

KLM SENTINEL

EXPORT-CONTROLLED ITEM
AUTHORISED GOVERNMENT END-USERS ONLY

PERSISTENT OVERWATCH • TECHNICAL BROCHURE

SENTINEL T-90

The persistent overwatch platform. Up to 90 minutes on station and a 45 km reach — rated above Everest, hardened against jamming, built to watch longer than anyone waits.

36,000 FT SERVICE CEILING • 75-90 MIN ENDURANCE • LEVEL 3 ACTIVE ECM

PERSISTENT OVERWATCH • MISSION PROFILE

SEE FURTHER. KNOW SOONER.

The long-stare variant. A high-density power module and extended-efficiency rotors buy up to 90 minutes on station and a 45 km reach — a full patrol cycle of unbroken coverage. Shares the same FHSS datalink architecture, combination sight family and KAT ground-control ecosystem as the T-60.

75–90

MIN

MAX FLIGHT ENDURANCE

45

KM

MAX RADIO RANGE

36,000

FT

SERVICE CEILING AMSL

94

KM/H

MAX SPEED

72

KM/H

WIND RESILIENCE

Lvl 3

ECM

ACTIVE COUNTER-MEASURES

SENTINEL T-90

● FIELD DEPLOYMENT



CORE CAPABILITIES

BUILT FOR THE EDGE OF THE SKY

01
ULTRA HIGH THRUST

Extreme thrust-to-weight ratio for operation in rarefied air down to 20 kPa; rated for launch at 29,400 ft AMSL with a 36,000 ft service ceiling — near-zero radar signature, ultra-low acoustic noise.

02
ELECTRONIC COUNTER-MEASURES

Active ECM suite defends against GPS and radio jamming, working with a frequency-hopping command & control link to keep the aircraft flying and transmitting under a hostile spectrum.

03
ALL-WEATHER / ALL-TERRAIN

Cold-soak launch at -25°C from 29,400 ft, IP67 all-weather sealing and rain-capable systems for year-round, cross-theatre operation.

04
AUTONOMOUS OPERATIONS

Fully programmable waypoint navigation on pre-downloaded maps, automatic payload functions, custom hover-time per waypoint, self-arming and auto take-off / auto-landing throughout.

HIGH ALTITUDE AREA OPERATIONS

36,000 FT — SENTINEL SERVICE CEILING

29,400 FT — MAX LAUNCH ALTITUDE

29,032 FT — MT. EVEREST SUMMIT

≈15,000 FT — TYPICAL TACTICAL QUADCOPTER

SEA LEVEL

TECHNICAL SPECIFICATIONS

FLIGHT PERFORMANCE

SPECIFICATION	VALUE
Max Flight Endurance *1	75–90 minutes
Max Radio Range *2	45 kilometres
Max Launch Altitude (AMSL)	29,400 ft (8,961 m)
Service Ceiling (AMSL)	36,000 ft (10,974 m)
Max Speed	94 km/h
Max Climb Rate	3.6 m/s
Wind Resilience	72 km/h
ECM Suite	Level 3 Active ECM
Cockpit Video Link	1080p Full HD (1920×1080)
Payload Tilt Angle	+15° to -90°
Failsafe (Over Range / Link Loss / Low Battery)	Auto-Home
Transmission	Wide-band UHF · auto frequency hopping



ARGUS 1200 COMBINATION SIGHT

ONE LOOK. TOTAL LOCK.

One 360°-slewing turret, a 48 MP day sensor and 160× hybrid zoom paired with AI-lock target acquisition. Onboard AI compute stitches day and thermal into a single frame — switchable across 9 colour palettes — for faster, more accurate interpretation of the ground picture.

