

PUMA T4-TE



Homeland Security & Critical Infrastructures

PUMA T4-TE (TETRA ENHANCED) NEW GENERATION PROFESSIONAL HANDHELD RADIO

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 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.

PUMA T4-TE delivers the security and the robustness of a TETRA radio with the features that characterize today smartphones, providing both mission critical communications services and multimedia capabilities.

Key features

- Large touch-screen display
- Android OS with apps supporting admin, browsing, situation awareness, image and video
- Full TETRA TMO/DMO voice and data capabilities including DMO repeater function
- Multi-slot PD and TEDS data transfer
- Analogue FM communications capability
- Local communications capability including Wi-Fi, Bluetooth and NFC establishing a personal area network for sensor connection
- GPS and accelerometer for enhanced location services
- Expandability via external accessories
- Local camera and SD card for imaging support



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PUMA T4-TE

TECHNICAL DATA

| Radio characteristics | |
|----------------------------------|---|
| Frequency bands | 380MHz to 470MHz 806MHz to 870MHz |
| Protocols (TETRA) | TMO, TEDS, DMO, DMO Repeater, DMO via Repeater, DMO via Gateway |
| Output Power | 1.8W (TETRA class 3L) 4W (FM) |
| Channel spacing | |
| TETRA | 25kHz (step 6.25kHz) |
| TEDS | 25kHz and 50kHz |
| FM | 12.5kHz and 25kHz |
| Security support | Air-Interface Encryption (TEA1, 2, 3) End-to-End Encryption (with applique) |
| Battery duration (TETRA) | About 20 hours at 1W (Class 4) |
| With duty cycle 5/35/60 | about 18.5 hours at 1.8W (Class 3L) |
| 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) -30 °C to +60 °C (degraded) |
| Storage temperature | -40 °C to +85 °C |
| Water & 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 | 3.6" high resolution colour LCD TFT with 16 million colours |
| Rotary knob | Unique knob for both talkgroup selection and audio volume |
| PTT and programmable keys | Large PTT for half-duplex voice calls 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 Two programmable keys (F1, F2) |
| LED | One red and one blue for voice calls One multicolour for wireless connection (Bluetooth, Wi-Fi) to other devices and accessories |
| Brightness and proximity sensors | For automatic display brightness adjustment For automatic de-activation of touch screen display and private call loudspeaker activation |
| Microphone/loudspeaker | One loudspeaker for private calls placed above the display Two microphones /loudspeakers placed below the navigation keys |
| Audio power | 1W @ 4 ohm each |
| Connections | Antenna SMA connector (upper side) 18-pin connector for dedicated accessories Micro-USB for audio/ data COTS accessories and battery charger placed on 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® Wi-Fi NCF Vibracall Accelerometer 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. |

