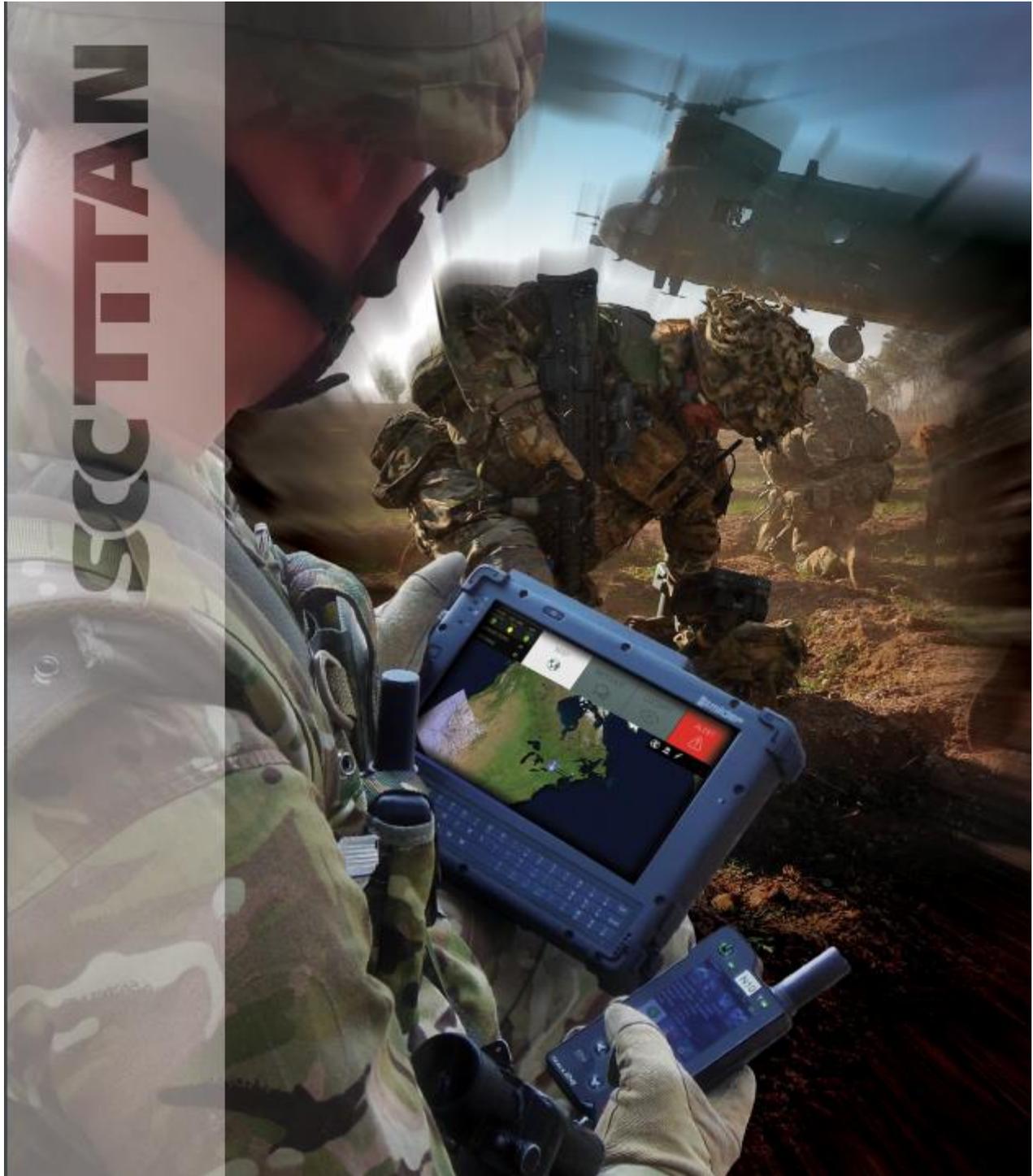
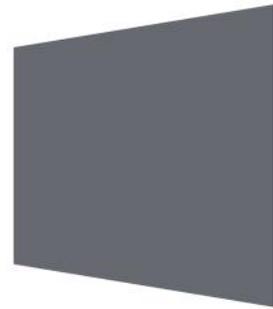


