

# PUMA T4-LK

Homeland Security & Critical Infrastructures

## PUMA T4-LK (LTE WITH KEYBOARD) NEW GENERATION PROFESSIONAL HANDHELDS

The PUMA T4 handheld introduces a new concept of handheld device, with a modular design combining reliable and secure communications with new value-added services that greatly enhance efficiency in daily operations and emergency situations. An Android based general purpose core provides computing, ancillaries and MMI functions integrated with radio communications provided by a modem component that can be delivered in different versions.

Field officers are presented with increasingly demanding challenges. These evolving scenarios require dismounted officer to act as mobile sensors (feeding data into control centres) in addition to autonomous operating units. The increased importance of data communications (audio and video) is shaping the requirement for new devices that support the activities of first responders in a flexible way without compromising the security and robustness that are characteristics of PMR radios.

The PUMA T4-LK provides officers with a flexible tool combining the power and performance of LTE with the ruggedness and reliability of a traditional PMR device.

On LTE systems equipped with the Communication Service Platform (CSP) core network, PUMA T4 can provide 'Tetra-like' voice communications together with video and multimedia. The PUMA T4-LK is also able to operate on 2G/3G commercial networks.

### Key features

- Android OS with a set of apps supporting admin, browsing, situation awareness, image and video
- LTE and 3G support
- Local communications capability including WiFi, Bluetooth and NFC establishing a personal area network for sensor connection
- GPS and accelerometer for enhanced location services
- Expandability via external accessories



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# PUMA T4-LK

## TECHNICAL DATA

### Radio characteristics

|                    |  |
|--------------------|--|
| Frequency bands    |  |
| LTE                | Band 1, 3, 7, 8, 20                                    |
| UMTS/HSPA+         | Band 1, 2, 5, 8  |
| GSM/GPRS/EDGE      | 850, 900, 1800, 1900MHz                                |
| Protocols          | LTE, HSPA (DC+), UMTS (WCDMA), EDGE, GPRS              |
| Output power (LTE) | 32dBm (max)  |
| Channel size (LTE) | 1.4, 3, 5, 19, 15, 20                                  |
| Security support   | End-to-End Encryption (with applique) in a CSP context |

### Mechanical characteristics

|                                 |                     |
|---------------------------------|---------------------|
| Dimensions (HxLxW inc. battery) | 138mm x 60mm x 38mm |
| Weight (included battery)       | Approximately 400g  |

### Environmental specifications

|                                  |  |
|----------------------------------|--|
| Operating temperature            | -20 °C to +55 °C (conformance tested)<br>-30 °C to +60 °C (degraded) |
| Storage temperature              | -40 °C to +85 °C   |
| Water and dust protection degree | IP67   |

### Operating System and Memory

|                    |                       |
|--------------------|-----------------------|
| Operating System   | Android 5.1           |
| RAM                | 1GB                   |
| Internal Storage   | 8GB FLASH eMMC        |
| Additional Storage | Micro SD (Up to 32GB) |

### User Interface

|                           |  |
|---------------------------|--|
| Display                   | 2.4" colour LCD TFT (320x240 RGB resolution) with 262K colours   |
| Rotary knob               | Unique knob for both talkgroup selection and audio volume  |
| PTT and programmable keys | Large PTT for half-duplex voice calls<br>Two programmable functional keys next to PTT  |
| Emergency button          | Placed on handheld top, programmable to send emergency call and/or status  |
| Navigation keys           | Four arrow navigation keys with acceptance button in central position<br>Two programmable keys (F1, F2)  |
| LED                       | One red and one blue for voice calls<br>One multicolour for wireless connection (Bluetooth, Wi-Fi) to other devices and accessories  |
| Brightness sensors        | For automatic display brightness adjustment<br>For automatic de-activation of touch screen display and private call loudspeaker activation                                     |
| Microphone/loudspeaker    | One loudspeaker for private calls placed above the display<br>Two microphones /loudspeakers placed below the keyboard  |
| Audio power               | 1W @ 4ohm each   |
| Connections               | Antenna SMA connector (upper side)<br>18 pin connector for dedicated accessories<br>Micro-USB for audio data COTS accessories and battery charger positioned in the right side |
| Video camera              | 5.0 MP (2608 x 1960 pixels resolution) with LED flash, placed in the rear side   |



### GPS

|                         |   |
|-------------------------|---|
| Acquisition sensitivity | -155dBm                                     |
| Tracking sensitivity    | -159dBm                                     |
| Location accuracy       | 5m (probability 50%)                        |
| Protocol                | ETSI LIP standard                           |
| Additional support      | Dual-mode functionality support for GLONASS |

### Miscellaneous

|                    |  |
|--------------------|--|
| Other HW resources | Bluetooth®<br>Wi-Fi<br>NCF<br>Vibracall Accelerometer<br>Magnetometer Gyroscope  |
| Base applications  | Browser, multimedia player/recorder, file manager, e-mail, phone book  |
| Accessories        | Antennas (short and whip), desktop and travel chargers, desktop multi-charger, headset, lightweight and throat mic headset, earphone, audio kit, wearable PTT, remote speaker microphone, skull microphone, USB programming and data cables. |



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