

Miniature Intrusion Sensor (MIS)

THALES

Communications UK

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DESCRIPTION

The low-cost MIS is the new generation of buried passive ground sensor. It offers increased range and classification capability and employs multiple transducer types from a single sensor to allow local data fusion. At 5.4" long (with spike) x 2.6" in diameter, and weighing 0.55 lbs, it is considerably smaller and lighter than conventional surveillance equipment. The MIS is also interoperable with other conventional surveillance systems.

The MIS has an internal seismic transducer and will accept (as standard) external transducers such as magnetic, passive infrared (PIR), piezo-electric cable or make/break device.

Each MIS has an in-built transceiver, which allows any MIS to be configured as a relay. The MIS will provide a 2 km LOS transmission range (ground to ground).



Example MIS system, less than 5 kg including batteries, PDA & monitor

Product Manager Robotic & Unmanned Sensors

Telephone: (732) 427-5827 / DSN 987

Fax: (732) 427-5072 / DSN 987

e-mail: SFAE-IEWS-NV-RUS@IEWS.monmouth.army.mil



Business Category: Large Business

UGS

Power Source		Environmental	
Sensors	1 COTS 3.9V lithium battery 30 days @ TBA activations/day @ -40°C 45 days @ XXX activations/day @ +20°C	High Temp	+71°C
Supplemental Battery Box	Various Options User-specific (as required)	Low Temp	-31°C (Monitor -31°C)
Monitor	1 COTS 3.9V lithium battery 3 days @ 999 activations/day @ -25°C 8 days @ 999 activations/day @ +20°C	Altitude	15,000 ft (operating) 47,700 ft (transit)
Repeater	Host system repeater – N/A	Humidity	95% relative humidity per MIL-STD-810F
		Immersion	Withstands 0.5 hrs in 2m H ₂ O DEF STAN 05-55
		Sand/Dust	Per MIL-STD-810F Proc I, II
		Salt	DEF STAN 07-55 Test C5
		Fungus	Resistant to 30 days growth period
		Shock/Vibe	Random vibration, drop test & loose cargo test /MIL-STD-810F
		EMI/EMC	Complies w/MIL-STD-461E, EU 89/336/EEC

Sensor	Description	Detection	Size/Weight	Features
Seismic/Acoustic	Employs sophisticated algorithm to classify targets as personnel, wheeled or tracked veh. (Vehicle identification capability – Option)	Tracked Vehicle 0-500m Wheeled Vehicle 0-500m Personnel 0-100m	63mm x 65mm diameter (Ex Sk) Weight: 0.25 kg	<ul style="list-style-type: none"> ■ Passive detection ■ Covert operation ■ Low false alarm rate
Passive Infrared	Detects temperature differential between target and background. Provides direction and target count.	Tracked Vehicle X-XXm Wheeled Vehicle X-XXm Personnel X-XXm	XXmm x XXmm x XXmm Weight: X.X kg	<ul style="list-style-type: none"> ■ Quiescent until activated by targets ■ Bespoke algorithms
Magnetic	Detects movement of ferrous metals. Provides direction and target count.	Tracked Vehicle XXm Wheeled Vehicle XXm Personnel XXm	XXmm x XXmm x XXmm Weight: X.X kg	<ul style="list-style-type: none"> ■ Low power DSP ■ Urban Ops Variant

Device	Description	Message Type	Size/Weight	Features
Monitor	Provides the capability to display sensor transmissions. Can be used to relay sensor data to an external digital display via built-in RS-232 port.	C2K MIS SEIWG IP	38mm x 65mm diameter Weight: 0.20 kg	<ul style="list-style-type: none"> ■ UHF 433 MHz VHF via Host ■ 138 channels ■ LPI/LPD ultra-short burst transmissions
Repeater	Host or existing systems	Variable bit	Host system	<ul style="list-style-type: none"> ■ 10 mwatt transmitters 2km range (TBA km airborne)