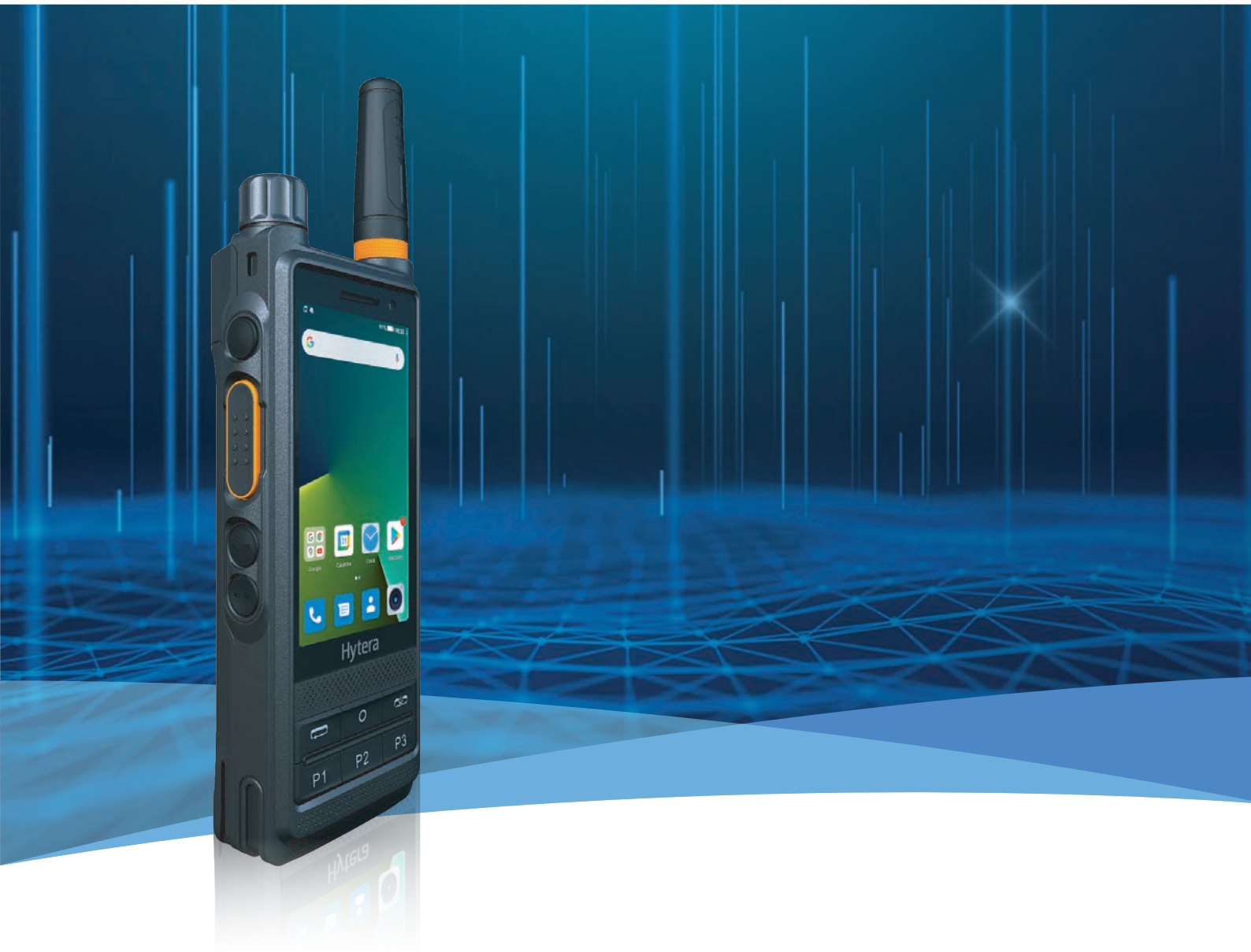
Hytera



PDM680 Rugged MCS Radio

READY FOR MISSION CRITICAL SERVICES

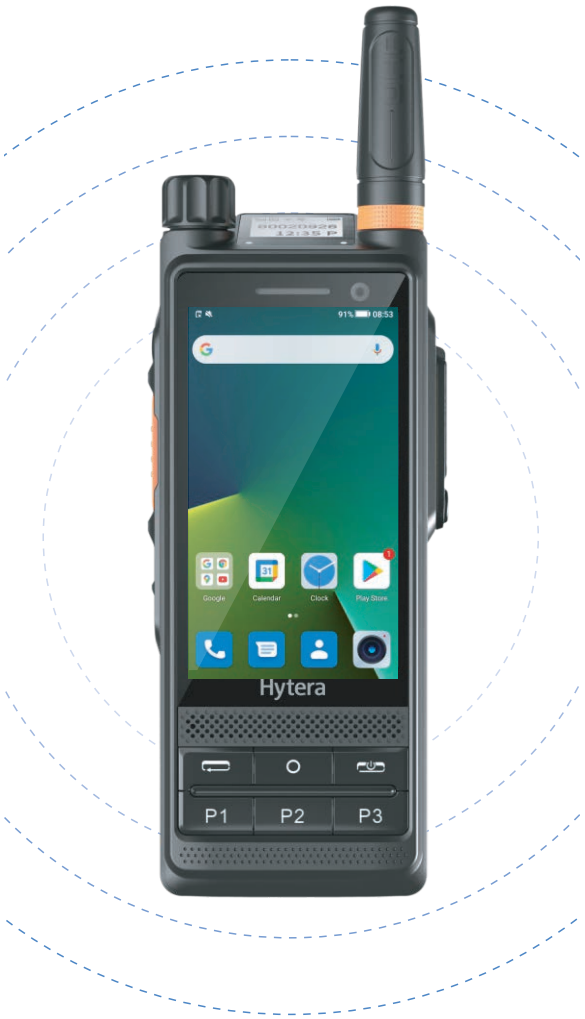
www.hytera-europe.com

Overview

The Mission Critical Services (MCS) includes a suite of standards defined by 3GPP for public safety.This LTE-empowered MCS solution offers Push-to-Talk (PTT) users with Mission Critical Push-to-Talk (MCPTT), Mission Critical Video (MCVideo), and Mission Critical Data (MCData) services for efficient and enriched communications.

The PDM680 rugged MCS radio is designed to help first responders stay connected and informed anywhere and anytime in critical situations. As a professional rugged radio, the PDM680 delivers reliable mission-critical voice communications, and mission-critical video and data services for those working in the most challenging conditions. In addition to the "on-network" operation, the PDM680 supports device-to-device (D2D) communications that allow the first responders to communicate without relying on the LTE network.

