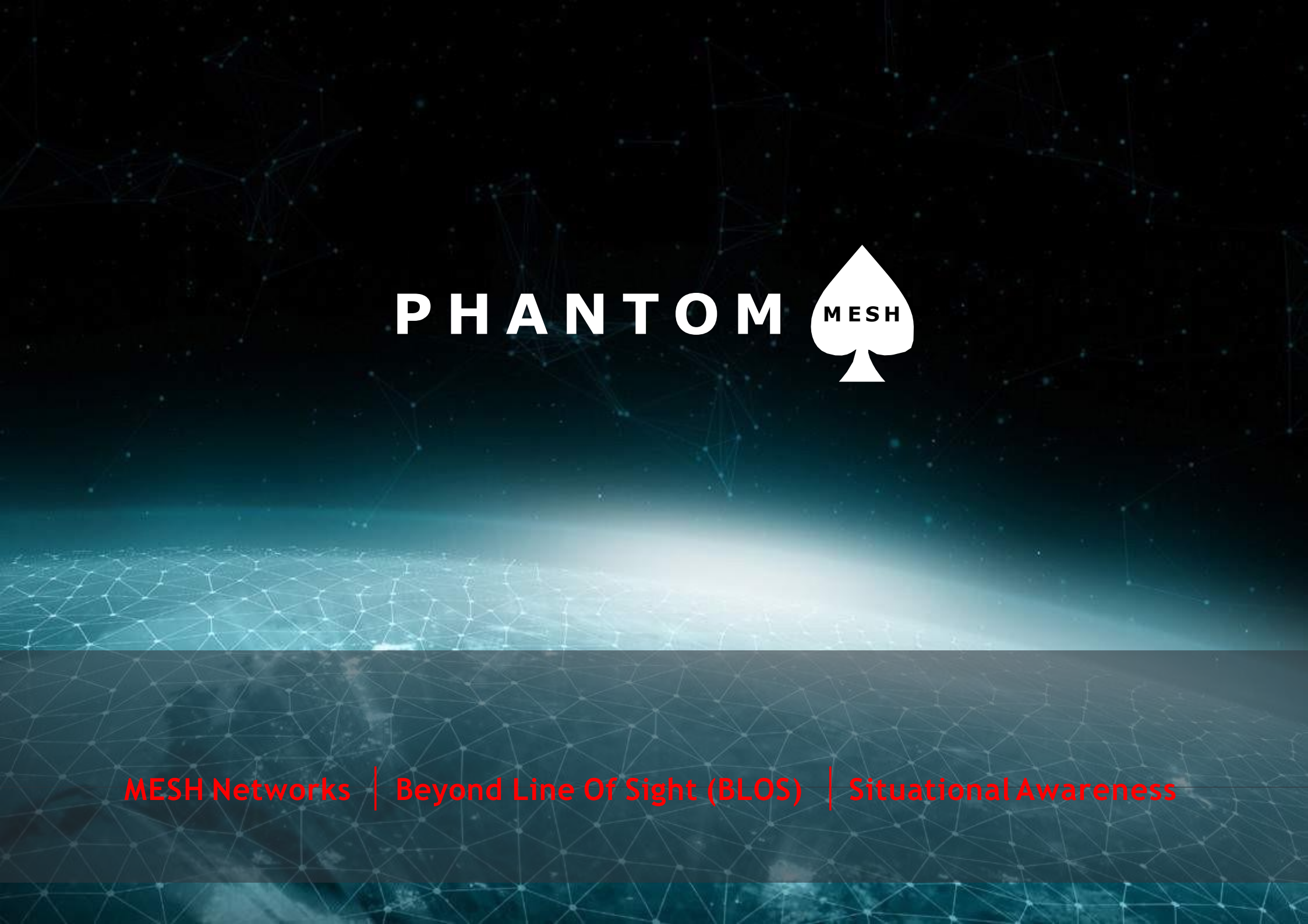

PHANTOM
MESH
MESH Networks | Beyond Line Of Sight (BLOS) | Situational Awareness

Without secure communications, intelligence tools and knowledge your mission is at threat of failure. Kinetic Six delivers innovative services and solutions of the highest standards to ensure our customers' success.

