PUMA T4-TK

PROFESSIONAL HANDHELD RADIO TETRA

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
- TETRA TMO/DMO voice capabilities
- Wireless communication capabilities, including WiFi and NFC, for data exchange and connection to audio accessories.
- GPS and accelerometer for enhanced location services
- Expandability via external accessories
- Local camera and SD card for imaging support.

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TECHNICAL DATA

General	
Frequency bands	• 340 MHz to 400 MHz • 380 MHz to 470 MHz
TETRA protocols	TMO, DMO, DMO via Repeater, DMO via Gateway
Output power	1.8W (3L TETRA class)
Audio power	1W @ 4 ohm
Channel spacing	25 kHz (step 6.25 kHz)
Security support	• Air-Interface Encryption (TEA 1, 2, 3) • End-to-End Encryption
Battery	5.100 mAh, 3.7V
Operating System (OS)	Android 5.1
RAM	1 GB
Internal storage	8 GB FLASH eMMC
Additional storage	Micro SD (up to 32 GB)
Dimensions (HxWxD)	153x69x39 mm [6,02 x 2,72 x 1,54 in] (including rotary knob and battery)
Weight	Approx. 430 g [0,95 lb] (included battery)

GPS	
Protocol	ETSI LIP standard
Acquisition sensitivity	-155 dBm
Tracking sensitivity	-159 dBm
Location accuracy	5 m [16,4 ft] (probability 50%)
Additional support	Dual-mode functionality support for GLONASS

Environmental conditions	
Operating temperature	• -20°C to +55°C [-4°F to 131°F] (conformance tested) • -30°C to +60°C [-22°F to 140°F] (degraded)
Storage temperature	-40°C to +85°C [-40°F to 185°F]
Water and dust protection	IP67

User Interfaces	
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 • Two programmable keys (F1, F2) • Standard alphanumeric keypad with 12 keys
LED	• One red and one green for voice calls • One multicolour for wireless connection to other devices and accessories
Brightness and proximity sensors	• For automatic display brightness adjustment • For automatic de-activation of touch screen display
Microphone/loudspeaker	• Loudspeaker below the navigation keys and loudspeaker for private calls above the display • Two microphones with noise canceling
Connections	• Antenna SMA connector (upper side) • 18-pin connector for dedicated accessories • Micro-USB for audio/data accessories and battery charger placed on the handheld right side
Camera	5.0 MP (2608 x 1960 pixels resolution) with LED flash, placed in the rear side

Other features	
Other HW resources	• Wireless audio connection • Wi-Fi • NFC • 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, remote speaker microphone, lightweight headset with transparent earbud, USB programming and data cables, leather bag with belt clip.