RADiRguard™

SMART PERIMETER SURVEILLANCE FOR CITIES, CRITICAL INFRASTRUCTURE, BORDER SECURITY, REMOTE OPERATIONS AND PORTS

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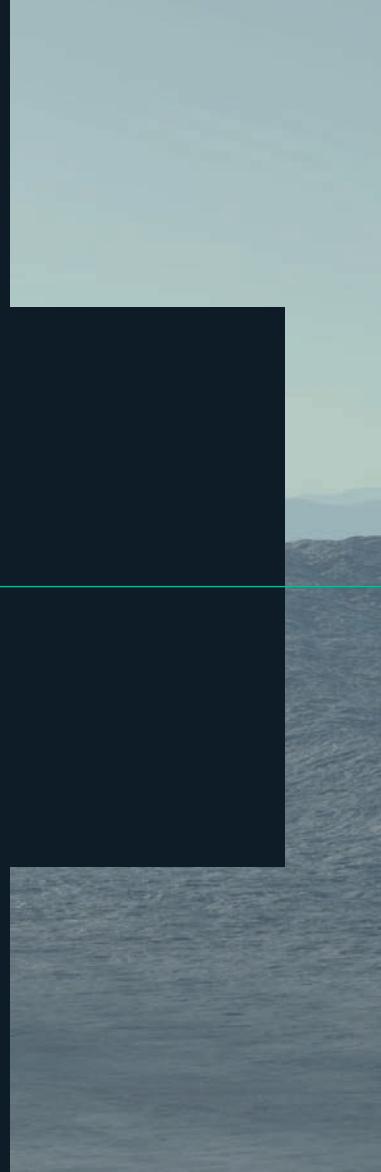
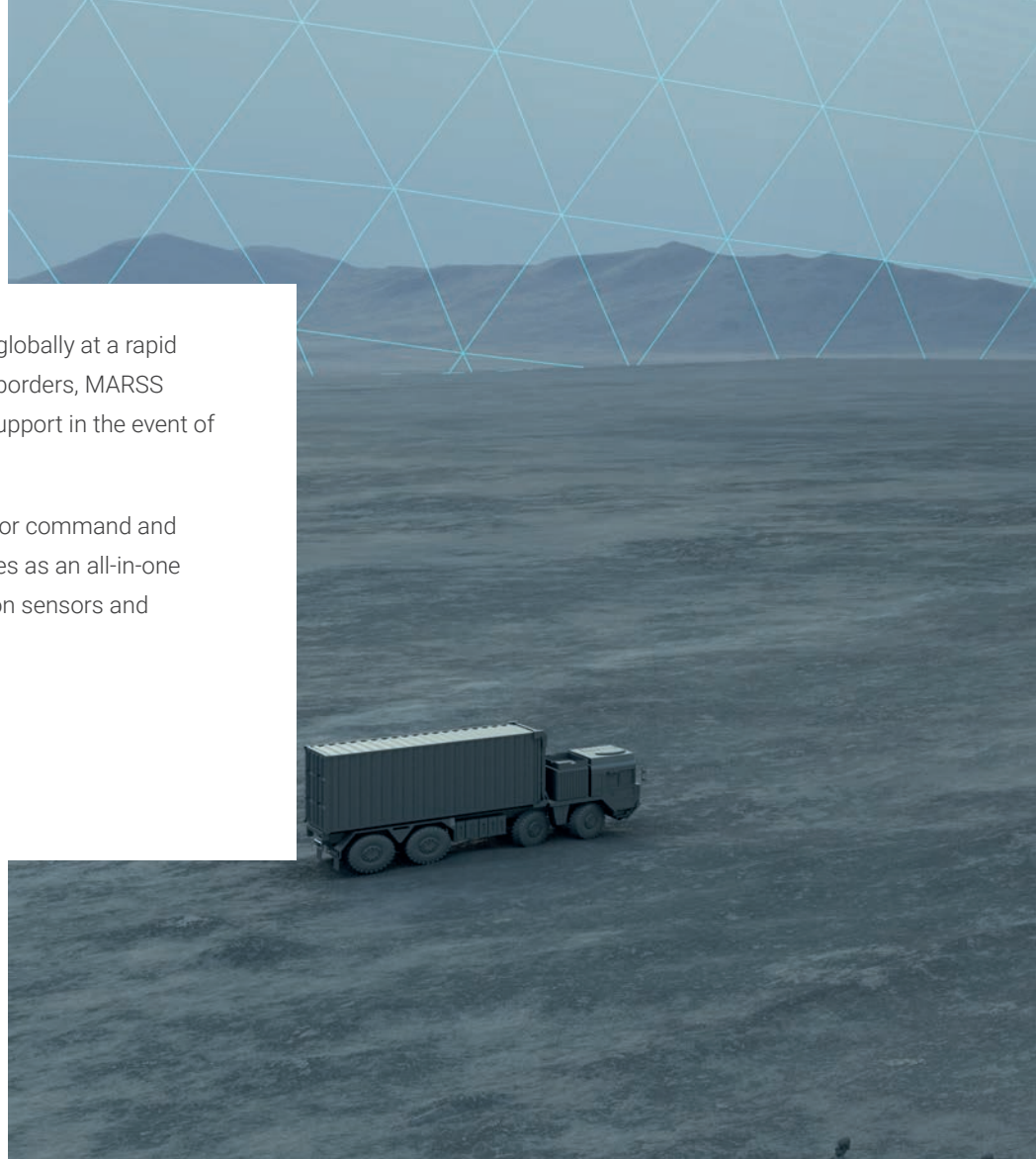
RADiRguard™