Key Features



- 3GPP eMBMS and MCPTT
- D2D Communications

- AI-based Noise Cancellation

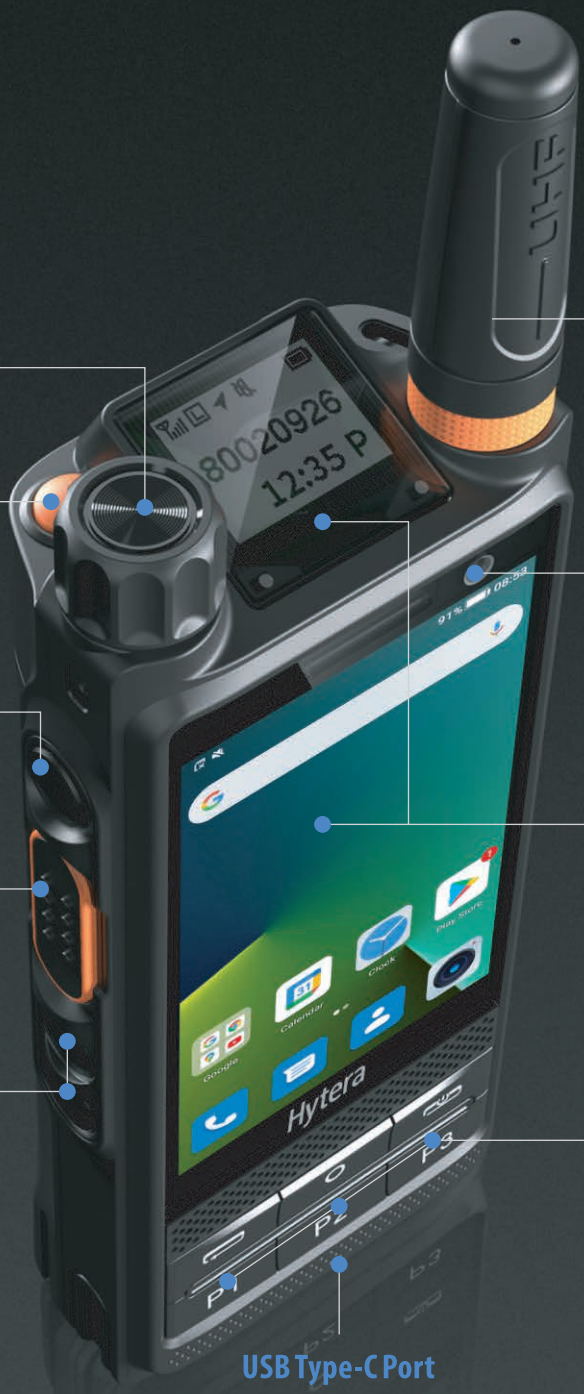
- Android Platform
- GMS Certification

- LTPS LCD Screen

- Remote Control
- Versatile Connectivity

Mission-Critical Design

The streamlined and intuitive user interface enables quick access to important information, helping you respond faster in an emergency. The distinctive layout of physical keys makes one-handed operation easier.
All these advantages of the PDM680 contribute to a more efficient mission-critical interaction.



