Inmarsat’s award winning L-TAC service offers satellite based Beyond Line Of Sight (BLOS) communications on the move for UHF and VHF users. Designed with mobility in mind, Inmarsat’s L-TAC service enables existing in-service tactical radios to transparently access BLOS communications without the need to modify the radio hardware.

**Benefits**
- Beyond Line Of Sight (BLOS) upgrade to existing tactical radio voice and data network services
- End user encryption maintained
- Affordable UHF TACSAT alternative
- Interoperability: VHF-C/ VHF-M/UHF
- COTM solutions for Man pack, Vehicular, Maritime & Aero Units
- Extremely easy to learn / limited training (approximately 2 hours)
- Remote support through our 24x7 Network Operations Centre

**Features**
- Designed to support in-service radios and compliment existing military capacity
- Radio agnostic and transparent - interoperates between UHF & VHF military and commercial frequencies
- Omni-directional antennas. No need to stop and point.
- Utilises I4 Narrow Beams, with Customised Beams available
- Very small form factor, lightweight and low power consumption
- Data enabled (HPW and Viasat)
- Flexible leases (Minimum 2 weeks)

**Military Customer Challenge**
Military users need to exercise command and control of widely dispersed forces in austere environments without the delay of deploying terrestrial infrastructure or the operational burden of protecting and sustaining them. UHF TACSAT is rare and difficult to access at short notice. Users need an enhanced service immediately.

**Requirement**
Increase the number of TACSAT channels available to users for voice and data communications. Allow netted voice and data for an all-informed network on-the-move, on-the-pause or at-the halt using existing radios, whilst maintaining national crypto.

**Solution**
The service is implemented using a single hop through Inmarsat’s satellite system via directly connected L-band uplinks and downlinks, giving users the same experience as UHF and VHF communications through our highly resilient L-band satellite channels. The service supports military and civilian operations for aviation, maritime, vehicle, man pack and fixed Ops room applications.
The Joint Force Commander has decided he needs to expand into the rebel held territory to the west.

The lead reconnaissance foot patrol supplies a steady flow of intelligence as it moves forward, constantly in touch with battle group HQ, well to its rear, without pausing to set up antennas.

The mounted elements of the main assault force maintain communications with patrols and the HQ as they manoeuvre to the north, far beyond the range of UHF combat radio.

The battle group commander speaks securely and reliably on the move to a sector hundreds of kilometres away, and to flanking coalition partners, while logistic elements follow to the rear, ready to establish the new forward base.

Maintaining contact without the need for range-extension stations or the technical challenges of mobile HF radio or lack of UHF terrestrial infrastructure.

Thanks to Inmarsat’s L-TAC service, mobile BLOS communications are available with minimum additional training over your existing radios.
For regular VHF users, L-TAC offers a fast-to-deploy and cost-effective capability for extending terrestrial coverage, either in remote terrains where there is no local VHF repeater or where natural or criminal action has destroyed the repeater. The provision of an L-TAC capability provides remote teams with a means of communication without the expense of a massive rollout of radio repeaters in an extended area.

In a public safety scenario, the existence of both UHF and VHF L-TAC variants will enable normally disparate teams such as military, police and civil agencies to work more closely together. Despite the fact that they may all be using different radio types and frequency bands, by taking out an L-TAC lease, they can interconnect with each other without the current need for a retransmission facility.
## L-TAC SPECS

### CONFIGURE A SYSTEM TO SUIT YOUR NEEDS.

### ANTENNA

<table>
<thead>
<tr>
<th>Short Title</th>
<th>L-Band Vehicular Antenna</th>
<th>L-Band Maritime Antenna</th>
<th>L-Band Manpack Antenna</th>
<th>L-Band Aviation Antenna</th>
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### L-BAND VEHICULAR ANTENNA

- **Frequency Range:** 1525 to 1660 MHz
- **Size (mm):** 146 x 72
- **Weight (g):** 667
- **Approval:** FCC Part 15
- **Colour:** Khaki Grey
- **Connectors:** RF-SMA
- **Standard Mounts:** Mag-Mount Base
- **Optional Mounts:** Antenna Mount Clamp Set
- **Frequency Range:** 1525 to 1660 MHz

### L-BAND MARITIME ANTENNA

- **Frequency Range:** 1525 to 1660 MHz
- **Size (mm):** 150 x 142
- **Weight (g):** 705
- **Approval:** FCC Part 15
- **Colour:** Khaki Grey
- **Connectors:** RF-SMA
- **Standard Mounts:** Pole-Mount Bracket
- **Optional Mounts:** Antenna Mount Clamp Set
- **Frequency Range:** 1525 to 1660 MHz

### L-BAND MANPACK ANTENNA

- **Frequency Range:** 1525 to 1660 MHz
- **Size (mm):** 76 x 153
- **Weight (g):** 305
- **Approval:** TSO C-130 ingrossos
- **Colour:** White
- **Connectors:** RF-BNC
- **Standard Mounts:** Screw-Mount
- **Optional Mounts:** Antenna Mount Clamp Set
- **Frequency Range:** 1525 to 1660 MHz

### L-BAND AVIATION ANTENNA

- **Frequency Range:** 1525 to 1660 MHz
- **Size (mm):** 111 x 143 x 38
- **Weight (g):** 385
- **Approval:** DTM: DO-160D
- **Colour:** Black
- **Connectors:** RF-TNC
- **Standard Mounts:** ARINC-743 footprint
- **Frequency Range:** 1525 to 1660 MHz

### L-BAND LOW PROFILE ANTENNA

- **Frequency Range:** 1525 to 1660 MHz
- **Size (mm):** 205 x 153 x 40
- **Weight (g):** 600
- **Approval:** DTM: Mil Std 810G
- **Colour:** CE
- **Connectors:** RF-TNC
- **Standard Mounts:** Elevatable Pole Set
- **Optional Mounts:** Antenna Mount Clamp Set
- **Frequency Range:** 1525 to 1660 MHz

### BATTERY

### BATTERY CAP 250V & 550V

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### OPS ROOM MAIN CTYR

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### BATTERY FUNCTION

- **Short Title:** PSU-U
- **Battery:** AA Battery Cassette
- **Weight:** 290
- **Colour:** Black
- **Approvals:** CE
- **Environmental:** -20° to +58°C Operating
- **Connectors:** DC Power: LEMO

### UPSU

- **Short Title:** PSU-U
- **Battery:** AA Battery Cassette
- **Weight:** 290
- **Colour:** Black
- **Approvals:** CE
- **Environmental:** -20° to +58°C Operating
- **Connectors:** DC Power: LEMO

### BATTERY ADAPTER 250V / 550V FOR UPSU

- **Short Title:** PSU-U
- **Battery:** AA Battery Cassette
- **Weight:** 290
- **Colour:** Black
- **Approvals:** CE
- **Environmental:** -20° to +58°C Operating
- **Connectors:** DC Power: LEMO
SUMMARY

L-TAC provides an enabling capability for military and civilian UHF/VHF Push-to-Talk users. Using Inmarsat-4 satellite(s), BLOS connectivity is provided to users across a global footprint. L-TAC enables users to connect tactical voice and data circuits between existing tactical radios in a highly-reliable fashion. Service is implemented using a single hop through an Inmarsat-4 satellite providing users with the same experience as if operating on UHF SATCOM or terrestrial networks. Using standard tactical radios and field-proven Slingshot systems, rapid deployment and activation of user networks are enabled. The L-TAC service is currently in active operations with armed forces and public safety agencies around the world, ensuring forces in harms way remain connected and operationally effective, whether on the ground, in the air or at sea.

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L-TAC. August 2020

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