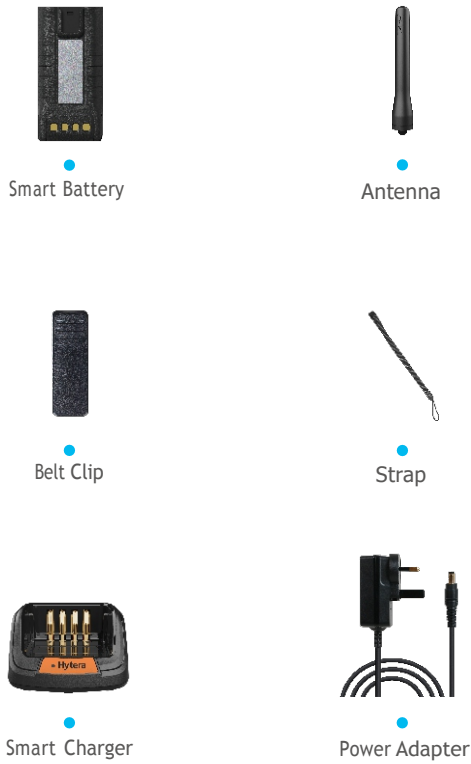


SPECIFICATIONS

General	
Frequency Range	Fv:380-475MHz; F5:806-870MHz
Dimensions (H x W x D)	125 x 55 x 31 mm
Weight (with battery and antenna)	285 g
Battery	2000 mAh(standard)
	3000 mAh(optional)
Battery Life (on the 5-5-90 duty cycle)	22h(with 2000mAh battery)
	33h(with 3000mAh battery)
Operating Voltage	7.7 V
User Interface	
Display	2.4 inch transfective TFT LCD, 320*240 pixels
Talk group-TMO	12000
Talk group-DMO	6000
Phone Book	5000
Inbox	
Outbox	≤550 entries
Drafts	
Talk group Folders-TMO	200
Talk group Folders-DMO	50
Status Messages	200
RF	
RF Channel Bandwidth	25 kHz
RF Power Output*	3 W
RF Power Level Accuracy	± 2 dB
RF Power Control	2.5 dB per step
Receiver Class	ETSI EN 392-2/396-2 Class A and Class B
RX Static Sensitivity	≤-118 dBm (typical: -120 dBm) (for 380-475 MHz)
	≤-117 dBm (typical: -119 dBm) (for 806-870 MHz)
RX Dynamic Sensitivity	-108 dBm (Min); -110 dBm (Typical)
Audio	
Audio Power Output	2 W (Peak 3 W)
Max Loudness	100 Phons (Standard Profile) & 106 Phons (Outdoor Profile)
Location Services	
Constellations	BeiDou: B1I/B2a
	GLONASS: L1
	Galileo: E1/E5a
Tracking Sensitivity	≤-165 dBm
	≤-149 dBm
Acquisition Sensitivity	<1.0 m (95% Probable, -130 dBm)
Accuracy	<35 seconds
Cold Start (Time to First Fix)	<1 second
Environment	
Operating Temperature	-20°C to + 60°C
	-30°C to + 70°C (Performance Limited)
	-40°C to + 85°C
Storage Temperature	IP65, IP66, IP67, IP68 (2 m, 4 h)
Water and Dust Protection	MIL-STD-810H
	ETSI EN 300 019
Drop, Shock & Vibration	GJB150A
Connectivity	
NFC Tag Type	ISO/IEC 15693
USB Type-C Port	USB2.0

*: 3W license control in 806-870MHz

STANDARD ACCESSORIES



VERSION

	Standard	Advanced
3W TX Power*	Y	Y
USB Type-C Port	Y	Y
Dual-frequency Positioning	Y	Y
Voice Command	-	Y
WLAN	-	Y
SIM Card E2EE*	-	Optional



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TETRA RADIO EVOLVED

PT590 Ready for Mission
EG Simple to Use



In the critical moment, every second counts. Your personnel in the field rely on effective voice communications to connect and collaborate instantly and easily to keep safe and get things done. The PT590EG Mission Critical TETRA Portable Radio makes your personnel always ready for the next moment.



The PT590EG Mission Critical TETRA Portable Radio inherited all the functionalities from Hytera's first-generation TETRA radio and added lots of new features after painstaking research. With innovative audio technology, best-in-class RF performance, and dual-frequency GNSS, the PT590EG has better voice quality, wider communication coverage, and more accurate positioning, ensuring mission-critical communications at all times.