SCC TITAN



The Market Leading Situational Command & Control (SCC) Solution

Executive Summary

The twentieth century's industrial warfare has evolved into the twenty-first century's war amongst the people. Battles take place within communities, in austere, remote regions all around the world, and joint operations are more commonplace than ever before. Interoperable, affordable, beyond the line-of-sight blue force tracking has therefore become an essential capability. When military, police, and government commanders implement the SCC TITAN solution, they are accessing an integrated Situational Command and Control (SCC) Platform which allows them to quickly and precisely manage unfolding events. The SCC software provides a single, shared tactical Common Operational Picture (COP) - whether on land, air, or sea - allowing commanders to conduct synchronised planning, control movement, and respond rapidly, to changing events involving up to 10,000 separate assets. Data exchange using SCC TITAN's gateway services allows information to be seamlessly integrated into the strategic COP, ensuring interoperability between various incumbent technologies. The intuitive display plots near-time asset positions on customised military, police, and government mapping, while also providing comprehensive reports for situational awareness, mission planning, and debriefing. Resetting or configuring associated SCC hardware can be achieved remotely, while pop-up alerts, alarms, and geo-fences, enhance management and collapse response times to critical events on the ground, in the air, or at sea. The COP allows for a command hierarchy from a strategic HQ to a tactical forward operating base, as offered in a traditional C2 system. Additionally, without compromising the command structure, individual user groups or tactical clients, can utilise the system for routine chat and situational awareness at lower tactical levels.



SCC TITAN

Differentiating Key Features

Control

The client takes control, with a server solution behind the client's firewalls for their encryption generation, therefore enabling each country, or client, to maintain their sovereignty without external viewing by MilDef, or other users. However, interoperability can be achieved for joint operations with the same encrypted key generation.

Cost Effectiveness

As the solution is based on commercial off-the-shelf technology, it benefits from being one of the most affordable on the market. Based upon hardware designed to fulfil the requirements of multi-million pound service level agreements (SLAs).

Security

With secure web protocols, password encryption and satellite communication links and messages that use AES 256 point-to-point encryption, it ensures complete data integrity for the client.

Reliability

MilDef has an established military, police, and government client list who are using SCC TITAN in demanding environments. Over the past decade of foreign and domestic conflict, we have proved how it's market leading technology can isolate errors and can prevent system failures, to maintain seamless operations.

Communication

MilDef can support a wide range of devices and communication networks including satellite, radio, and GPRS/GSM, anywhere in the world.

What is SCC TITAN?

SCC TITAN is comprised of three main components:

SCC Platform is the HQ component of the SCC TITAN solution. It consists of the data handling server hardware and software, and can be located at a forward operating HQ, or at a strategic command, without compromise to security. See SCC PLATFORM for further details and technical specifications.

SCC Tactical is the mobile situational awareness component of the SCC TITAN solution. It is designed to be accessed on a tablet or laptop computer running Windows 7, 8 and 10. When used in conjunction with the SCC Platform as a client based standalone solution, SCC Tactical utilises satellite communications infrastructure to ensure continuous secure operation, worldwide. See SCC TACTICAL for further details and technical specifications.

SCC Mobile is a portable communications device that can be handheld, or installed into vehicles, aircraft, or ships. This is a simple, secure, and low cost standalone satellite communications device and has been designed for military, police, and government organisation use. See SCC MOBILE for further details and technical specifications.

SCC TITAN

Architectural Overview



SCC PLATFORM

Our focus is to provide cost-effective, reliable, secure and capable solutions to military, police, and government organisations, operating in potentially hostile environments, fully fledged combat zones, as well as for homeland security. Our SCC Platform provides military, police, and government organisations with a secure web-based application for full friendly force tracking (FFT) capability, including: situational awareness, operational command and control, emergency response, and the ability to provide comprehensive post-operation debriefing.

