Sigma Defense

OverWatch™

About OverWatch

The OverWatch system supports commanders and operators at the tactical edge by giving them immediate, reliable access to video and sensor data—allowing them to understand the battlespace and make rapid, informed decisions. OverWatch ingests nearly any digital or analog video source (including visible and thermal feeds) and distributes real-time full-motion video (FMV) across any tactical network, regardless of radio, transport, or device type. Its software-defined architecture, powered by the compact DogBone processor, automatically optimizes bandwidth, manages routing, and enables multicast support—ensuring operators maintain persistent surveillance even in contested, low-bandwidth environments. With proven performance across demanding SOF and Marine Corps missions, OverWatch deploys quickly, allowing teams to establish and rapidly share ISR data across forces.

How OverWatch Supports the Mission

Surveillance & Reconnaissance — Rapidly deploys visible and thermal sensors for persistent FMV, discreet surveillance, and instant change-detection alerts.

FOB Perimeter Security — Creates a continuous camera perimeter with automatic alerts and Tactical Assault Kit (TAK) shared video to detect threats instantly.

Asset Monitoring — Provides continuous video monitoring with automatic movement alerts to protect high-value assets.

Force Protection — Streams real-time sensor video to all TAK users, enhancing threat detection and coordinated unit movement.

Change Detection & Alerting — Analyzes video and distributes immediate TAK alerts when movement or scene changes occur.

Situational Awareness — Fuses multi-sensor FMV into a shared TAK picture for synchronized, real-time battlefield understanding.

OverWatch System:

DogBone Processor:

OverWatch ingests any sensor feed—visible or thermal—and distributes real-time feeds across any radio or network with automatic routing and bandwidth optimization. This provides instant, shared visual awareness—allowing teams to see threats sooner, move with confidence, and make faster decisions when seconds matter.

OverWatch™ delivers TAK-native capability that strengthens command and control without adding complexity. Every device integrates seamlessly with Android Tactical Assault Kit (ATAK), Windows Tactical Assault Kit (WinTAK), and Mission Command Host (MCH), enabling distributed teams to see the same picture, coordinate movements, and share critical data. Its modular, software-defined design allows it to rapidly adapt to mission needs. This also ensures interoperability across sensors, platforms, and networks—whether supporting reconnaissance teams, perimeter defense or overwatch for maneuvering elements. With 98% effective bandwidth availability, TRL 9 maturity, and a proven track record, OverWatch delivers a reliable, low-SWaP, mission-proven video and data backbone that enhances lethality, survivability, and decision advantage at the tactical edge.

OverWatch Features

Universal Camera Port — Plug and play 99% of video into an OverWatch DogBone.

Tactical MANET Radio Compatible — Seamless integration with all major MANET radios.
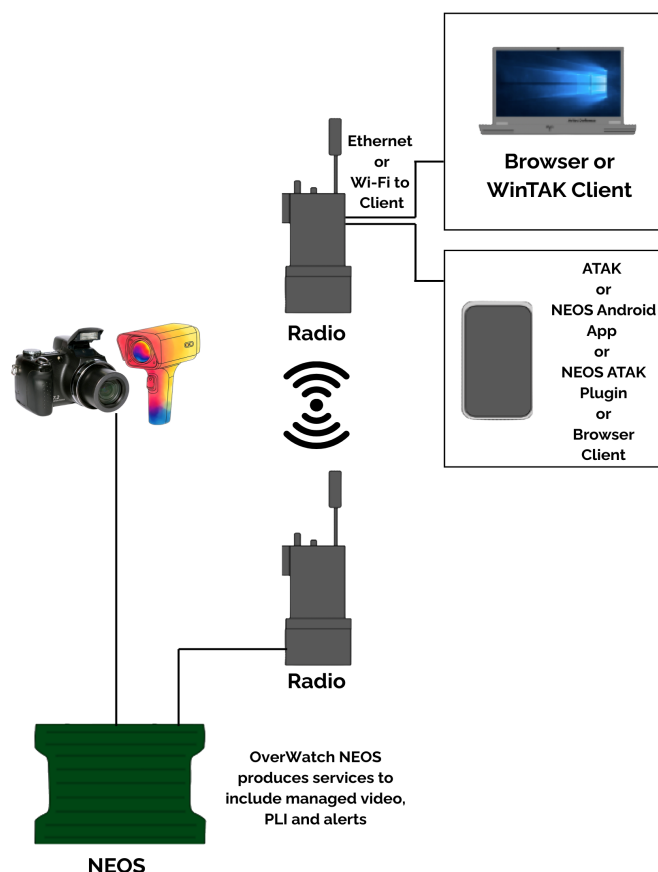
Two Cameras: — The OverWatch kit comes with one visible camera, one thermal camera, and additional lenses (telephoto, 4mm, fisheye) for dynamic viewing.

Data Network Compatible — SATCOM, LTE, Wi-Fi, laser data and radio compatible.

TAK Enabled — Instant access to camera feeds and rapid video distribution via a user-friendly, field-proven alerting system that is viewable on tablets and mobile devices.

Low SWaP-C — Man-wearable ruggedized anodized aluminum enclosure; very small size and weight with low 5-volt power requirement.

EMCON — Avoids detection with zero Wi-Fi or Bluetooth emissions.

Ethernet or Wi-Fi to Client

Browser or WinTAK Client

Radio

ATAK or NEOS Android App or NEOS ATAK Plugin or Browser Client

Radio

OverWatch NEOS produces services to include managed video, PLI and alerts

NEOS

CIVILIAN	MIL-SPEC
Enclosure Dimensions: 3.24" x 3.5" x 1.0"	Enclosure Dimensions: 3.52" x 4.2" x 1.3"
Power Requirement: 5 volts at 3 amps	Power Requirement: 5 volts at 3 amps
Enclosure Weight: 184 grams	Enclosure Weight: 302 grams
Network: Ethernet Standard	Network: Ethernet NATO STANAG (Glenair)
Power: Barrel Adapter	Power: NATO STANAG (Glenair)
Video Input: USB A Standard H.264, MJPEG, AVC, Analog (w/ Aries Peanut Cable)	Video Input: USB NATO STANAG (Glenair) H.264, MJPEG, AVC, Analog (w/ Aries Peanut Cable)
OS: Linux Based Aries OS	OS: Linux Based Aries OS
Board: Aries Board	Board: Aries Board
EMCON: No Wi-Fi or Bluetooth hardware or software	EMCON: No Wi-Fi or Bluetooth hardware or software
Output Video Stream: MJPEG over HTTP via TCP	Output Video Stream: MJPEG over HTTP via TCP
Video Quality: Adjustable 1 - 99% compression	Video Quality: Adjustable 1 - 99% compression
Video Framerate: Adjustable 1 - 20 FPS	Video Framerate: Adjustable 1 - 20 FPS
Video Resolution: Adjustable up to 360 x 480	Video Resolution: Adjustable up to 360 x 480
Full Remote Settings Customization	Full Remote Settings Customization
Alert Trigger Threshold: Adjustable 1 - 5000 pixels	Aert Trigger Threshold: Adjustable 1 - 5000 pixel:
IP Rating: Not Qualified	IP Rating: 68
TRL: 9	TRL: 9
Operating Temp: -40C to 105C	Operating Temp: -40C to 105C