PROTECTING WHAT MATTERS MOST

High level perimeter & border security is required more than ever with threats evolving globally at a rapid pace. Whether protecting government buildings, landmarks, military bases or national borders, MARSS RADiRguard provides 24/7 autonomous monitoring, detection, tracking and decision support in the event of a security incident.

Fully integrated with MARSS NiDAR, RADiRguard offers an intelligent turnkey solution for command and control operations to protect critical infrastructure and perimeters. RADiRguard operates as an all-in-one system to replace traditional stand alone perimeter security systems as CCTV, detection sensors and command and control.



MULTI-VEHICLE NETWORKING
DRONE / UAS DETECTION
MOBILE NIDAR ACCESS
OBJECT TRACKING
THREAT CLASSIFICATION

ALL-IN-ONE SOLAR POWERED PERIMETER PROTECTION

EFFICIENT AND EFFECTIVE OFF-GRID SECURITY INSTALLATION

RADiRguard is an all-in-one infrastructure perimeter solution, that includes sensors for reliable detection and classification of threats before they reach a perimeter. Each self-contained RADiRguard unit combines built-in radar, CCTV and IR, plus intelligent threat classification to reliably detect and classify objects in advance of reaching a perimeter.

RADiRguard is easily and rapidly deployable and is a cost effective, scalable solution that can be configured to a wide variety of surveillance areas.