Tracking and Messaging

Our SCC Platform has been designed by a team of ex-military specialists who were involved at the very highest levels of operational, and frontline conflict, with the Ministry of Defence (MoD) and NATO. SCC Platform is built to service the beyond the line-of-sight (BLOS) blue force tracking defence requirements of military, police, and government organisations worldwide.

SCC TITAN

Advanced Functionality

Interoperability

All data can be duplicated and interconnected with a Battlefield Management System (BMS), combat search and rescue (SAR), or strategic Common Operational Picture (COP). The system incorporates gateway technology which easily allows data to be pushed and pulled from any strategic C2 systems, no matter what the format.

Information Layers

SCC Platform allows the client to annotate geographical information of assets and locations to ensure all information is immediately identifiable and available to the commander at all times.

Communications

The integration of two-way advanced text messaging allows immediate confirmation of the nature of the incident, and subsequent command and control. This includes the ability to send and receive external emails to a mobile asset, which is using satellite communications.

Emergency Identifier

The identification system allows emergency information to be sent to the most appropriate commander, or organisation. Panic alert information is automatically sent to the active alert's nearest responders, or to an email/SMS account.

Geo-fencing

Geo-fencing can be used to control troop movement. Hot zones can be updated at speed, and easily annotated electronically on a digital map, resulting in an automatic alert being raised at HQ, if any assets enter, or leave, the specified 'geo-fence'. The system will alert the commander if the pre-planned convoy route has been compromised, or the assets have not reached pre-defined destinations, by the configured estimated time of arrival.

Asset Groups

One system can be used by several autonomous user groups within an organisation. Generally, these would be operationally specific and include a homeland user group for domestic operations and training. There is no limit to user asset groups from brigades, section level, and individual soldier, or for police force, down to police officer. All can be configured to offer the necessary hierarchical command and control structure, as required.

Typical Requirements

Server configuration depends on asset numbers and redundancy architecture. A server solution is a standard offering for the SCC Platform, SCC Application, Linux Ubuntu Server 12.04 64 Bit, Map Service – Google, ESRI ArcView or OSM, 2 x Exchange server licence for mailbox and SMS external reporting, Linux Scripted Backup Recovery Program.



SCC TACTICAL

SCC Tactical is ideal for commanders observing the battlefield, and for a developing operational scenario. SCC Tactical enables assets to be easily identified with blue and red forces easily plotted. When SCC Tactical is linked with SCC Mobile (the Wave or the Whisper and the Echo devices), geo-fences can be viewed. SCC Tactical enables messaging, to help plot events, with the aid of a tablet keyboard, or Wave / Whisper keyboard, which is on the device. SCC Tactical updates the SCC Platform with key details. When there is no infrastructure in place, in the depths of a jungle, or in the middle of a city, SCC Tactical provides clarity in each operating environment. By understanding what is in the vicinity, the client can plan, attack, and defend a position with a high degree of certainty. SCC Tactical provides interactive maps, and weather applications tools, that assists the client plan the mission.

Tracking and Messaging

SCC Tactical has pre-defined messages which the client can setup which become the Standing Operating Procedure (SOP) tool. With one click of a button, the client will know that correct messages are being sent, and in turn received. The client wants to know that they are being tracked, and support is on the way. By having SCC Tactical three way message functionality for land, air, and sea assets, it enables the mission command to continue, where terrestrial communication may fail.

Advanced Functionality

Versatile

SCC Tactical software is quickly and easily loaded onto a laptop or a tablet device for vehicles, helicopters or a tactical HQ. It enables a commander to view their immediate Area of Responsibility (AOR), or provide them with a greater field of view, by the SCC Platform asset group functions. SCC Tactical is designed to be lightweight and agile, to be carried in a day sack, ops vest, or jacket pocket. MilDef also supports the SCC Tactical military and police vehicle fits, which can be overt or covert. SCC Tactical offers the client positional reports to other assets within the AOR. With map overlays and weather updates to a geo-fence capability, the client can be certain of the accuracy of the software.

