

Dual-mode Rugged Radio PDC680



Overview

Hytera PDC680 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 the DMR network and public networks such as 2G, 3G, LTE, and WLAN.

As a professional rugged radio, the PDC680 is engineered for effortless usability. The ergonomic and modular design of the device's smart knob and keys makes the UI easy to accomplish tasks with one hand.



Key Features



All-in-one device



Dual screens



IP68



Smart knob



Loud and clear audio



AI-based noise
cancellation



Remote control



Highlights

Precise positioning

The PDC680 provides fast and accurate positioning to track people or devices, whether indoor or 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.



Automatic switch

The PDC680 can automatically switch between DMR network and public network. Thanks to the ability to register to both networks using the same ID, the PDC680 can always select the optimal one to deliver smooth and reliable voice communications everywhere.



Live streaming

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



Full range of apps

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





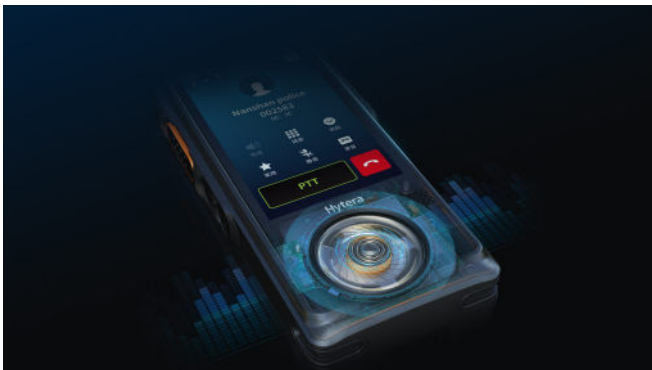
All-in-one device

With a highly integrated and modular design, the PDC680 combines a DMR radio and a smartphone into a single device. So you can effectively carry a broadband and narrowband handset in one lightweight device.



Loud and clear audio

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



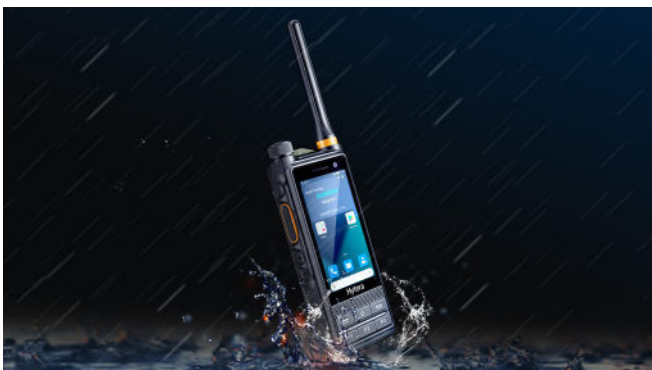
All-round security assurance

The PDC680 can secure the voice and data through authentication, software and hardware encryption. 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 withstands water, dust, and electrostatic discharge. It can also withstand 1.5-meter drop. The industrial-grade touchscreen stands up to continuous use in any weather. All these help the PDC680 survive 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-Polymer Battery



Charger



Power Adapter



Belt Clip



Antenna



Strap

Optional



USB Camera



BT Earpiece



Wireless PTT



Wireless Remote Speaker Microphone



PTT&MIC Controller



Water-proof Remote Speaker Microphone



Receive-only Earbud



Receive-only Swivel Earset



C-Earset



4,000 mAh Smart Battery



Charger (2A)

Specifications

Wireless Data Communication

| | |
|----------------|---|
| DMR/Analog | 340-470MHz |
| LTE | 3GPP LTE |
| | FDD-LTE: B1/B2/B3/B4/B5/B7/B8/B20/B26/B28 |
| | TDD-LTE: B34/B38/B39/B40/B41 |
| CDMA | CDMA 1xRTT BC0 CDMA2000 1xEV-DO BC0 |
| WCDMA | B1/B2/B4/B5/B8 |
| TD-SCDMA | B34/B39 |
| GSM | 850/900/1800/1900MHz |
| 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 : |
| | TTFB (Cold boot)< 1 minute |
| | Horizontal position accuracy < 10meters |

Transceiver

| | |
|----------------------------------|---------------------------------------|
| Channel Spacing | 25/20/12.5kHz |
| TX Power | 1W/3W (Analog) |
| | 1W/4W (DMR) |
| RX Sensitivity | 0.2uV/-121dBm (12dB SINAD) |
| | 0.16uV/-123dBm (12dB SINAD) (Typical) |
| | 0.2uV/-121dBm @BER5% |
| Inter-modulation | TIA-603: 70dB@12.5/20/25kHz |
| | ETSI: 65dB@12.5/20/25kHz |
| Blocking | 84dB |
| Suppression of Spurious Response | TIA_603: 70dB@12.5/20/25kHz |
| | ETSI: 70dB@12.5/20/25kHz |
| Adjacent Channel Selectivity | TIA_603: 60dB@12.5kHz/70dB@20/25kHz |
| | ETSI: 60dB@12.5kHz/70dB@20/25kHz |
| Frequency Stability | ±0.5ppm |
| Audio Output | 2W |
| Audio Distortion | ≤3% |
| Digital Vocoder Type | AMBE+2™ |

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 |
| 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), 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-810 G |
| ESD | IEC 61000-4-2 (Level 4), ±8kV (Contact), ±15kV (Air) |
| Operating Temperature | -20°C - +60°C |
| Storage Temperature | -30°C - +80°C |
| Humidity | MIL-STD-810G, ≤ +65°C,95%RH |



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