Hytera

Dual-mode Rugged Radio

PDC680 V1B1-T

ALL IN ONE ALL IN CONTROL
MISSION CRITICAL FOCUSED



www.hytera.com

Overview

Hytera PDC680 V1B1-T dual-mode rugged radio combines a mission-critical DMR radio with an Android-based smartphone in a single device. It harnesses the power of narrowband and broadband technologies to provide mission-critical voice call, photo and video taking, positioning, and more. This innovative radio enables seamless communications between DMR network and public network such as 2G, 3G, LTE, and WLAN.

As a professional rugged radio, the PDC680 V1B1-T is engineered for effortless usability. The ergonomic design on smart knob and keys and the modular design on UIs make it easy for you to accomplish tasks with one hand.



Key Features

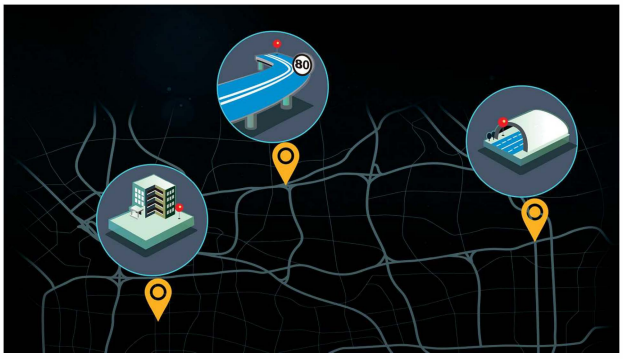
- All-in-one device Portable Radio
- Dual screens
- IP68
- Smart knob
- Loud and clear audio
- AI-based noise cancellation
- Remote control



Highlights

Precise positioning

The PDC680 V1B1-T provides fast and accurate positioning to track people or devices, indoor and outdoor. The GPS, Galileo, GLONASS, QZSS, BDS, and A-GPS are used for outdoor positioning, while the location-based service (LBS) and WLAN are adopted for indoor positioning.



Live streaming

Thanks to the dual HD cameras, the PDC680 V1B1-T allows you to capture on-site pictures and videos, and then send them to another radio or command center in real time to dramatically improve situational awareness. The PDC680 V1B1-T also supports the external camera.



Automatic switch

The PDC680 V1B1-T can automatically switch between DMR network and LTE network. Registering with both networks using the same ID, the PDC680 V1B1-T can always select the optimal one to deliver smooth and reliable voice communications everywhere, indoors or out. And the PDC680 V1B1-T can roaming to multi-site in the same network (License)



Purpose-built app

With the Android system, the PDC680 V1B1-T can support system-level apps developed by Hytera and other third-party apps. This helps you communicate and respond efficiently.





All-in-one device

With highly integrated and modular design, the PDC680 V1B1-T combines a DMR radio and a smartphone into a single device. So you do not need to carry two separate handsets for accessing voice, data, video, and more, the PDC680 V1B1-T is Portable radio support the VHF Digital/Analog (4FSK/FM)



Loud and clear audio

Using the enlarged front chamber technology and professional acoustic design, the PDC680 V1B1-T can output sound at up to 128 dB. To ensure crystal and clear audio in noisy environments, the PDC680 V1B1-T adopts AI-based noise cancellation, echo cancellation, and wind noise reduction technologies.



All-round security assurance

The PDC680 V1B1-T can secure the voice and data through authentication, software and hardware encryption, or more. TrustZone protects the system; full-disk encryption (FDE) protects the user data; air interface encryption (AIE) and end-to-end encryption (E2EE) protect the voice and data communication; and remote control helps you manage radios.



Rugged and durable

Rated at IP68 and ESD IEC Level 4, the PDC680 V1B1-T withstands water, dust, and electrostatic discharge. It can also withstand 1.5-meter drop from all angles. The industrial-grade touchscreen stands up to continuous use in any weather. All these help the PDC680 V1B1-T perform well in harsh environments.



Smart management

You can remotely manage radios in batches, including upgrade, programming, permission control, key configuration, app management, device health management, and data backup and recovery.



