



Multi-mode Advanced Radio PTC680

ALL IN ONE ALL IN CONTROL MISSION CRITICAL FOCUSED



The Art of PTC680

Mission-critical voice is the most crucial need of PMR users, and yet their demands on multimedia services, quick access to key data and mobile office automatic are gradually increasing. Obviously high-speed data transmission and hybrid multimedia are of great help to make well-informed decision and to know what to expect.

Combining a mission-critical radio and a smartphone into a single device, the compact and ergonomic PTC680 is completely Android and PMR functional to provide diverse features including mission-critical voice, HD photo capture and video shooting, broadband voice services, etc., enabling the users to carry out multiple missions simultaneously and increasing the efficiency of critical communications.



Key Benefits

- Light weighted
- Loud and clear audio
- Intelligent talk
- Dual-screen
- IP68 and MIL-STD-810G
- Advanced global positioning
- Dual-SIM
- Full TETRA trunking
- Multimedia gathering
- Dedicated knob
- Multi-frequency of cellphone
- Remote control

Mission-Critical Focused Design

The intuitive user interface used across the PTC680 enables quick access to critical information, makes it easy to use and also helps the users react faster when they are in emergency. Operations to mission critical can be done by a single hand via the rotate knob, smart key, PTT button and programmable keys.



The Professional One for Mission Critical

The PTC680 inherits all the market leading options of Hytera TETRA radio to focus on mission-critical communication, and its ruggedness and reliability has been refreshed to a new level to stand up to all tough and challenging environments, which has enabled the radio to be used in the most time-critical operations.



Compact and Light Weighted

Although the PTC680 combines a mission-critical radio and a smartphone into a single device, it is fully TETRA trunking functional to support all TETRA features with only 325g in weight, easy to carry and wear, and also provides intuitive controls to help users get in touch as soon as possible and, perform various programmable features to different missions. It has 6cm in width with big rounded corner on the back to deliver an unrivalled tactile feedback for palm-fitted one hand operation.

Crystal Clear Audio

The PTC680 uses patented enlarged front chamber technology and has a professional acoustic design to provide up to 128dB of loudness. Multi-mic Noise Reduction, Wind Noise Suppression, Echo Cancellation are used to compete with the background noise in any environment. Therefore, the audio is always crystal clear.





Flexible Connectivity

PTC680 supports wired PIN connection and connections over WiFi, BT and NFC to a wide range of audio accessories, making it optimum for the frontline operatives to use their radios with higher efficiency.

All-round Security Assurance

Multiple defensive mechanisms have been built to the PTC680 to safeguard your mission-critical communications. Signature authentication and preconfigured Se Android security strategy utilized to ensure the system security. All static user data is full-disk encrypted, while E2EE and AIE are used to secure data transmission. The management to PTC680 is based on industry standards to make the radio in complete control.



The Smart One with Critical Intelligences

Based on the Android platform the narrowband features have been delicately enriched and upgraded on PTC680 to make your communication intelligent, which enhances the control capability of the decision-maker and ensures the safety of frontline operatives and your organization.



Advanced Global Positioning

The PTC680 uses five GNSS (Global Navigation Satellite System) and A-GNSS* (Assisted Global Navigation Satellite System) to make quick and accurate positioning in open outdoor areas, while Location-based Service (LBS) or WiFi when moving to buildings or areas not covered by GNSS, enabling the track to the user and device all the time.

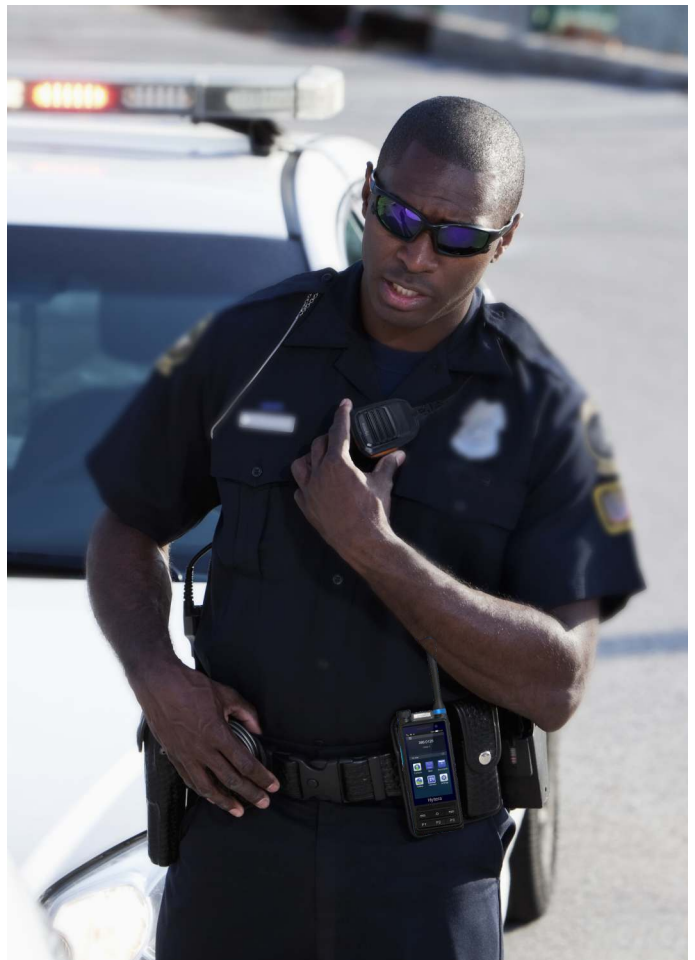
*A-GNSS will be supported in future release. Contact Hytera for LBS and WiFi positioning available areas.