Smart Knob
Volume/channel/ contact

Emergency Key

Smart Key
Function varies from missions

Large PTT key

2 Programmable Keys
Quick access to functions and apps

Antenna
4.5 cm long, more convenient to carry

Dual Cameras
Rear 16 MP, front 8 MP

Dual Screens
Tilt top screen, readable in multiple directions

HD main screen, visible in all lighting conditions

3 Programmable Keys
Quick access to functions and apps

USB Type-C Port

Highlights

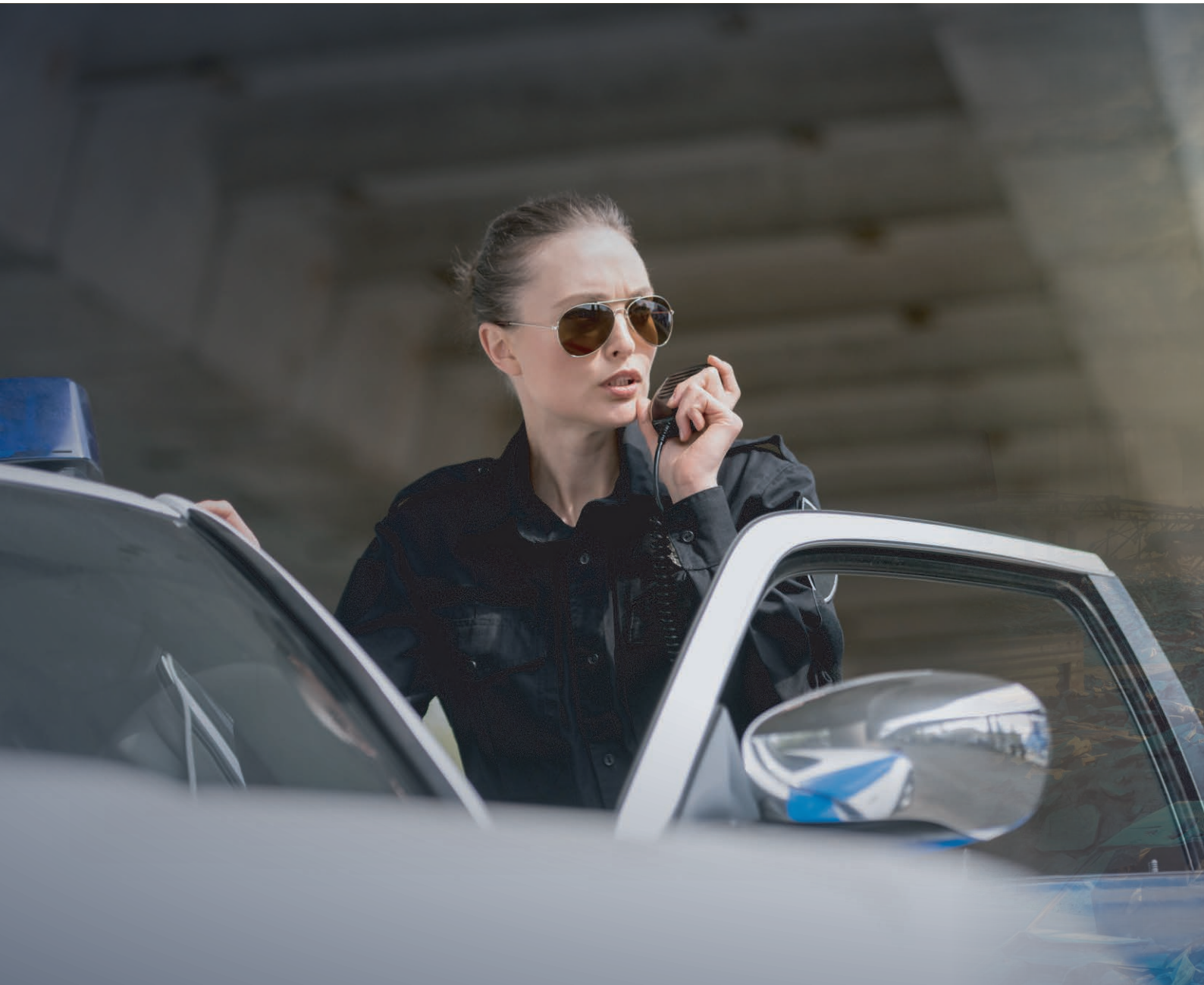
3GPP MCS

- **Mission-critical services**

Compliant with 3GPP MCS, the PDM680 delivers MCPTT, MCVideo, and MCData services to ensure mission-critical communications for public safety. By its very nature, the PDM680 provides mission-critical voice services such as group call and private call by the prominent PTT key. With the 8 MP front camera and 16 MP rear camera, the PDM680 enables real-time video communications over LTE network between the field and command centre.

- **Mission-critical application**

Hytera HyTalk MC is a 3GPP-compliant application tailored for the PDM680 to deliver MCPTT, MCVideo, and MCData services. It helps improve personal safety, situational awareness, and efficiency for those who work in the public safety, public utility, transportation, or other industries.