CONTENTS

PHANTOM MESH

"Phantom MESH is an encrypted communications network allowing you to rapidly deploy complete BLOS radios, PTT and MESH networks anywhere in the world."

PHANTOM MESH SOLUTIONS

PHANTOM MESH

Phantom MESH delivers real time situational awareness with clear digital communications, utilising MESH radio technology through our network hub via the local LTE, satellite or fixed line internet infrastructure.

With our MESH products at the core, we can assist customers in integrating their choice of end user devices and equipment, allowing full customisation of the solution.

We deliver integrated solutions for Defence, Law Enforcement, Maritime Surveillance & Protection, Emergency Services, Search & Rescue and Commercial users.

PRODUCTS

pMESH - operates on a COFDM, Token Passing based MANET platform whereby all radios operating in the network will be self-healing, consistently forming new RF paths or links to create the most robust network possible, in any given environment.

iMESH - is a ruggedised Gigabit class LTE networking platform designed to deliver high speed broadband connectivity across a wide range of in-vehicle and operations room environments.

iMESH KRIP - expanding on the iMESH, iMESH KRIP comes complete with a gateway allowing for a seamless transition of traffic from the simplex team radios across to team members operating on the Motorola WAVE PTX application.

iHIVE - is a rapid deployable network, designed to support operations with ultimate flexibility and security. Embedding advanced network analysis and optimisation capabilities iHIVE will automatically optimise itself to provide your best possible services of any RF and Jamming challenge.

INTEGRATED SOLUTIONS

Integral to all our Phantom MESH solutions is our third party software and products.

MOTOROLA - Using the latest COTs radio with military spec encryption, this allows secure inter team communications with digital clarity.

WAVE PTX - The Motorola Wave PTX service allows Phantom MESH users to connect from HQ to the teams on the ground via the Wave PTX application to DMR radios.

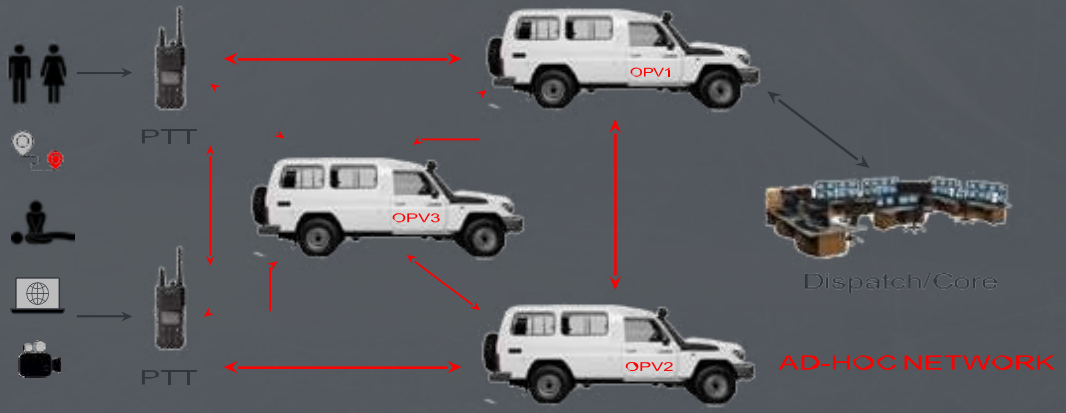
ATAK (CIV) - An Android application for real time situational awareness and "Blue Force Tracking". Allows users to send encrypted video or photo files, either user to user, user to selected teams, user to command post or user to the whole team.

IOT SENSOR VESTS - Connected wearable technology and sensors integrated into day-to- day equipment help improve situational awareness, mobility and communications. AI-driven and smart real-time data capture and analysis can help organisations make proactive, data driven decision-making process to eliminate risk.