Contact

SCC Tactical has a proven record of field use, when critical life support is needed. Existing clients have informed MilDef that knowing medical evacuation, or other support is enroute to their location, gives them a high level of confidence in SCC TITAN's capabilities. MilDef offers basic training and Train the Trainer packages to ensure individuals and teams are confident using the communications, prior to an exercise or operation.

Supported GUI and mapping

The messaging Graphical User Interface (GUI) is designed to be as simple and intuitive as Skype messaging. SCC Tactical has a multi-messaging GUI, which offers a three way communications model. Offering extensive mapping functionality allowing for manual and automatic map data inputs, the client can see up to a hundred positional reports simultaneously. Custom maps and all major file formats are recognised, MilDef prides itself with working with different nationalities' interfaces, and providing the solution to support training and operations.



SCC TITAN

Security

The encryption management module with password control for crypto custodian is ideal for military, police and government organisations. With current multi-national efforts, a set of crypto keys can be distributed for the same mission, enabling all clients to see each other for a true Blue Force Tracking (BFT) ability. During a mission, assets can easily be added, or disabled. At mission end, all assets can be cancelled and new keys generated.

Typical Hardware Requirements

Any laptop/tablet with the following minimum specification: Intel 2.7 GHz processor, 64 GB available disc space, 2 GB DDR2 Memory (RAM), 2 x USB 2.0 Bluetooth (recommended)

Typical Software Requirements

SCC Tactical application, Windows 7, 8 and 10, required electronic formatted maps

SCC MOBILE

SCC Mobile is designed to be used in the field for asset tracking and basic C2. The primary SCC Mobile devices are the Wave and the Whisper, which can be used in conjunction with personnel and vehicles. When combined with the SCC Platform and SCC Tactical, SCC Mobile enables commanders to view their positions, in near real time, and pass this data into the COP.

Our Echo device is the ideal dismounted device for soldiers and police forces, with basic functionality: on-off, emergency, check-in, and predefined message capabilities. We have designed the Wave, Whisper and Echo tracking devices to be robust and rugged. The Wave and Whisper provides two-way chat messaging between the device and the SCC Platform, device to asset group, and device to device. Free text, pre-defined canned messages, and email, are all supported.

Tracking and Battery Life

The Wave, Whisper and Echo devices operate on the Iridium satellite network, which offers complete global coverage, and the option of AES 256 bit encryption. Robust and versatile, the devices can be handheld, or deployed as a vehicle tracker through the use of an optional vehicle kit. The reporting rate can be changed as required, from one minute intervals upwards. Waypoint marking and 'check-in' messages are also supported. This is controlled via the Wave device's resistive touch screen, the Whisper device's colour LCD screen, or by using the Echo's mini-USB link to a tablet. Bluetooth connectivity is also available.

Impressive battery life of best-in-class level allows for prolonged operation away from power sources, even at high reporting rate.

Emergency Alarm

When the panic button is pushed, audible and visual alerts appear on the SCC Platform. Notification of the alarm is also automatically forwarded by SMS and e-mail to nominated recipients and SCC Tactical clients. Furthermore, closest responder alert functionality ensures that information such as Military Grid Reference System (MGRS), direction and heading is automatically transmitted with the panic alert to the five nearest responders.

SCC POCKET

The encrypted smartphone application, SCC POCKET, has been used by police and security teams at G7 and G8 events worldwide. It complements the capabilities of the Wave and Whisper device. The SCC POCKET application sends accurate, encrypted position updates, and text messages back to the monitoring software. For personal privacy, tracking can be easily switched off, when it is not required. When the emergency alarm is activated, the near real time notification will be an audible and visual alert, on the SCC Platform. An individual's location will update every 15 seconds, and their status can be rapidly assessed, and an effective response initiated. Notification of an alarm is also automatically forwarded by SMS and e-mailed to nominated recipients in the client's organisation. The SCC POCKET App is ideal for police, VIPs, Royalty, and security teams. The SCC POCKET phone application compliments the Wave, Whisper and Echo devices.