Multimedia Gathering

Thanks to the high definition cameras and large screen, the frontline operatives now can use PTC680 to clearly capture critical photographic evidence or record the important moments during the mission. Don't worry about the space, because the PTC680 has a large-capacity memory for storage, in addition, a micro SD card can be installed to the radio for massive photos and videos.

Complete Control via Smart MDM

Smart MDM is the system to remotely manage your PTC680 in batch. It takes 5 minutes only to wirelessly program 100 radios, which saves 95% of time compared with wired programming. Stay in complete control over the radio with many other features for example remote firmware and software upgrades, multi-command, feature and application permissions, over-the-air wipe and lock capability, data backup and recovery.





Efficient API for Narrowband

The PTC680 has standard android API for custom development of PMR features to match different requirements. The custom applications can be better shown and performed on its large screen. Together with the existing features the radio can provide hybrid solutions according to the specific industry needs.

Powerful Broadband Voice Services

PTC680 also provides Mission Critical Services (MCS) and Commercial PoC (C-PoC) services to extend the radio coverage. MCS is a PMR characterized talk solution deployed over public networks to provide stable and reliable PTT communication, high-speed data applications and multimedia services. C-PoC is another solution that provides high-quality audio and video services, instant messaging. Enjoy the efficiency of audio and live videos over broadband delivered by PTC680.





Well-informed Decision for Frontline

Although mission-critical voice is the priority of all priorities to public security users, the benefits of multi-mode advanced radio to them are far more.

