

PUMA T4-TK

Homeland Security & Critical Infrastructures

PUMA T4-TK (TETRA WITH KEYBOARD) 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-TK 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

- 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-TK

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	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 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 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 keyboard
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.



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