M2M

We have advanced the capability of data through our devices by adding a Machine to Machine (M2M) way of sending additional data over the satellite network for use in the battlefield, or for user groups such as the military, police, NATO or for UN observers when in cities, or on operations.

CBRN

We have teamed up with specialists in the Chemical, Biological, Radiological and Nuclear (CBRN) community. SCC TITAN allows the client to pass alerts through the Whisper device linked to the SCC Platform, to identify a dust cloud or isotopes with an attached detector. Once the detector is alerting, it then sends a message via the Whisper, which is then sent to the SCC Platform and other neighbouring units showing the alarm location. The SCC Platform monitor can take immediate action and reply to the user on the ground, and message them directly. The message can be acknowledged by the user who then knows help is on the way. A geo-fence can be applied to the danger area, or indeed track the movement of the dust cloud.

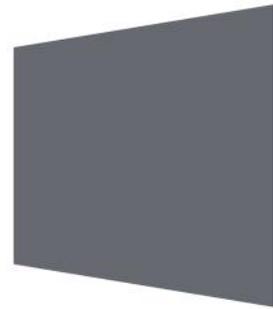
ECM

We provide secure satellite communications, remote command and control (C2) capabilities for the Electronic Counter Measures (ECM) system, to allow command and control from anywhere in the world. Clients can now change frequencies and profile settings on the move from the formation headquarters, or Electronic Warfare Control Centre (EWCC).

SCC TITAN provides the ability to monitor system parameters and fault find on the move. However, the most significant advancement is the spectrum situational awareness. This new solution automatically sends threat information from the ECM to the strategic headquarters where follow on action can be decided by the commander in near real time. The solution links smart phones and satellite technology to ensure that a threat alert from an ECM device is disseminated to all designated personnel thereby, for the first time, sharing information from high value sensors with all other appropriate personnel.



SCC TITAN



POLICE AND GOVERNMENT

The SCC TITAN capability offers a communication solution for key Civil Contingency Act category 1 responders dealing with modern terror threat. We can provide joined up communication for blue light services and military forces, to improve the speed of decision making and actions on the ground, in a crisis. The Wave, Whisper and Echo devices attached to SCC Tactical provide commanders within the SCC Platform, a level of control that enables units to act decisively when it counts. Encryption can be applied at any operational level with inter-agency links as required. Ranging from an air crash, flood, motorway accident, or a terrorist attack, the SCC TITAN is a cost effective solution for modern evolving threats.