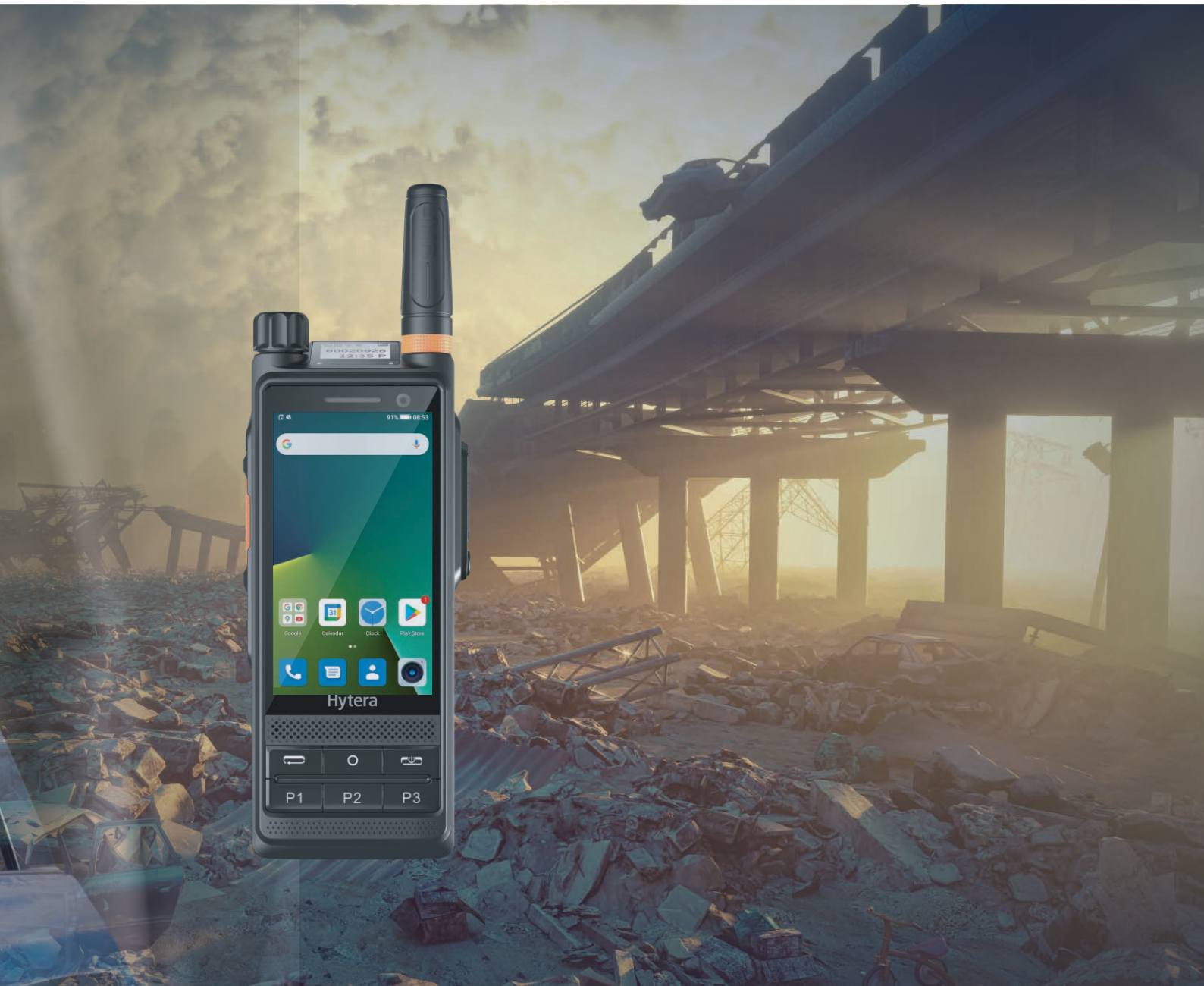
D2D Communications

- **Stay connected anywhere**

Reliable and effective communications is crucial to first responders in order to provide help when disasters occur, especially when the LTE network is down or nonexistent. Built with Digital Mobile Radio (DMR) technology, the PDM680 can provide D2D communications where LTE connectivity is not available. This ensures the stable PTT services over a long distance.