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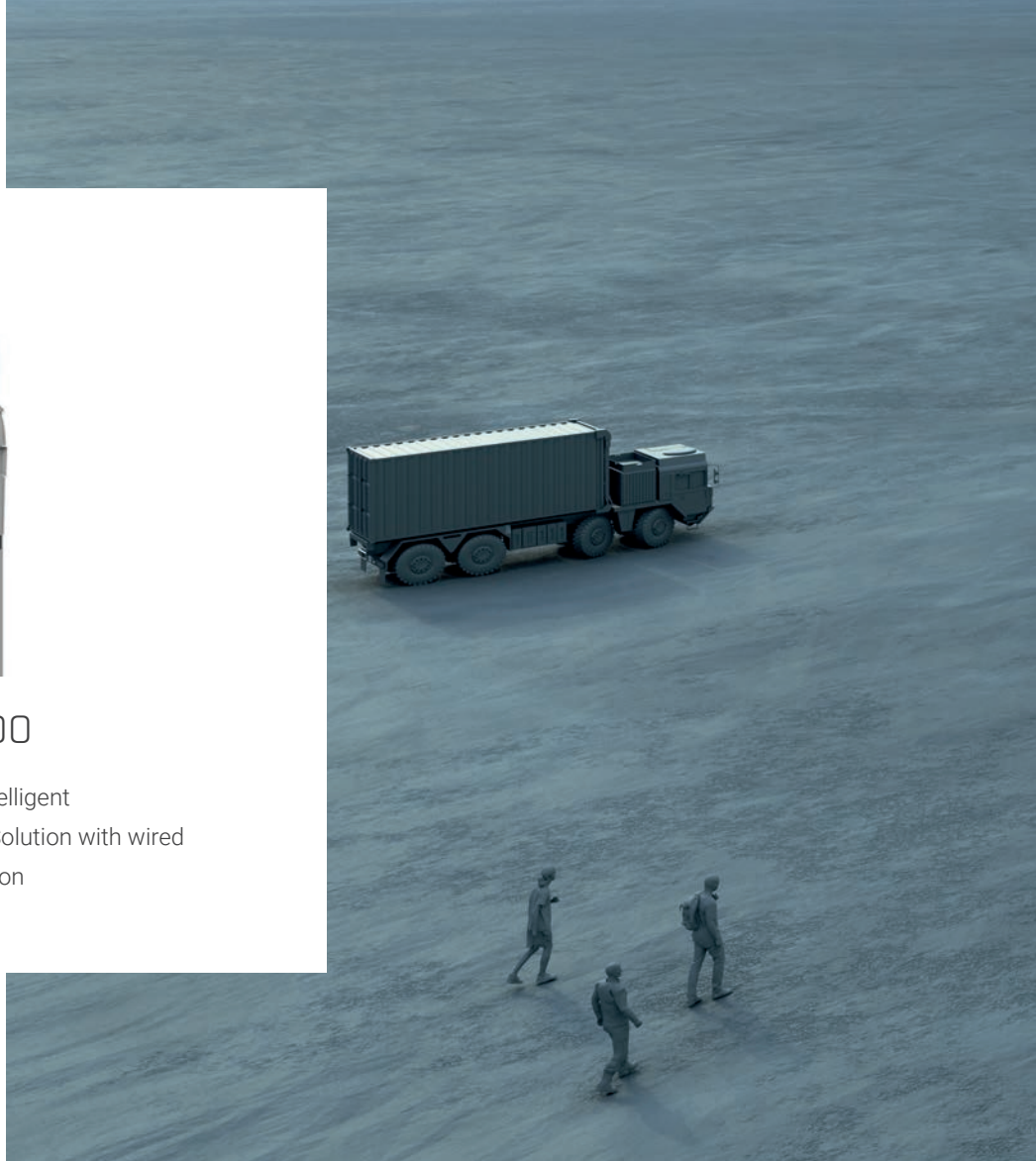
RADiRGUARD VARIANTS

RA 500 SOLAR

All-In-One Solar Powered Intelligent Perimeter Surveillance Solution with Sub-6GHz wireless connection