SPECIFICATION	VALUE
Day Sensor	48 MP · stills to 8K (8000×6000) · 4K video @ 30 FPS
Zoom	160× hybrid · up to 12× optical · OIS + EIS dual stabilisation
Thermal Sensor	640×512 · 30 Hz refresh · up to 8× digital zoom
AI Super-Resolution	Thermal upscaled to 1280×1024 · full-frame thermometric read-out
Feed Mode	Simultaneous stitched day + thermal · up to 9 colour palettes
AI Lock	Target GPS coordinates with AI lock & crosshair for rapid, precise targeting
Laser Range Finder	1.2 km, precise oblique distance
Onboard AI Compute	11 TOPS · detection, upscaling, identification & measurement
Gimbal Rotation	360° full yaw
Sight ECM Rating	Level 3 active

ARGUS 1200

● ACTUAL PRODUCTION UNIT



360° GYRO-STABILISED · LEVEL 3 ECM RATED

OPTICAL PAYLOAD • IN THE FIELD

ONE TARGET. TWO CHANNELS.

The same ground vehicle, resolved simultaneously across the Argus 1200's day and thermal channels — 160× hybrid EO zoom for stand-off identification, paired with a 640×512 LWIR thermal core offering up to 8× digital zoom for zero-ambient-light targeting.



DAY SIGHT
160× HYBRID ZOOM

THERMAL PALETTES
9 SELECTABLE

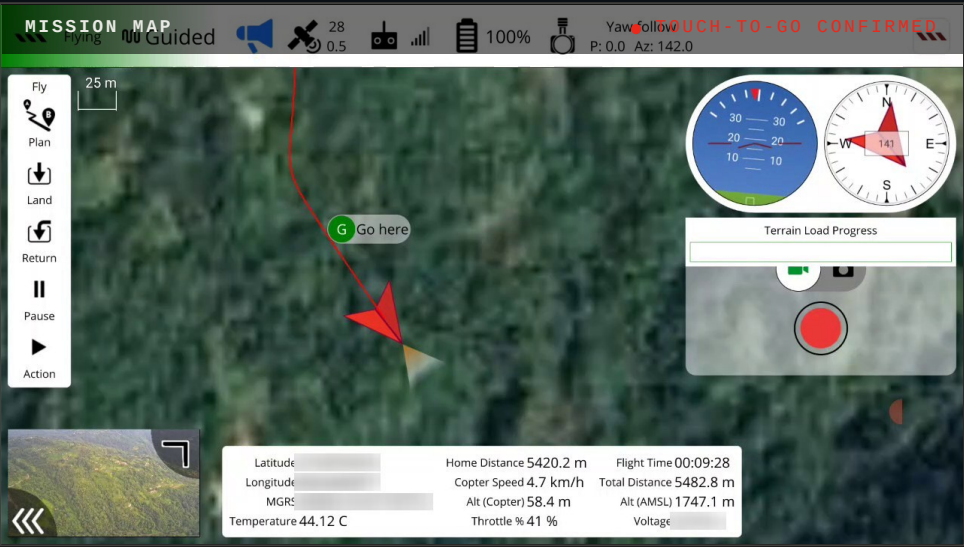
FEED MODE
DUAL STITCHED

RANGE FINDER
1.2 KM OBLIQUE

KLMFLY GROUND CONTROL SOFTWARE

TOTAL SITUATIONAL AWARENESS. ONE SCREEN.

Every mission runs over a fully encrypted, secure digital link between aircraft and ground station — FHSS frequency-hopping with AES-grade channel encryption, so the mission map, live feed and telemetry can never be intercepted or spoofed mid-flight.



SATELLITE / TERRAIN / HYBRID Switch base map layers on the fly to match terrain, lighting and mission need.	ONE-CLICK MISSION Plan a full waypoint mission and launch it with a single confirmed command.	WAYPOINT NAVIGATION Drop, sequence and edit unlimited waypoints directly on the map.
TOUCH-TO-GO Tap any point on the map and the aircraft flies there – no manual entry.	ONE-TOUCH TAKEOFF & LAND Single-command autonomous takeoff and landing at the marked home point.	DYNAMIC WAYPOINT ALTERATION Insert, remove or drag waypoints mid-flight without interrupting the mission.
IN-FLIGHT ALTITUDE CHANGE Raise or lower mission altitude live, mid-mission, without re-planning the route.	HOLD & HOVER Command an instant position hold at any point for on-station observation.	FULLY ENCRYPTED LINK FHSS frequency-hopping with secure channel encryption end-to-end.