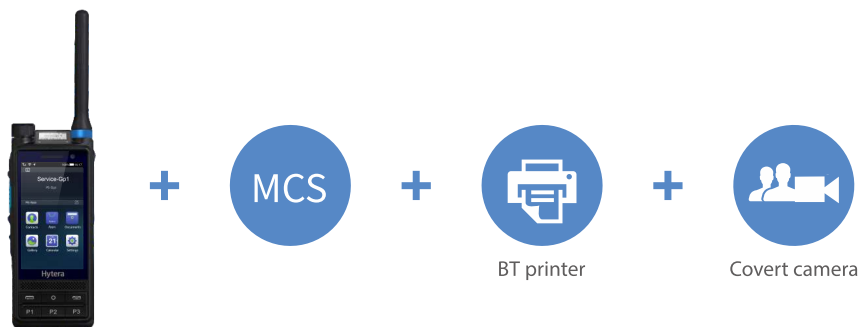


Image Gathering

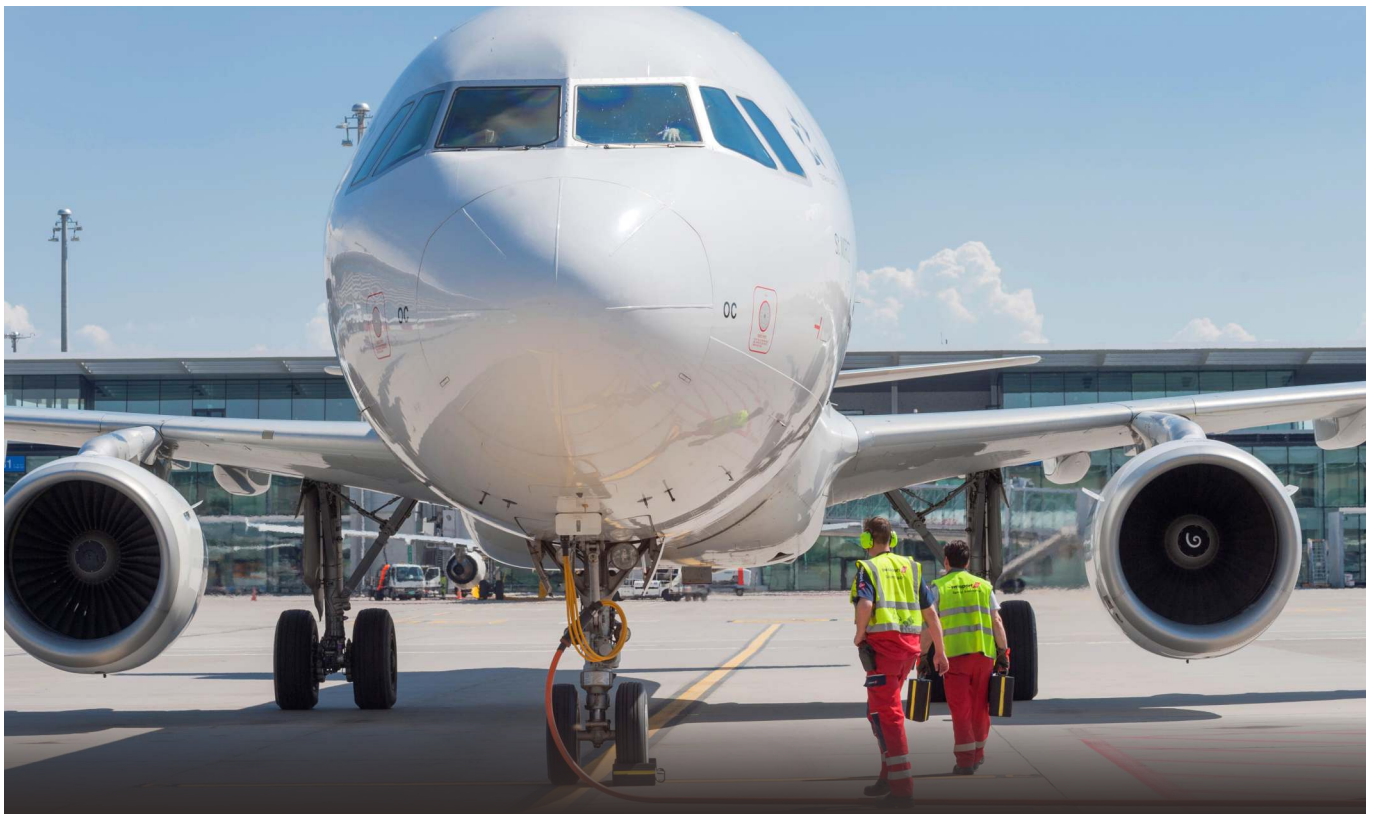
The large color screen makes all operations easier and more intuitive. Thanks to the HD camera and 32G memory, the frontline officers equipped with the PTC680 radio and covert camera can capture critical photographic field information, then trace back and follow up for better-informed decision.

Broadband Ready

The multi-mode advanced radio is TETRA and Android functional so that officers are no longer overburdened by too many device, and no need to frequently change the device for different missions. It uses broadband resources, for example, WiFi, telephone call, MCS solution, to cover those areas out of narrowband, enabling the user to be always connected wherever he moves to.

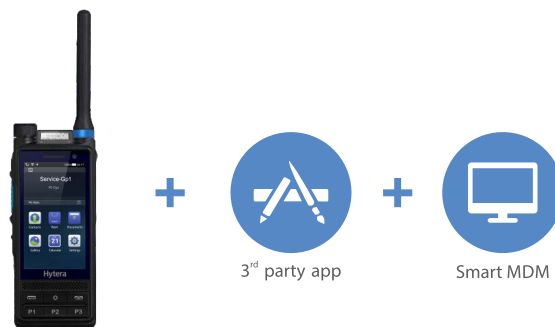
Adaptive to 3rd Party Accessory

The frontline officers can check the vehicle and driver information through specific app installed on the radio. Connect the specific accessory like BT printer for ticket printing.



Better Organization Efficiency

Been coupled with a package of intelligences, the PTC680 radio serves the airport staff with more considerate and more efficient management to help the professionals provide high level of customer services.



Mobile OA Available

The PTC680 allows the airport professionals to install their customized apps, such as W/O, flight check, airline dispatching, that use narrowband path as well as broadband path to increase their productivity. These apps enable the professionals to distribute and follow up tasks in a standard operating procedure, share information and interact online.