RA 500

All-In-One Intelligent Perimeter Surveillance Solution with wired connection

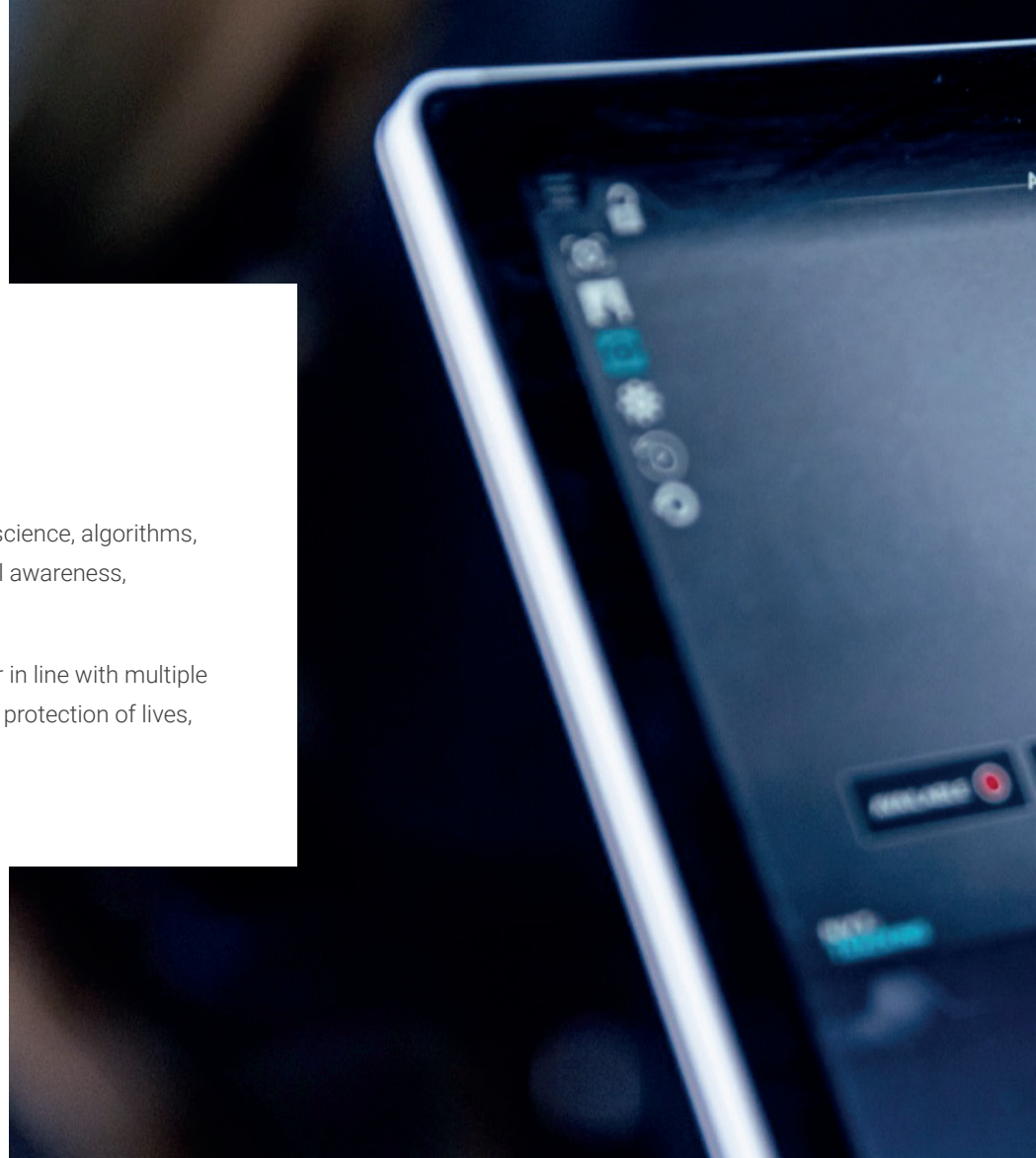


POWERED BY NiDAR CORE

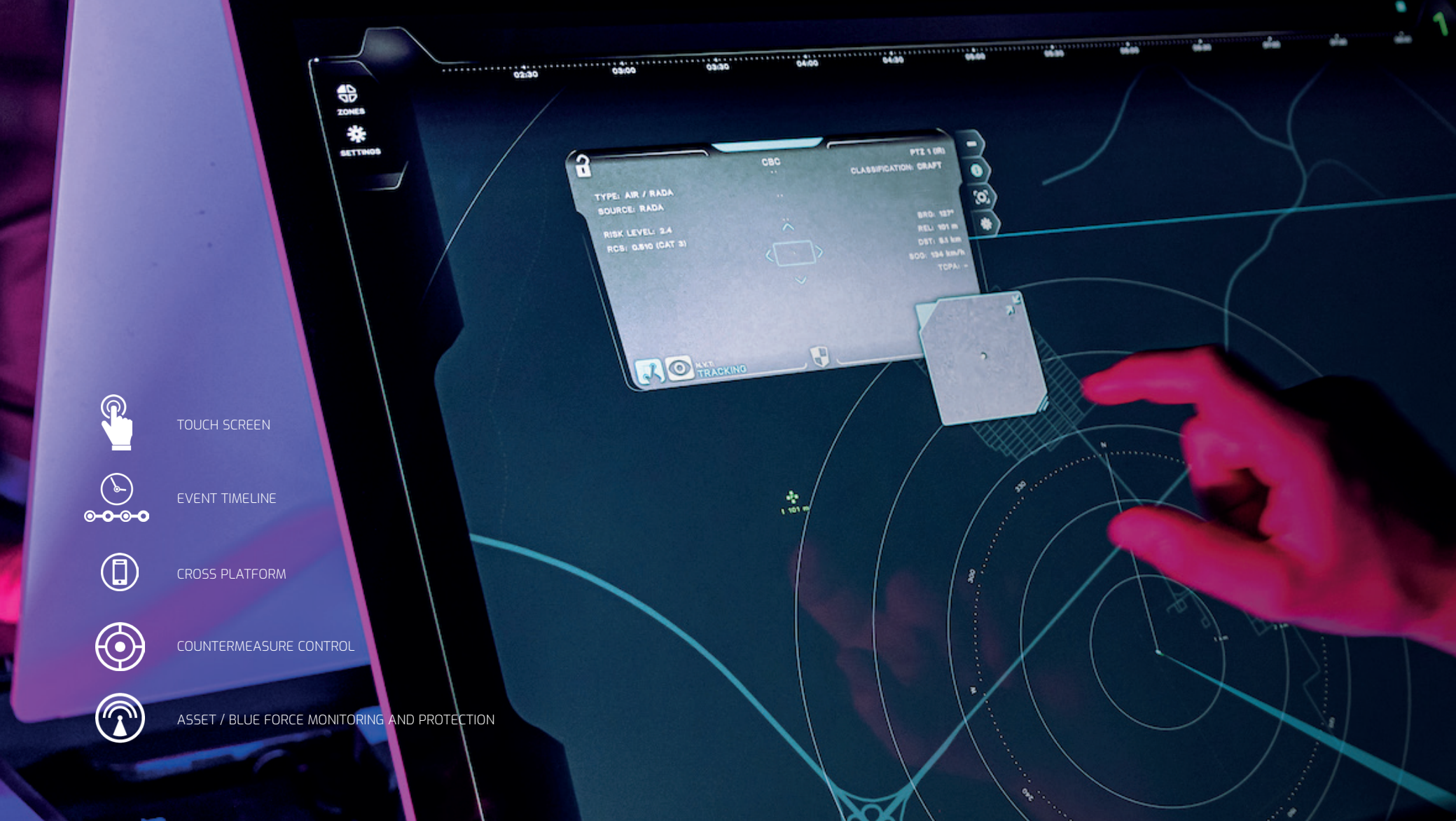
THE AI-POWERED INTERNET OF THINGS (IOT) PLATFORM AT THE HEART OF ALL MARSS SOLUTIONS

NiDAR CORE uses intelligence from multiple sources including operational logic, data science, algorithms, video analytics, AI, ergonomics and user experience to produce unparalleled situational awareness, outperforming traditional defence software without compromising on quality.

An adaptable platform which is always learning, NiDAR CORE can act autonomously or in line with multiple systems, supporting operations by creating a seamless network with a single goal: the protection of lives, critical infrastructure and assets.



OUR ‘HYBRID INTELLIGENCE’ SOLUTIONS COMBINE AI WITH TRADITIONAL ALGORITHMS AND HUMAN INTELLIGENCE TO CREATE AN UNRIVALLED IoT PLATFORM.



TOUCH SCREEN

EVENT TIMELINE

CROSS PLATFORM

COUNTERMEASURE CONTROL

ASSET / BLUE FORCE MONITORING AND PROTECTION

AN INTUITIVE C2 INTERFACE

SEAMLESS INTEGRATION WITH MARSS NIDAR C2 FOR CONTINUOUS SURVEILLANCE AND MONITORING

With NiDAR's easy-to-use C2 interface, each RADiRguard unit leverages AI to provide accurate multi-domain information and superior threat recognition, consolidated into a single tactical picture to alert users to mission-critical events.