KAT 11 PRO

● DARK OLIVE · SENTINEL T-90



KAT 11 PRO CONTROLLER

ONE UNIT. TOTAL COMMAND.

Smart integrated aircraft control with fully autonomous mission control and waypoint navigation. Picture-in-picture map, live sensor feed and mission telemetry side by side, dual-antenna FHSS diversity, and a 10.1" Full HD display — 240 minutes of endurance on internal power with removable microSD cockpit recording storage.

SPECIFICATION	VALUE
Display	10.1" Full HD display
Control Architecture	Smart integrated aircraft control · fully autonomous mission control & waypoint navigation
Live View	Picture-in-picture map, live sensor feed and mission telemetry side by side
Radio Diversity	Dual-antenna FHSS diversity
Internal Battery Endurance	240 minutes on internal power
Cockpit Recording	Removable microSD
Failsafe (Over Range / Low Battery / Link Loss)	Auto-Home

OVER RANGE AUTO - HOME	LOW BATTERY AUTO - HOME	LINK LOSS AUTO - HOME
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PHYSICAL, POWER & COMMUNICATIONS

BUILT TO CARRY, LAUNCH, SUSTAIN

PHYSICAL & POWER

SPECIFICATION	VALUE
Wingspan / Diagonal (unfolded)	1280 × 1280 × 295 mm
Folded Dimensions (L × W × H)	630 × 630 × 295 mm
Maximum Take-Off Weight (MTOW)	4,500 g
Empty Weight	2,700 g
Frame Material	Carbon fibre · polyurethane · magnesium alloy composite
Number of Rotors	4
Propeller Size	18
Battery Chemistry	Lithium Hybrid HV · proprietary cell
Battery Capacity / Voltage	26,000 mAh / 25 V
Battery Swap Time	< 90 seconds
Charge Time (0–100%)	50 min (fast charge) · 120 min (normal)
Max Additional Payload Capacity	Up to 1.5 kg

COMMUNICATIONS & NAVIGATION

SPECIFICATION	VALUE
Control Link Frequency Band	2.4 GHz / 5.8 GHz / X-band FHSS
Video Link Frequency Band	2.4 GHz / 5.8 GHz / X-band FHSS
Control Link Latency	< 100 ms
Video Latency	< 100 ms
GNSS Constellations Supported	GPS · GLONASS · Galileo · QZSS
RTK / PPK Support	Yes
Onboard Recording Storage	256 GB

ENVIRONMENTAL & COMPLIANCE

PROVEN IN THE FIELD, NOT THE LAB

SPECIFICATION	VALUE
Operational Temperature	-55°C to +65°C
Cold-Soak Launch	Down to -25°C from 29,400 ft AMSL
Weatherproofing	IP67 · rain capable
Operating Air Pressure	Down to 20 kPa
Operating Humidity Range	Up to 95% RH
Applicable MIL-STD Reference	MIL-STD-810H

SENTINEL T-90

HIGH-ALTITUDE OPERATING ENVELOPE



-25°C COLD-SOAK LAUNCH · IP67 RATED · MIL-STD-810H

ORDERING INFORMATION

DEPLOY THE SENTINEL T-90

FIELD	DETAILS
Part Number	KLMPST90001
Warranty Terms	2-year comprehensive warranty against manufacturing defects
Included Accessories	Transport case · spare batteries · charger & cables
Training & Support Package	2 weeks comprehensive training, complimentary on system purchase
Contact for Full Briefing	sales@klmsentinel.com — Subject: Sentinel T-90 Briefing



KLM SENTINEL

Specifications subject to change without notice. Export-controlled item — supplied to authorised government end-users only.

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IMAGINEERING BEYOND LIMITS™ ///