HOLOLENSUGV/UAV/USV -HOLOLENS telemetry instructions from the Mesh radio connected to the HOLOLENS, used by the vehicle operator driving the vehicle. Transmitting live video from the UGV mounted camera to the MESH radio worn by the operator, and displaying the video on the heads-up display of the HOLOLENS.

PHANTOM MESH

"Proven high-capacity multi-domain IP connectivity in challenging environments that sits seamlessly alongside existing public or private infrastructure."



pMESH

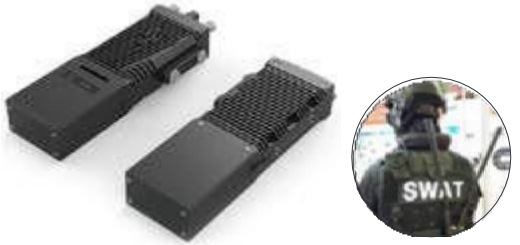
PERSONAL TACTICAL COMMUNICATION

- Headset
- GPS
- Helmet Camera
- Rugged Data Tablet
- Bio Health Sensors

RUGGEDISED MESH REPEATER

PPT RADIO

BODY WORN RADIO



USES OF pMESH

- VIP Convoy Communications
- Identifying and monitoring of terrorist threats
- Monitoring of serious crime
- Public order policing
- Intelligence gathering
- Maritime
- Airborne down-links
- Battlefield Situational Awareness
- Robotic and Autonomous Systems (RAS)
- Including UAVs, UGVs and USVs
- Connected and Autonomous Vehicles (CAV)

PHANTOM MESH

"pMESH self-forming capability fully supports mobility applications like unmanned drones, convoy movement and battlefield networks. The deployment of military assets for a mission allows for fast implementation of a private network within the field of operation."

pMESH DEFENCE & LAW ENFORCEMENT

CRITICAL COMMUNICATION

pMESH can be deployed as a Battlefield Communication Network; pMESH can connect all green force in the battlefield, and with integral GPS positioning., commanders will have their assets status and deployment data available at all times.

Real time data and intelligence can also be pushed to the units in the battlefield. Soldiers and Special Forces units can be equipped with our Robust Bodyworn pMESH or PTT pMESH radios. This will enable human assets to be connected into a battlefield network.

CONVOY MOVEMENTS

Convoy movement through hostile territory is extremely unpredictable and having full situation awareness among all vehicles in the convoy is critical.

Our tactical communication pMESH products are used in a convoy movement to enhance situation awareness across the whole convoy. In a pMESH network, all vehicles in the convoy are connected in an IP network. Video, Data and voice can be communicated between any vehicles in the convoy.

pMESH delivers long range, high throughput, highly mobile connectivity and broadband capability in dynamic environmental conditions, ensuring mission critical communications.

MESH Scenario Convoy LINES

TEAM BASED SOLUTIONS

The Personnel Tactical Communication Kit (PTC) can be used by homeland protection agencies in operations such as crime-in-progress, anti-terror, counter narcotics, counter trafficking, civil unrest and street patrols.

Having real time situational awareness helps to ensure the safety of the officers. Each person in the team can be equipped with a bodyworn/PTT pMESH radio and body or helmet worn video camera. A K-9 unit dog can be equipped with a body camera and pMESH unit. The solution enhances situational awareness.

PHANTOM MESH

"Emergency Services and Search & Rescue teams are often called upon when disasters strike, or when accidents occur in remote locations such as forests or mountains. Protecting a country's coastline is an important function, from preventing piracy and armed threats to simply discouraging illegal fishing or smuggling activities."

pMESH SEARCH & RESCUE, COAST GUARD & SAFE CITY

SEARCH & RESCUE

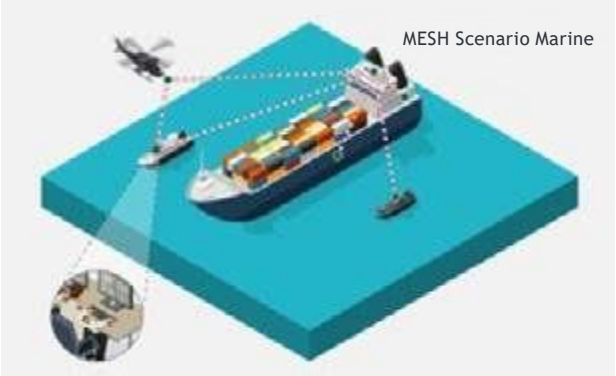
Search and Rescue teams often deploy into various operational environments with little notice.