Enhanced decision-support reduces operator burden enabling for more rapid, accurate responses and reducing false alarm

INTELLIGENT SURVEILLANCE BUILT FOR EVERYWHERE

EO CAMERA

Optical and infrared pan, tilt and zoom camera for enhanced classification

INTEGRATED NiDAR AI

Artificial intelligence with seamless integration to NiDAR

CONNECT TO COUNTERMEASURES

Respond to threats through NiDAR by connecting to countermeasures such as GPS and RF jamming, access control and more

SOLAR ENERGY

Off grid, high energy production with additional installation savings

MODULAR CAPABILITY

Bolt on accessories to expand reach, awareness and capability

INTELLIGENT RADAR

Seamless high accuracy object tracking up to 250m

INTEGRATED CCTV

Continuous monitoring and detection 24/7

BATTERY BACKUP

Ensured by fuel cell to continue operations in weather with lack of solar energy

LOW FALSE ALARM

Smart object recognition enhances security reliability and mitigates false alarms

LAYERED DEFENCE

360º SURVEILLANCE FOR 24/7 MAXIMUM SECURITY

RADiRguard continuously monitors ground activity, including intruders and vehicles, up to 25,000sqm coverage.

The system is embedded with NiDAR Core to provide reliable object detection and tracking achieved by compact microwave radars with intelligent algorithms to provide object classification.

Objects are continuously analysed by Artificial Intelligence using GSM/WiFi/VHF emission and 3rd party data bases.

Once a threat has been detected and verified, the system alerts the operator and a recommended best course of action for countermeasures is suggested.