Accessories

Standard


2,400 mAh
Li-Poly Battery
BP2402


Charger (2A)
CH20L13


Power Adapter (2A)


Belt Clip
BC39


Antenna


Strap
RO03

Optional


BT Earpiece
EHW08


Wireless PTT
POA121


Wireless Remote
Speaker Microphone
SM27W2


PTT&MIC Controller
ACN-02P


Water-proof Remote
Speaker Microphone
SM26N1-P


Programming Cable
PC156


Receive-only Earbud
ES-01


Receive-only
Swivel Earset
EH-02


C-Earset
EHS24


4,000 mAh Li-poly Battery
BP4005


Charger (1A)
CH10L29


Multi-unit Charger
MCA25


Nylon Carry Case
NCN029


Leather Carrying case
LCY022

Specifications

Wireless Data Communication

DMR / ANALOG	VHF 136-174MHz
Channel	1024
LTE	3GPP LTE FDD-LTE: B1/B3/B7/B8/B20/B28 TDD-LTE: B34/B38/B40
WCDMA	B1/B8
GSM	900/1800MHz
WLAN	802.11 a/b/g/n/ac, 2.4GHz/5GHz
NFC (Optional)	13.56MHz
BT	V4.2, BDR/EDR/BLE
Positioning	GPS/BDS/GLONASS/Galileo/QZSS/A-GPS Position performance for open zone : TTFF (Cold boot)< 1minute Horizontal accuracy<5m(95% probable at -130dBm)

Transmitter

Channel Spacing	12.5kHz
TX Power	VHF: 1W/4W (Analog) 1W/5W (DMR)
Adjacent Channel Selectivity	TIA–603: 60dB@12.5kHz ETSI: 60dB@12.5kHz
Frequency Stability	±0.5ppm
FM Hum&Noice	-40dB@12.5kHz
Digital Vocoder Type	AMBE+2™

Receiver

RX Sensitivity	Analog: 0.14uV/-124 dBm(12dB SINAD) @12.5KHz (Typical) Digital: 0.16uV/-123 dBm @BER5% (Typical)
Inter-modulation	TIA-603: 70dB ETSI: 65dB
Spurious Rejection	TIA–603: 70dB ETSI: 70dB
Adjacent Channel Selectivity	TIA–603: 60dB@12.5kHz ETSI: 60dB@12.5kHz
Audio Distortion	<3%
Audio Output	2W

General

Dimensions (H x W x D)	140 x 60 x 29.1mm
Weight (with antenna & battery)	325±5g
AP Processor	8-core, 1.8GHz
Operating System	Android 10
Google Certification	Google Mobile Services
Memory	RAM: 3GB; ROM: 32GB eMMC Supports up to 256GB with Micro SD card
Ports	13PIN Accessory/Charging Port
Top Screen	0.92"128x88 Color: black & white
Main Screen	3.6" 1280x720, Capacitive, Touch Screen, Gloves Proofed, Passive Stylus
Card Slots	2 Nano SIM cards 1 Micro SD card 1 Encryption card for Narrowband
Front Camera	8MP, Fixed Focus
Rear Camera	13MP, Auto Focus
Sensors	Proximity Sensor Ambient Light Sensor 6-axis sensor (accelerometer + gyroscope) Magnetometer Accelerometer

Battery

Standard	2400 mAh Li-polymer, 7 7V(Rated)
Optional High Capacity	4000 mAh, 7.7V(Rated)

Video and Photo

Video File Types	3GPP(.3gp), MPEG-4(.mp4) QuickTime(.mov), WEBM(.webm), Windows Media(.asf,.wmv), RealMedia(.rmvb, .rm) MPEG-PS(.mpg, .mpeg), MPEG-TS(.ts), AVI(.avi), Matroska(.mkv)
Image File Types	JPEG(.jpg), GIF(.gif), PNG(.png), BMP(.bmp)
Video Recording Quality	Front Camera: 1080P HD up to 30 frames per second(fps) Rear Camera: 1080P HD up to 30 frames per second(fps)

Audio

File Types	MP3(.mp3), WAV(.wav), 3GPP(.3gp), MPEG-4(.mp4,.m4a), ATDS raw AAC(.aac), MPEG-TS(.ts), FLAC(.flac), MIDI(.midi, .xmf, .mxmf), RTTTL/RTX(.rtttl, .rtx), OTA(.ota), iMelody(.imy), Ogg(.ogg), Matroska(.mka), QCELP(.qcp), RealMedia(.ra), Windows Media(.wma), AC3(.ac3)

Environment

Dust and Water Proofing	IEC60529- IP68 (2m, 4h), IEC60529- IP66
Shock and Vibration	MIL-STD-810G
ESD	IEC 61000-4-2 (Level 4), ±8kV (Contact), ±15kV (Air)
Operatin Temperature	-20°C - +60°C
Storage Temperature	-30°C - +80°C
Humidity	MIL-STD-810G, ≤ +65°C,95%RH

Hytera
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