Moreover, the PDM680 features MCS-DMR Simulcall to call both MCS devices and DMR radios at the same time. It helps the commander save time and effort to initiate both the MCS call and the DMR call simultaneously at the press of the PTT key.

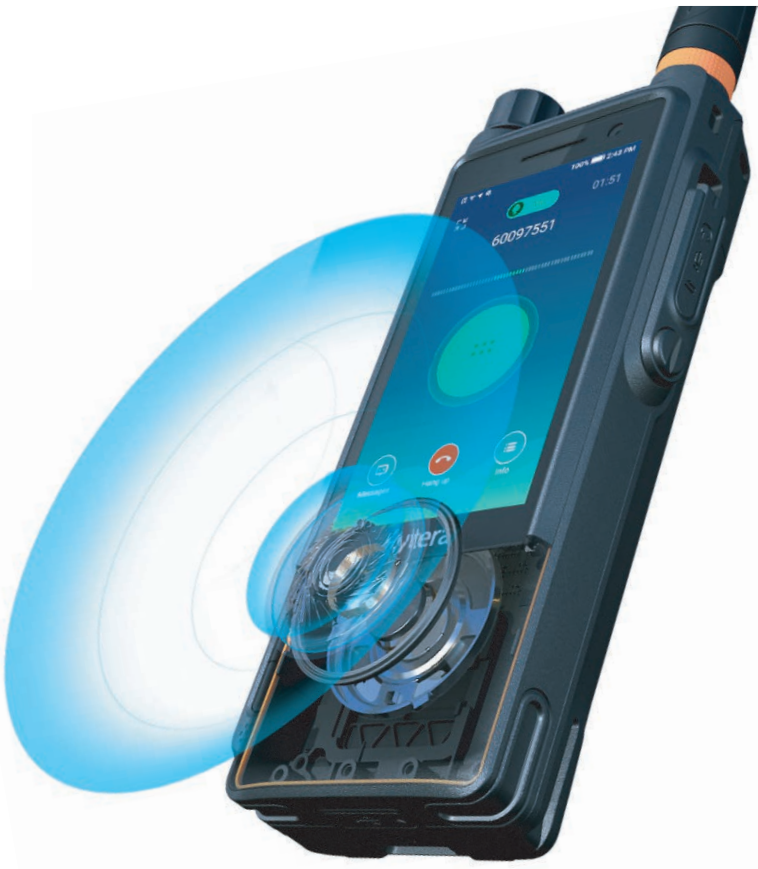
*The PDM680 is on par with traditional DMR radios in terms of D2D communication distance. The actual distance is subject to the terrain and environmental conditions.