Efficient Control via Smart MDM

Using Smart MDM to remotely manage the radio fleet not only makes the device ready in the shortest time, but also minimizes the manpower input and organizational disruption, enabling the professionals 24-hour on call to maintain the high level of customer services.



Always Focus on the Mission

Professionals in emergency rescue have benefited from the ruggedness of the PTC680 and the efficiency of its accessories.

The IP68 rated and MIL-STD-810 G certified PTC680 is rugged enough to stand up to whatever the environment puts in their way. This helps them to focus on the mission and keeps them safe.

The integrated BT technology provides a secure connection to devices. When the professionals are engaged in a rescue, their protective clothing and gloves make it difficult to reach and operate the radio, in addition, those tangled wires impact their performance. Now they can use wireless accessories such as Wireless Earpiece, or Wireless PTT to communicate and release their hands to get ready quickly for emergency operations.



Accessories

Accessories

Optional Accessories



Body Worn Camera with LCD



Body Worn Camera



Wired Earset



Transparent Earpiece



Wireless PTT



4000mAh Smart Battery



Programming Cable



Remote Speaker Microphone



Convert Camera

Standard Accessories

Smart Battery(2400mAh Li-polymer)

Power Adapter

Charger

Belt Clip

Antenna

Strap

Main Services

Work Mode	Voice Service	Data Service	Apps	Security	Audio	Others
Public Network	Private Call	Text Message	Contacts	Emergency Alarm	Microphone Gain Control	Positioning
DMO	Group Call	Status Message	Messaging	Temporary Disable/Activate	Microphone Path Set	Covert Mode
TMO	All Call	MMS	Camera	Permanent Disable	Three-band Equalizer	TTS
	Broadcast Call	Packet Data	Gallery	Man Down	VOX	Favorite Folder
	Emergency Call	Call Out	Sound Recorder	Lone Worker		Sub-folder
	Public Phone Call		Files	Authentication		RoIP
	PSTN/PABX Call		Documents	E2EE		TXI
	Call Queuing		Notes	Over the Air Encryption		
	Call Priority		Clock			
	NB Call Recording		Calculator			
	Repeater Call (DMO)		Browser			
	Gateway Call (DMO)		Compass			

Specifications

Wireless Data Communication

TETRA	350-475MHz
LTE	3GPP LTE FDD-LTE: B1/B2/B3/B4/B5/B7/B8/B20/B26/B28 TDD-LTE: 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
WiFi	802.11 b/g/n, 2.4GHz
NFC	13.56MHz
BT	V4.2, BDR/EDR/BLE
Positioning	GPS/BDS/GLONASS/Galileo/QZSS Position performance for open zone : TTFF (Cold boot)< 1minutes Horizontal position accuracy < 10meters

General Specifications

Dimensions (H x W x D)	140 x 60 x 29.1 mm
Weight (with antenna & battery)	About 325g
AP Processor	8-core, 1.8GHz
Operation System	Android 7.0
Memory	Broadband: RAM: 3GB; ROM: 32GB eMMC Expandable to 128GB with Micro SD card Narrowband: Expandable to 16GB with Micro SD card
Ports	20PIN Accessory/Charging Port
Top Screen	0.92" Color: black & white
Main Screen	3.6" 1280x720, Color depth: 24bit Capacitive, Touch Screen, Gloves Proofed, Passive Stylus Pen
Slots	2x Nano SIM card slots 1x Narrowband Micro SD card slot 1x Broadband Micro SD card slot
Front Camera	5MP, Fixed Focus
Rear Camera	13MP, Auto Focus
Sensors	Proximity Sensor Ambient Light Sensor 3-axis sensor+Gyroscope Barometer Geomagnetic sensor Accelerometer

Transceiver

Channel Spacing	25kHz
TX Power	1.8W(Class 3L) &1W(Class 4)
RX Sensitivity	Static: ≤-116dBm(-117dBm typ.) Dynamic: ≤-106dBm(-109dBm typ.)
Audio Output	2W

Video and Imaging

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 60 frames per second(fps)
Watermark	Video and imaging

Audio

File Types	MP3(.m -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)
Input	Multi-Mic Noise Reduction, Wind Noise Suppression, Echo Cancellation

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), ±8 kV (Contact), ± 15 kV (Air)
Operating Temperature	-20°C ~ +60°C
Storage Temperature	-30°C ~ +80°C
Humidity	Per MIL-STD 810 G, ≤ +65°C,95%RH

Battery

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

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Encryption features are optional and have to be configured separately; they also are subject to German and European export regulations.

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