Equipping these teams with PTT pMESH will enable the various teams to stay connected with each other. Videos from bodyworn cameras attached to pMESH can transmit the search efforts to Operations Command via the pMESH network.

MARINE & COAST GUARD SURVEILLANCE

Marine agencies tasked with coastal protection will be required to deploy boarding parties to deal with many different situations, from piracy and smuggling activities to illegal fishing.

In such operations it is critical to have good situational awareness of the whole operation, not only for decision making but also to ensure the safety of the boarding party. Equipped with Personnel Tactical Communication Kit, marine boarding parties will be able to stay connected to the Command Ship.



MESH Scenario Marine

SAFE CITY

Phantom MESH solutions provide homeland protection agencies with advanced communication technologies to effectively respond to a variety of common city operations. The solution offers a private and secure communication network based on Kinetic Six's pMESH products. A surveillance solution can help to protect cities and keep cities safe. The integrated surveillance and communications network provides fast and reliable access to real-time visual, audio and location-based information. The pMESH network is flexible and provides further expansion as required which allows the network to grow depending on the needs of the user.

PHANTOM MESH

"A range of devices which are lightweight, deployable and ruggedised to fulfil your mobile broadband requirements."

iMESH & iMESH KRIP

iMESH

The iMESH is a ruggedised Gigabit class LLTE networking platform designed to deliver high speed broadband connectivity across a wide range of in-vehicle and operations room environments.

- Two LTE Intelligent radios built in
- World GSM compatible
- Up to 128 wireless clients

iMESH KRIP

Expanding on the iMESH the iMESH KRIP comes complete with a gateway allowing for a seamless transition of traffic from the simplex team radios across to team members operating on the Motorola Wave PTX application.

- ROIP connection between RF and IP
- IP67 rated
- Full or split tunnel VPN
- Including UAVs, UGVs and USVs
- Connected and Autonomous Vehicles (CAV)

DEVICE RANGE

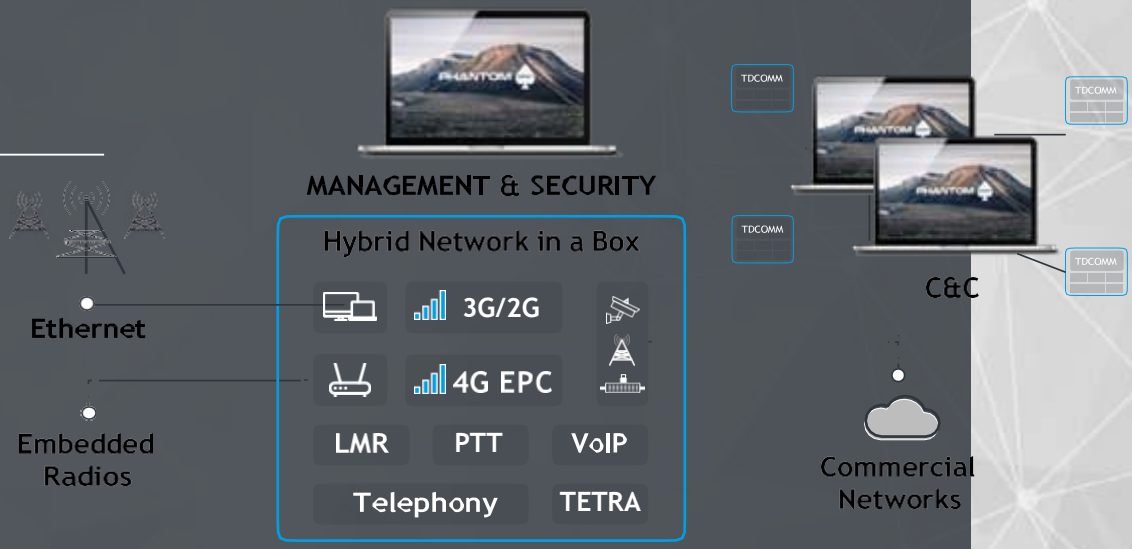
Our iMESH range offers extensive features which can differ dependent on model variant.

