAR
Maximum exportability
AIRBUS Defence & Space Supplier

PENGUIN C Mk 2 UAS

Technical specification

AIRCRAFT SPECIFICATIONS

Wingspan	3.3 m / 10.8 ft
MTOW	Group 2: 25 kg / 55 lbs, Group 3: 28 kg / 62 lbs
Endurance	Group 2: 25.5 hours w/Epsilon 140LC and 11 hours estimated w/Epsilon 180 Group 3: 25.5 hours w/Epsilon 140LC and 16 hours estimated w/Epsilon 180
Range	100 km / 62 mi
Cruise speed	47-49 knots
Max level speed	62.2 knots
Ceiling	5,000 m / 16,400 ft MSL
Max takeoff altitude	3,048 m / 10,000 ft AMSL
Operational t°	-40°C to 50°C / -40°F to +122°F
Navigation	GPS
Anti-icing measures	Heated Pitot tube
Weather limitations	Rain < 5 mm/ hour / 0.2 inches/hour; 20 knot sustained winds
Detectability	Not detectable at 1 km / 0.62 mi
Transponder	Mode 5 ADS-B OUT

PROPULSION SYSTEM

Engine type	28cc EFI module; proprietary low noise muffler
Temperature control	Automatically controlled via mechanical flap
Fuel type	Unleaded gasoline or C10
Generator system	150W onboard generator system

DATA LINK SPECIFICATIONS

Datalink manufacturer	Digital Link with MIMO
Frequency	UHF, L, C, or S band
Link Rate	Up to 12 Mbps
Output power	4W
Encryption	AES 128

GIMBAL COMPARISON

	E140LC	E140Z	E175	E180
EO HD sensor with 45x optical zoom ratio, 4x digital zoom	✓	✓	✓	
EO Full HD sensor with 67x optical zoom ratio, in addition 4x digital zoom				✓
LWIR sensor with fixed FOV	✓			
LWIR sensor with 3.3x optical zoom ratio		✓		
MWIR sensor with 15x optical zoom ratio			✓	✓
> 10 km / 6.2 mi Laser Range Finder			✓	✓
Gimbal weight	1.3 kg / 2.9 lbs	1.8 kg / 3.9 lbs	2.6 kg / 5.7 lbs	3.9 kg / 8.6 lbs

SYSTEM SPECIFICATIONS

Autopilot	Piccolo, Cloud Cap Technology
Ground Control Station	Portable, Dual touchscreen displays
Tracking antenna	Tracking high gain directional and omnidirectional antenna
Take off	Fully autonomus Pneumatic Catapult with 6,000J launch energy
Landing	Computer assisted parachute recovery; airbag
Crew size	2
Preparation time	1 hour from pallet to launch ready
Mobility	System fits in 6 or fewer cases



"The UND Aerospace Foundation has found the Penguin C system to be a robust and reliable unmanned platform. We have flown the Penguin C and Epsilon 140z payload in operations varying from flood to fire support in temperatures ranging from well below freezing up to around 95°F/35°C. We regularly fly near or at the published wind limits, and the parachute and airbag landing system has performed well in all environments.

The technical support from UAV Factory has been stellar. Questions and support items are handled promptly. UAV Factory continues to work with our team to ensure our system is operating optimally, and all inquiries and requests are promptly followed up."

Ryan C. Walsh, UAS Business Development,
UND Aerospace Foundation

"The UAV Factory Penguin C has provided an exceptional capability to UAS Flight Training. Penguin's reliable and proven design has afforded our students the opportunity to gain insight into professional-grade systems that they may encounter in industry."

UAS Flight Training Manager Embry-Riddle
Aeronautical University



OCTOPUS
ISR SYSTEMS

EPSILON Series Sensors



E140LC

E140Z

E175

E180

GIMBAL OPTIONS

- Onboard Processing and Recording
- Moving Map Software
- Automatic Target Tracking
- Moving Target Indicator (up to 100 targets)
- High Precision Geo-Location
- FMV out; digital H.264 encoded
- Electronic stabilization
- Laser range finder: <1.5 m / 5 ft accuracy
- Laser Illuminator: 830 nm class IIIB, 50 mW

System Footprint

3 Aircraft
1 Launcher
1 Tracking Antenna
1 GCS