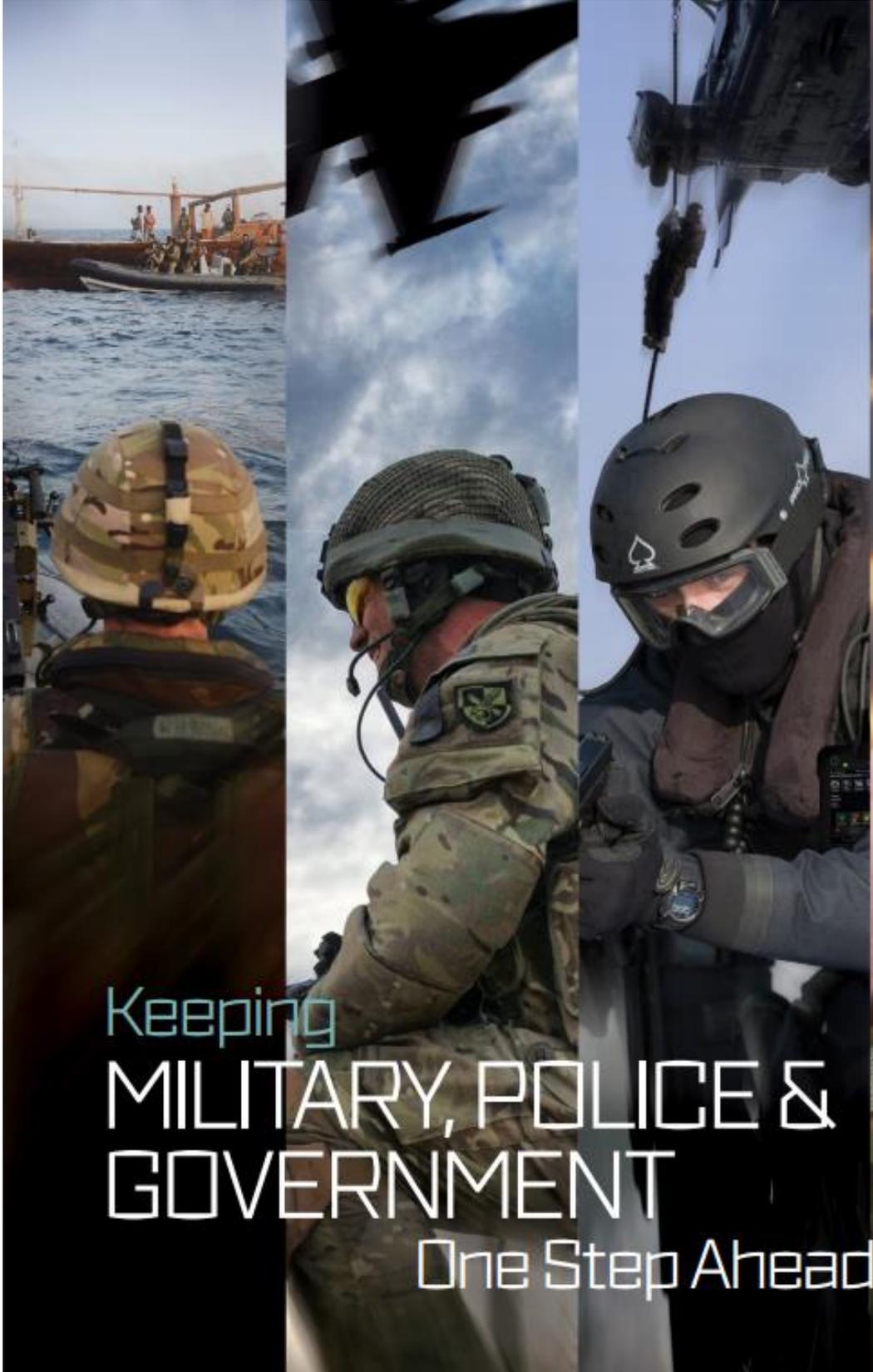
SCC AIRBORNE

The SCC Airborne solution comprises of an Iridium Short Burst Data (SBD) satellite device (the Wave and Whisper), that connects to, and uses an external aero certified dual Iridium GPS antenna, to communicate with the GPS and Iridium satellites. The Wave and Whisper devices is the communications data link, which is connected to either a Windows 7, 8, or 10 tablet providing the interface for messaging, situational awareness, and emergency alerts. On the tablet, an electronic map will show all operational assets with realtime details of military grid reference, time, date, altitude and speed, that will all be overlaid. This information will provide the aircrew with realtime situational awareness (SA), whilst the messaging window will allow short messages to be sent to the HQ, other aircraft, an asset on the ground with a smart phone (possibly an iPhone), or to all assets, as a broadcast message. The SCC Airborne solution also allows the aircrew to send and receive emails in the aircraft. The communication flow is protected by AES 256 level encryption, and no individual asset is loaded with the same encryption keys.

Search and Rescue/Personnel Recovery

As SCC Airborne is a FFT system for land, air, and sea assets, it allows aircrew to monitor, and even coordinate, support assets in the event of a rescue, or personnel recovery. Furthermore, the emergency location for personnel using the SCC Airborne solution, with SCC POCKET for mobiles or our Iridium devices, will identify exact locations to the aircrew for recovery.





Keeping
MILITARY, POLICE &
GOVERNMENT
One Step Ahead