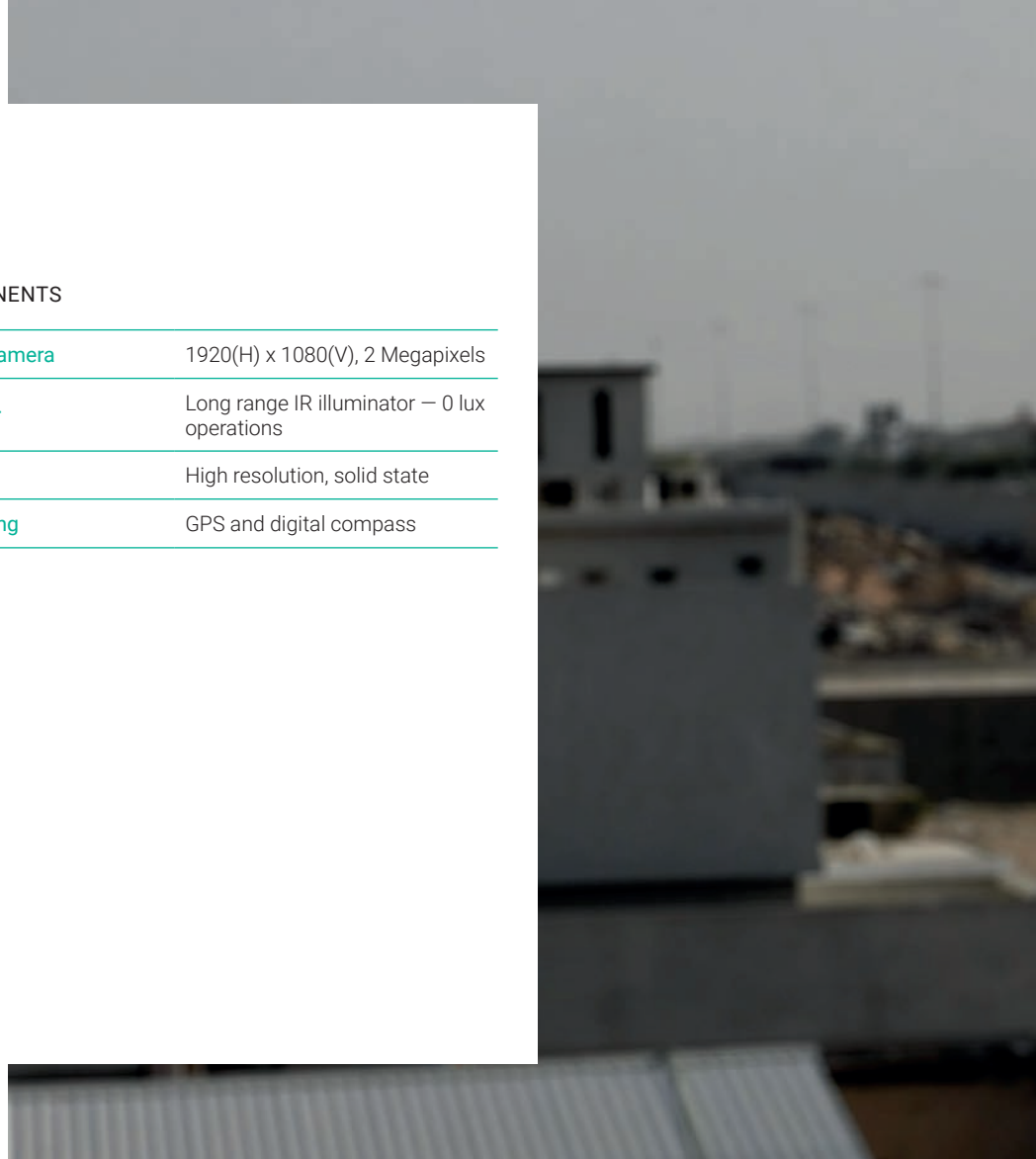
TECHNICAL INFO

CAPABILITY

Square coverage	25,000sqm (250m tracking for objects of interest)
AI Classification	Humans, vehicles, animals and more
Environmental	IP67 and designed according to AECTP-200 standard / category A1 thermal perspective
Network connection	Wired and wireless options available
User interface	NiDAR multi-touch command and control
OS	Linux
Power supply	24VDC
Power consumption	60W type
Mounting and installation	On a pole or on a wall
Weight	26.5kg for all components
Dimension Off Grid	H = 800cm - Diam = 34.8cm
Dimension Grid Powered	H = 773cm – Diam = 34.8cm
Off grid option	Cylindrical Solar Cells & power backup generator (Methanol Fuel Cell or gasoline)

COMPONENTS

Optical camera	1920(H) x 1080(V), 2 Megapixels
IR sensor	Long range IR illuminator — 0 lux operations
Radar	High resolution, solid state
Positioning	GPS and digital compass



LEADING DEFENCE TECHNOLOGY

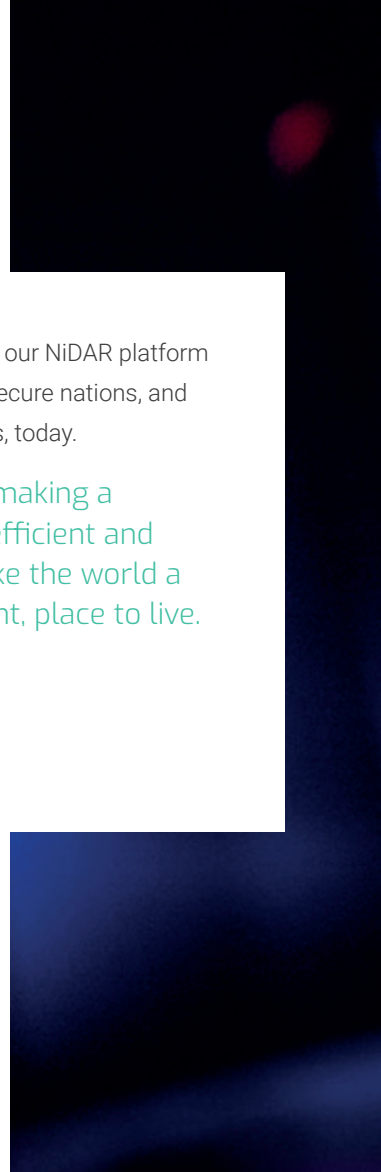
HELPING NATIONS AROUND THE GLOBE PROTECT WHAT THEY VALUE MOST.

At MARSS, we are helping our customers to strengthen their defence & security and modernise their cities. Trusted globally, our systems protect millions of lives against a wide range of evolving threats from land, sea and air.

Driven by innovation, we are committed to investing in the research and design of new technology to save lives. Our AI-powered IoT platform NiDAR fuses intelligence from multiple sources with the latest tech, sensors and countermeasures to create a single tactical picture for optimal situational awareness and control.

The continuous development of our NiDAR platform is helping to create smart and secure nations, and protecting against future threats, today.

MARSS is committed to making a difference and creating efficient and intuitive solutions to make the world a safer, and more intelligent, place to live.