Audio and Ruggedness

• Louder and clearer

On a crowded street, hearing each word clearly on the radio is vital for police officers to get their jobs done safely and efficiently. Designed with their unique needs in mind, the PDM680 is engineered for audio excellence. The audio can reach a maximum SPL of 118 dB. Even at 30 cm away from the sound source, the loudness level is as high as 98 dBPhon. Moreover, AI-based noise cancellation, echo cancellation, and wind noise cancellation technologies minimize the background noise and boost the audio clarity.



• Ready for the toughest conditions

The PDM680 is a truly rugged radio. It meets IP68, MIL-STD-81 OH, and IEC ESD level-4, surviving almost any challenges from water, dust, dirt, 1.5-meter drops, strong shocks and vibrations to extreme temperatures and humidity. The industrial missioncritical touchscreen can be easily used with wet fingers or gloves.

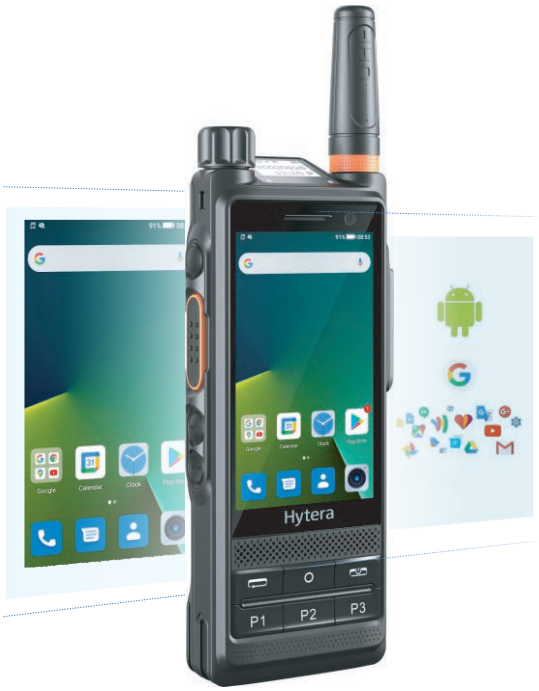
Android Platform and Connections

- **Richer apps, higher efficiency**

With Android and open API, the PDM680 is compatible with tremendous third-party applications to better suit your needs for enhanced productivity. From GPS navigation to web surfing and ticketing, work can be done much more easily. Thanks to the 3.6-inch LTPS LCD screen, you can interact with applications easily and intuitively in any lighting conditions without missing any mission-critical details.

- **More connections for easier use**

The PDM680 is equipped with a 13-Pin connector for reliable connection to heavy-duty accessories, as well as a USBType-C port for charging and data transfer. And the radio supports WLAN, BT, and NFC, making connection to other wireless devices much easier and simpler.



