Optronics Systems

SURVEILLANCE TARGET ACQUISITION AND WEAPON SIGHT

The Surveillance Target Acquisition and Weapon Sight (STAWS), is an integrated, passive, multispectral sighting system designed for use with the latest generation of Remote Controlled Weapon Systems (RCWS).

Unlike most STA sensors, which consist of a number of discrete devices, STAWS uses an integrated system architecture. This provides a 24-hour, all weather surveillance and targeting capability operated from below armour. STAWS provides many operational advantages, including built-in growth potential, leading to significant benefits in maintainability and supportability, resulting in the lowest possible product life cycle costs.

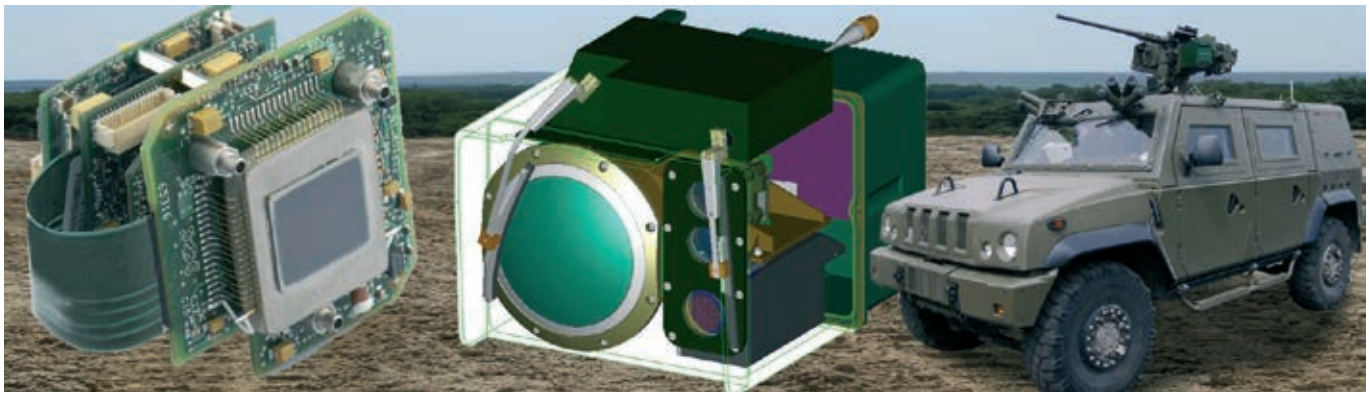
The STAWS sight utilises advanced uncooled thermal imaging technology. Combined with a high-resolution daylight sensor, STAWS provides a 24-hour all weather surveillance and target acquisition capability.

To maintain its competitive advantage, STAWS has been designed with a growth path to accept technology insertion. This includes larger format 640 x 480 uncooled detectors for extended range performance. In its basic form, STAWS uses a stadiametric non-laser based range finding method to determine the distance to a target.

For more accurate ranging an optional eyesafe Laser Range Finder (LRF) can be fitted. All STAWS hardware is configured to accept a LRF. STAWS can also be linked with other optional components to provide the user with a target acquisition and location capability to an eight-figure grid reference accuracy level.

Data provided by the LRF, Digital Magnetic Compass (DMC) and Global Positioning System (GPS) is processed by a micro controller built into STAWS. The target position is calculated and displayed on a screen.

STAWS



KEY BENEFITS

- Designed for latest generation RCWS
- Built-in growth path
- Built-In Test (BIT)
- Integrated systems architecture
- Architecture allows upgrades to the system without chassis and backplane modification
- Selected for the UK Panther Command and Liaison Vehicle (CLV)
- UK in-country support provided.

TECHNICAL SPECIFICATION

Operating temperature	-40ºC to +55ºC
Power consumption	20W typical

THERMAL IMAGER	
Waveband	8 - 14 micron
Wide Field of View (WFOV)	12 x 9º
Narrow Field of View (NFOV)	4 x 3º
Resolution	320 x 240

SYSTEM NOISE EQUIVALENT	
Temperature Difference (NETD)	Typically 60mK
Video format	CCIR or RS170

FOV	
Wide	12 deg x 9 deg
Narrow	4 deg x 3 deg

RANGE PERFORMANCE - VEHICLE TARGET (NFOV)	
Detection	>5000m
Recognition	>2000m
Identification	>1000m

OPTIONS
Full TV resolution TI (640 x 480 uncooled)
Wash / wipe
Lens Protection
Eyesafe Laser Range Finder (LRF)

GROWTH OPTIONS
Digital Magnetic Computer (DMC)
Global Positioning System (GPS)
Target Location capability

DAYLIGHT CAMERA	
Sensor format	1/3" Charge Coupled Device(CCD)
FOV (zoom) Wide limit	33.4º x 25.1º max
Calibrated WFOV	12º x 9º (matched to TI)
Calibrated NFOV	4º x 3º (matched to TI)
Narrow limit	3.4º x 2.6º
Resolution	425 TV lines horizontal
Minimum luminance	0.3 lux
Video format	PAL, composite

RANGE PERFORMANCE - VEHICLE TARGET (CALIBRATED NFOV)	
Detection	>7500m
Recognition	>2900m
Identification	>1600m

STAWS can also be linked with digitised Battlefield Management Systems (BMS), to allow rapid distribution of positional data to other platforms.

The company's CMM Level 5 software rating ensures future software obsolescence/upgrade issues are properly managed and will have minimal impact on system availability. We are unique in providing full UK in-country support for uncooled thermal imaging equipment.

World leading uncooled thermal imaging technology

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For more information please email infomarketing@leonardocompany.com
Leonardo MW Ltd
Sigma House - Christopher Martin Road - Basildon - Essex - SS14 3EL - United Kingdom - Tel: +44 (0) 1268 522822