MISSION PAYLOAD
SIGMA-4

Construction	
Housing	Aviation grade aluminum
Dimensions (L×W×H)	93.2×87.3×120.5 mm
Weight (gimbal with camera)	380 ± 10 g
Gimbal Stabilization	Three-axis

Control	
Control Interfaces	S.BUS, UART TTL, Ethernet (TCP/UDP)
Input Supply Voltage	12V DC (via buck converter accepting 14–60V input)
Power Draw	~7 W
Video Output	1920×1080 @ 30 fps (via Ethernet)
Gimbal angular range	Yaw: ±160°; Pitch: -120°...+30°; Roll: ±45°

Optical sensor – tele lens	
Focal Length (Equiv.)	25mm (equiv. ~150mm)
Sensor	1/1.8" CMOS, ~8,3 MP (3840×2160)
Aperture	f/2.0 (fixed)
Field of View (H×V)	17,5° × 9,9°
Zoom	Digital (up to 10×)

Optical sensor – wide lens	
Focal Length (Equiv.)	6mm (equiv. ~24–28mm)
Sensor	1/1.8" CMOS, ~8,3 MP (3840×2160)
Aperture	f/2.0 (fixed)
Field of View (H×V)	65,2° × 39,8°
Zoom	Digital

Laser rangefinder	
Effective range	5 – 1500 m
Operation modes	Single or continuous
Accuracy	± 2 m

SIGMAUNIT
FOCUS IN THE DETAILS

Thermal module	
Detector	Uncooled VOx (resolution 640 × 512)
Pixel pitch	12 µm
Spectral range	8–14 µm (far IR, LWIR)
Lens	13 mm
Field of View (H×V)	32,9° × 26,6°
Noise-Equivalent Temperature Difference	≤ 45 mK (@F/1.0)
Zoom	8×
Color palettes	White Hot, Black Hot, Color

AI tracking	
Object types	Human, vehicles
Max number of concurrent targets	up to 10
Processing latency	~30 ms (for detection algorythm)
Tracking robustness	Recovers a lost target within 1 second after brief occlusion
Auto-Tracking modes	1. Detect & Track mode; 2. Feature-based Tracking mode.
Target acquisition	Intuitive 'tap-to-track' selection on the video feed
Processing capacity	2.0 TOPS

Geopositioning	
Method	Calculating coordinates at the center of the HUD (if GPS data available)
Output data	Geographic coordinates (Lat,/Long.), elevation, distance to target
Accuracy	≤ 10 m (with no obstructions)