DarkMesh System - Digital

DarkMesh is a high power extended-range recognition and inspection system that transmits real-time video and audio from the dog.

Receive video/audio easily at your control station at a distance of up to 450 metres. The system is mounted on the K9 harness using the Molle and Velcro attachments. Two-way audio allows the operator to give commands and listen to the dog and/or the suspect using the «Push to Talk» function.

The optronic module designed for our DarkFighter K9 Helmet combines a colour camera for low light conditions (black/white on request) and an infrared thermal vision camera to detect heat signatures.

The control station allows simultaneous camera viewing as well as video recording for evidence gathering and training purposes.

Reliable connectivity when your team needs it most. Your missions take you through cities, tunnels and ships. The DarkMesh radio thrives in these complex RF environments, where its 2x2 MIMO technology uses reflections from the obstacles to move your data even faster. The mesh network delivers your data around the obstacles, maximising your network, performance and mobility.

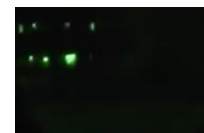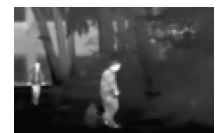| HD colour camera | Thermal camera | Two way audio comm | Rugged |

| Colour Camera | Thermal Camera |

DarkMesh Network Architecture

| Team A | Team B | Team K-9 | Team members |
| | | | Command |

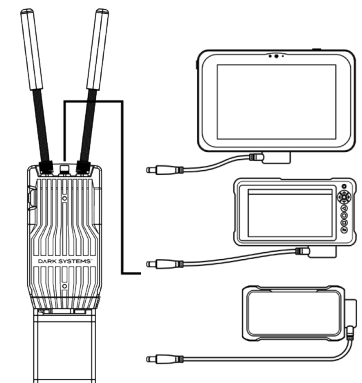| Mobile Mesh | Encrypted | Avoids interference | Long range |
| Urban | Underground | Maritime | Reinforced |

Receiver + end user device

DARK SYSTEMS™

The end user device is based on a reputable equipment, in the form of a smartphone in a reinforced case with the addition of physical buttons on top of the touchscreen interface. This mobility allows you to carry the control station in your tactical kit, on your plate carrier vest, on your wrist or in your hands.

6.1'' EUD 165 x 80 x 15 mm (6.49 x 3.14 x 0.59''), 400g (0.88 lbs)
Reinforced and waterproof, Android OS
6.1'' screen, 1440 x 3040 pixels
Rechargeable, non-replaceable battery
Support on plate carrier vests or wrist
Hands-free operation: Yes

Technical characteristics

Dimensions	160 x 80 x 38 mm (6.3 x 3.1 x 1.5''), 700g (1.54 lbs)
Interfaces	Communication, optronics, power supply, accessories
Power Supply	Lithium-ion battery, replaceable, standard or MIL-STD
Autonomy	4.5-hour autonomy with MIL-STD battery
Mechanical	Box Aluminium (6061-T6), black anodised
Temperatures	Temperatures -30°C to +60°C (-22°F to +140°F)
Environment	IP66 (designed in accordance with MIL-STD)

Optronics	- 5MP colour camera, HFOV: 90°
	   Resolution 1280x720 pixels
	- Infrared thermal camera: LWIR, HFOV: 56°,
	   Resolution 160x120 pixels
	   (optionally available in 320 or 640 pixels)

Compatibility	Persistent Systems, Silvus Technologies
Network	MIMO Technology
Frequencies	DarkMesh is available in many frequencies between 400 MHz and 6 GHz. Unlicensed frequency bands: 915 MHz, 2,4 GHz, 3,5 GHz CBRS et 5,x GHz Special bands: L-band, 1.5 to 2.5 GHz hex-band radio, S-band and C-bands
Encryption	128-bit AES hard data encryption 256-bit AES soft data encryption
Range	450 m line-of-sight (LOS), up to 200 m (NLOS)
Recording	Recording on a smartphone/tablet, max. about 6 hours
Antennas	Integration into the harness loops or vertical

AN-PRC/148 battery with dual charger

DarkMesh is compatible with Persistent Systems (MPU5) and Silvus Technologies radios.
Contact us for more information

End User device with receiver on the plate carrier vest

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K9 DarkMesh is a non-ITAR-controlled item; intended for military, law enforcement, first responders | sales@darksystems.com