- Multiple LTE radios and antennas
- Up to 1.2 GB/600 MB download speed (LTE Network dependent)
- GPS location tracking enabled or disabled
- WiFi enabled or disabled
- Dual-band, dual-concurrent: 802.11ac Wave 2 (WiFi 5)
- Amphenol ruggedised I67 cables
- 5 GB (LAN/WAN switchable)
- Up to 128 users
- 940 MBps firewall throughput
- World GSM compatible

PHANTOM MESH

"iHIVE is a rapid deployable network, designed to support operations with ultimate flexibility and security."

iHIVE RAPID DEPLOYABLE NETWORK



FLEXIBLE & SECURE OPERATIONS

- Single unit for all your technologies - Cellular 3G/4G/5G, Wi-Fi and 2 Way RoIP
- Flexible configurations for fixed and on the move Vehicle, Naval, and Man-Carried operations with coverage ranges reaching up to 10 Km
- Independent and MESH unit communications
- Full traffic monitoring & control for cost efficient back haul management and ultra-high security
- Secure and managed Inter-Network communications with commercial networks for global connectivity
- Ad-Hoc subscriber support

ADVANCED NETWORK ANALYSIS

With operations rarely playing by the book - flexibility is critical to your mission's success. Embedding advanced network analysis and optimisation capabilities iHIVE will automatically optimise itself to provide your best possible services of any RF and Jamming challenge.

Understanding security, iHIVE is the only network of its kind, embedding a threat Intelligence engine on network traffic and an Off the Air security module for real-time alerts on potential Wi-Fi and cellular threats in the area.

VISIBILITY

INSIGHT

CONTROL

PHANTOM MESH

WAVE PTX eliminates barriers between devices, networks and locations, enabling next level team collaboration and communication.

WAVE PTX

MOTOROLA SOLUTIONS

Bring team collaboration and communication to a new level with Motorola Solutions' specialised WAVE PTX software offerings.

Turn your phone into a Push-To-Talk (PTT) handset with the WAVE PTX Mobile Application and get instant communication anywhere you have data connectivity.

Connect your radio system into WAVE PTX and extend talkgroups so that everyone can be part of the conversation, regardless of the device they carry or network they are using.

CONNECTING YOUR TEAMMATES

By extending instantaneous group communication to users on smartphones and tablets as well as radios, the WAVE PTX Mobile Application provides connectivity without limits. The result is team members that can stay connected at the push of a button wherever they may be, whatever network they are using.

- Instant PTT communication via phone or tablet
- Multimedia messaging via text, photo or video file
- Location and mapping

TEAM CONNECTIVITY

PHANTOM MESH

“The Android Team Awareness Kit (ATAK) is a suite of software that provides geospatial information and allows user collaboration over geography.”

ATAK (CIV)

ANDROID TEAM AWARENESS KIT

The Android Team Awareness (or Assault) Kit (TAK) application is a mission planning, geospatial, route planning, situational awareness, messaging, data sharing, mapping and system administrator tool that reduces the operational footprint from a tactical laptop, to a commercial mobile device.

MILITARY TECHNOLOGY

Used by US, UK and other Special Forces, Military, Security and Emergency Services, TAK has now become the go-to tool for professional units across the world to communicate, share live location and use as a comprehensive planning tool.

PHANTOM MESH

"Improve human safety and performance with connected wearables."

IoT SENSOR VEST

WEARABLE SOLUTION

Wearin generates smart, real-time insights by capturing field data from sensors integrated into day-to-day gear. Our human digital twin platform enables organisations to monitor user positions, detect health and safety risks, provide remote guidance, and capture critical operational data.