Security

360° protection

Adopting multiple defensive mechanisms, the PDM680 safeguards your mission-critical system, device, data and voice. Signature authentication ensures the system security. All data at rest is full-disk encrypted, while the data and voice in transit are protected by E2EE. The industry-leading remote management makes the radio in your complete control, from real-time monitoring to data erasing and more.

Accessories

- **Standard**

Li-polymer Battery (2,400 mAh)	Power Adapter	Belt Clip	Main Screen Protector
Charger	Antenna	Nylon Strap	Color Ring

- **Optional**


Covert Camera


BT Earpiece with Dual-PTT


BT Earpiece


Wireless PTT


Wireless Remote Speaker Microphone


Waterproof Remote Speaker Microphone


Receive-only Earbud


Receive-only swivel


Earphone


PTT & MIC Cable


Smart Battery (4,000 mAh)


Charger (2 A)


Multi-unit Charger


Leather Strap

Specifications

General	
Dimensions (H x W x D)	145.7 mm x 60 mm x 29.1 mm (with standard battery)
	145.7 mm x 60 mm x 33.1 mm (with high capacity battery)
Weight	328±5 g (with standard battery and antenna)
	373±5 g (with high capacity battery and antenna)
Display	**Main screen** Size: 3.6 inches Resolution: 1280 x 720 Colour depth: 24 bits Capacitive touch technology, usable with gloves and capacitive stylus **Top screen** Size: 0.92 inch Resolution: 128 x 88 Colour: black and white
Camera	**Front camera** 8 MP, fixed focus **Rear camera** 16 MP, auto focus
Battery	Standard: 2,400 mAh, Li-polymer battery, 7.7 V (rated) Optional: 4,000 mAh, 7.7 V (rated)
Memory	RAM: 4 GB ROM: 64 GB eMMC Expandable to 256 GB with Micro SD card
Card Slot	2 Nano SIM card 1 Micro SD card 1 encryption card
AP Processor	8-core, 2.2 GHz
Operating System	Android 10
Google Certification	Google Mobile Services
Audio Output	Output power: 2 W
	Audio distortion: ≤ 3%
	Audio loudness: 118 dBSPL, 98 dBPhon
Port	USB Type-C port 13-Pin accessory connector
Video Format	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)
Video Quality	Front camera: 1080P HD, 30 fps Rear camera: 4K; 1080P HD, 30 fps
Image Format	JPEG(.jpg), GIF(.gif), PNG(.png), BMP(.bmp)

General	
Audio File Format	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(.rttl, .rtx), OTA(.ota), iMelody(.imy), Ogg(.ogg), Matroska(.mka), QCELP(.qcp), RealMedia(.ra), Windows Media(.wma), AC3(.ac3)
Sensor	Proximity sensor Ambient light sensor 6-axis sensor (accelerometer + gyroscope) Magnetometer Accelerometer
Connectivity	
DMR	Frequency range: 340–470 MHz TX power: 1 W/4 W
Broadband	TDD-LTE: B34/B38/B39/B40/B41 FDD-LTE: B1/B2/B3/B4/B5/B7/B8/B20/B26/B28 W-CDMA: B1/B2/B4/B5/B8 TD-SCDMA: B34/B39 CDMA: CDMA 1xRTT BC0, CDMA2000 1xEV-DO BC0 GSM: 850/900/1800/1900 MHz
LTE	3GPP LTE Rel-12
WLAN	IEEE 802.11 a/b/g/n/ac, 2.4 GHz/5 GHz
BT	V5.0 BDR/EDR/BLE
NFC (Optional)	13.56 MHz
Positioning	GPS/BDS/GLONASS/Galileo/QZSS/A-GPS/NLP In open areas: TTFF (cold start) < 60s TTFF (hot start) < 10s Horizontal accuracy ≤ 2 m (> 5 SVs, –130 dBm, CEP for 50%)
Environment	
Water and Dust Resistance	IEC 60529 IP68
Shock and Vibration Resistance	MIL-STD-810 H
ESD	IEC 61000-4-2 (level 4), ±8 kV (contact), ±15 kV (air)
Operating Temperature	–20°C to +60°C
Storage Temperature	–30°C to +80°C
Humidity	Per MIL-STD 810H, ≤ +65°C, 95%RH

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