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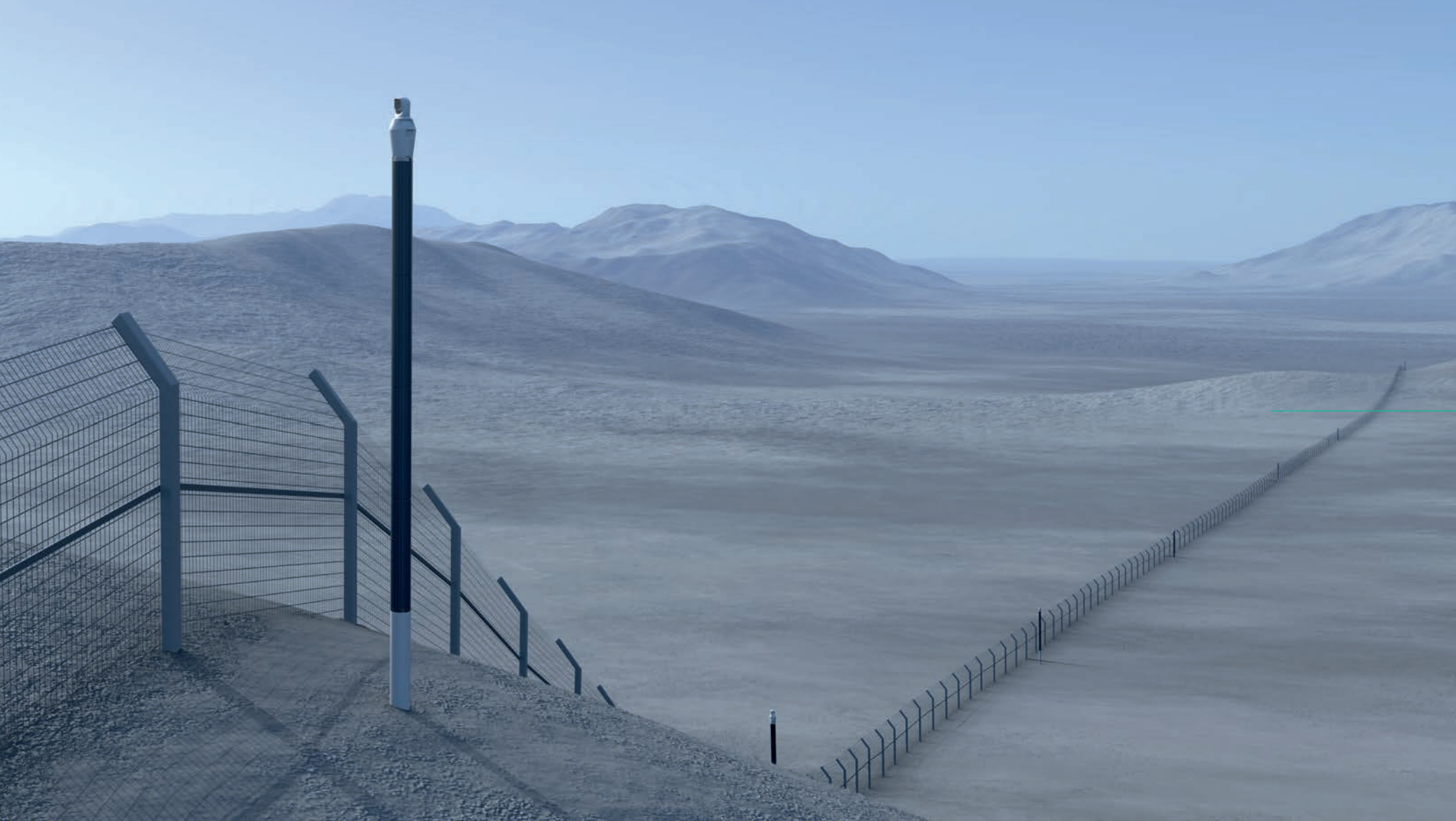

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MARSS

LONDON
14 Curzon Street
W1J 5HN
London, UK

MONACO
Villa C Olympea
6-8 Rue Augustin Vento
98000, Monaco

KSA
King Khalid Int. Rd.
Riyadh
Saudi Arabia

BRISTOL
40 Berkeley Square
BS8 1HP
Bristol, UK

info@marss.com / marss.com