With the user at the centre of its design engineering, Wearin provides state-of-the-art connected wearable technology to protect the lives and improve the safety and performance of people operating in demanding environments.

From dismounted soldiers to police officers, first responders to security agents, lone workers to miners, the focus is placed on people behind the technology to keep them – and their data – safe. The new wearable ecosystem integrates lightweight, easy-to-use connected sensors and devices into their gear to capture real-time task- critical data, without weighing them down or compromising mobility or comfort.

With two-way data flow, biometric alarms, and automatic alerts from their AI-driven platform, teams can improve coordination, reduce reaction times, and avoid hazards. A digital image of each team member allows for increased situational awareness and empowers real-time decision-making.

SECURITY & PROTECTION

With secure, end-to-end data encryption, Wearin's technology protects sensitive information along with the people it belongs to.

"Seamless integration of modular sensors."

Its ecosystem integrates the clients' preferred plug-and-play sensors to monitor gas, proximity, falls, biometrics, high voltage, noise, temperature, etc., as well as devices such as GPS, indoor positioners, radios, and cameras – enabling an end-to-end seamless integration of modular sensors.

- PROTECTED USERS
  React immediately to emergencies, while predicting and mitigating risks
- BIOMETRIC-BASED ALARMS
  Detect acute stress and fatigue and automatically generate alarms
- SITUATIONAL AWARENESS
  Coordinate operations and improve response times with real-time, two- way data flow and automatic alerts
- LIVE STREAMING OF OPERATIONS
  Share real-time contextual data and video on the field for better tactical decisions
- EASE OF USE
  Ensure user mobility and comfort with lightweight, integrated devices and a single,centralised power
- IMPROVED ERGONOMICS
  Reduce weight and maximise mobility with devices integrated into tactical gear
- ADVANCED DATA ENCRYPTION
  Protect sensitive data with end-to-end encryption and security

PHANTOM MESH

"UGVs can be used for many applications where it may be inconvenient, dangerous, or impossible to have a human operator present."

HOLOLENS UGV/USV/UAV pMESH

UNMANNED SYSTEMS & HEAD MOUNTED DISPLAYS

The pMESH radio can be mounted on the back of the AASP UGV. It can perform the following functions:

•Receiving HOLOLENS telemetry instructions from the MESH radio connected to the HOLOLENS, used by the vehicle operator driving the vehicle.

•Transmitting live video from the UGV mounted camera to the MESH radio worn by the operator, and displaying the video on the heads-up display of the HOLOLENS.

•The C2 mounted MESH radio on the Command vehicle will also receive all the data from the UGV mounted camera, allowing Command situational awareness of the UGV environment.

MULTIPLE FUNCTIONS

When a weapon is also mounted on the UGV, the same MESH radio used for telemetry control can also provide gunnery control of the weapon, controlled by another operator, also wearing a body-worn mesh radio. One MESH radio mounted on the remote platform performs multiple functions.

PHANTOM MESH

"Rolatube Technology delivers products and systems utilising its revolutionary and proprietary Bi Stable Reeled Composite Technology."

ROLATUBE

ADVANCED TECHNOLOGY

Using its unique rollable composite material to manufacture its lightweight mast system, they are designed to complement advances in communication and surveillance technology. They are lightweight, compact and strong, bringing advantages to perimeter control, area lighting, and other site infrastructure applications.

Manufactured to adhere to the rigorous requirements of the Military Standard 810G, RolaTube mast systems have been proven, trusted and used by the global defence sector.

ANTENNA MAST

RolaTube Technology has extended the use of the Bi-stable Reeled Composite to expedite communications even further by integrating linear dipole antennas within the mast composite. The 3.5m 'SQUAD' Integrated Antenna Mast in use by the UK military, with an additional high frequency antenna top mounted to enable more flexible RF communication.

These 3.5m IAMs pack into a 15cm roll, weigh only 1.6kg, and are deployed within seconds, bringing unprecedented weight, volume and time-savings to the dismounted soldier.

PHANTOM MESH

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