

NEOS™ Dual

About NEOS Dual

Aries NEOS Dual is a lightweight, DIU Blue-certified edge processing and data transport system that transforms how operators connect sensors to the fight. Designed for Group 1 and 2 UAS and built for dismounted operations, NEOS sits between the ground control station and the network—instantly converting raw video and data from drones, optics, or ground cameras into standard, network-ready formats. With plug-and-play simplicity, it enables secure streaming through radios, LTE, or satellite links like Starlink without requiring a Tactical Assault Kit (TAK) server. The result: an operator can immediately push live, usable video to any network or teammate, delivering real-time situational awareness across the battlespace.

How NEOS Supports the Mission

FMV Distribution — Converts and streams video from sUAS / UAS directly to the network, enabling multiple feeds with minimal bandwidth.

Surveillance and Reconnaissance — Pushes live optics to Android Tactical Assault Kit (ATAK) with automated detections, for instant, location-tagged awareness.

FIRES and Forward Observer Support — Delivers real-time, geolocated video for rapid target ID and fire mission coordination.

FOB and Vehicle Perimeter Security — Analyzes video feed at the edge for motion detection, providing auto-alerts without constant streaming.

Situational Awareness — Feeds video and data into ATAK, providing a shared, map-based operational picture across the team.

NEOS gives commanders and operators immediate access to live, actionable video and data from any sensor, anywhere—enabling faster decisions, shared awareness, and decisive action without overloading the network. It turns disconnected sensors into an integrated operational picture that moves at the speed of the mission.



The NEOS™ Dual configuration allows an operator to share simultaneous UAS and ground video feeds, giving commanders a fused picture of the tactical environment. It manages bandwidth dynamically, compresses and prioritizes data, and performs low-power edge analytics—identifying threats, managing metadata, and automating alerts without flooding the network. Fully ATAK-enabled, NEOS empowers commanders to sense, decide, and act faster while reducing cognitive and network load. Built domestically for secure, closed-loop operations, NEOS supports the DoD’s drive toward affordable and interoperable UAS—providing decisive information advantage at the edge of battle.

NEOS Features

sUAS Flexibility — Universally compatible with all platforms. DIU Blue approved, tested, and validated with R80D SkyRaider™, SkyRanger™ R70, Black Hornet, Puma, SwitchBlade, Skydio, Stalker, PDW C-100, DJI, Parrot, Hoverfly.

Universal Video Input — USB 2.0 input convertible via custom cabling (USB-C, HDMI, BNC, etc.)

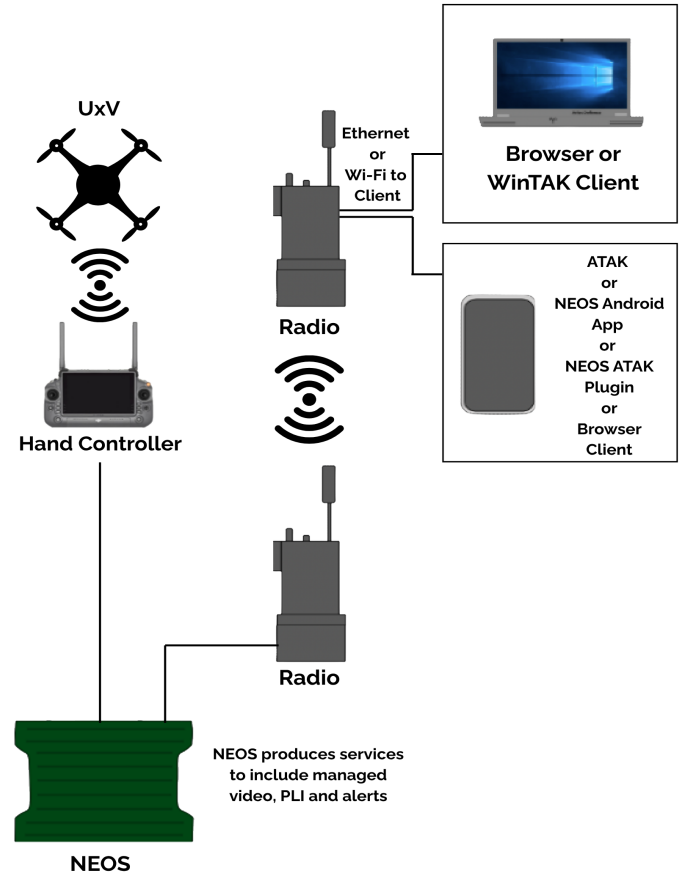
Tactical MANET Radio Compatible — Seamless integration with all major MANET radios.

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.



NEOS SPECS (CIVILIAN)	NEOS SPECS (MILITARY)
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	Alert 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