This rugged TETRA radio also ensures incredible ease of use for your workers in the field—thanks to its ergonomic design, intuitive display, one-fits-all USB Type-C port, remote radio management capability, interoperability



In a crowded street, busy port, or factory in full swing, the PT590EG keeps your personnel connected with loud and clear audio to ensure perfect collaboration.

MISSION READY

SUPERIOR AUDIO QUALITY

Super Loudness

106 phons
Loudness

To make your personnel hear and be heard with the right and complete content in highly noisy environments, the PT590EG is equipped with a powerful speaker which has an innovative acoustic cavity design and large acoustic apertures for 106 phons of audio loudness.

Ultra Clarity

30 dB 20 ms
Noise Cancellation Fast Separation

The PT590EG adopts the most advanced AI-based noise cancellation algorithm and gets machine learning behavior. After learning and training thousands of noise samples, this radio has extremely high noise elimination effect (up to 30 dB) in both steady and unstable environments.

To make your personnel get the right commands from the first word, the PT590EG can separate the human voice from the noise just within 20 ms. This ensures your personnel to get every word even in a very short call.

High Adjustment

30 cm
Howling Suppression

When officers or workers stay in team activities, they often communicate on the move. Using advanced howling suppression technology, the PT590EG suppresses the feedback howling effectively when two radios are too close. No annoying screeching feedback even when two radios are 30 cm away from each other.





Extended Radio Range

3 W
Continuous Transmission

-120 dBm
Receiving Sensitivity

The PT590EG is trustworthy when your personnel take it and go out for work. With sustained and stable Class 3 (3 W) transmitting power and industry-leading receiving sensitivity (-120 dBm), the PT590EG provides stable communications without losing any information even at a distance or in the edge area. Your personnel always keep connected anywhere and anytime.

Enhanced Signal Correction Capability

Anti-multipath
Algorithm

Adopting the anti-multipath interference algorithm, the PT590EG receives and transmits voice smoothly and stably, regardless of the complex metallic environment such as a port and chemical plant.



Positioning is crucial for personal safety, especially in emergency situations. The PT590EG ultra-high precision positioning helps the command center or teammate find workers as soon as possible and handle emergencies in a safer and more efficient manner.



ACCURATE POSITIONING

4 GNSS
7 Frequencies
1 m Location Accuracy

Positioning and location sharing can improve response times and increase safety. The PT590EG applies dual-frequency positioning technology unprecedentedly. By receiving and processing satellite signals in two frequency bands at the same time, it effectively compensates and corrects the signal distortion that occurs after the satellite signal passes through the atmosphere. As a result, the PT590EG positioning accuracy is improved to an industry-leading level—within 1 meter.



LONG-LASTING PARTNER

22 h Battery Life
Type-C Fast Charging

The 2,000 mAh Li-polymer battery, together with the innovative low power consumption technology, can last up to 22 hours on the 5-5-90 duty cycle.

In addition to the traditional charging contacts, the PT590EG has an extra USB Type-C port which allows the radio to be charged with mains power or even the power bank anywhere and anytime. The 18 W fast charging can fully charge the PT590EG in only 1.5 hours. Even just a 30-minute quick charge can give the PT590EG at least 10 hours power for unexpected long shift.



RUGGED FOR THE REAL WORLD

IP68 2m, 4h
-30 °C Low Temperature

Combining purpose-built design and stringent testing, the durable PT590EG can withstand the elements of field work in the real world. It meets the harshest test standard MIL-STD-810 H to survive 1.5-meter drops. With the optional low-temperature battery, the extreme temperature ranges from -30 °C to 70 °C*. The PT590EG is IP65, IP66, IP67, and IP68 (2m, 4h) rated.

The PT590EG is equipped with an anti-magnetic speaker which prevents the accumulation of magnetic metal dust, and can effectively stabilize the communication quality.

*Performance limited at extreme temperatures.





EASY TO USE



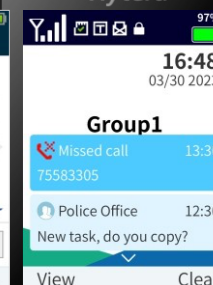
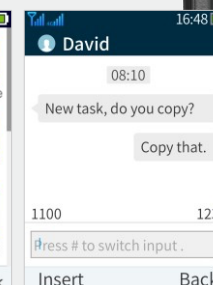
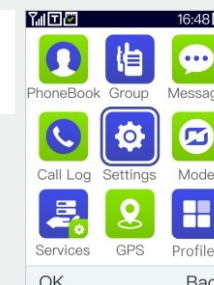
VIEW MORE, DO MORE

2.4-inch
Color Screen

9-grid
Menu

Conversational
SMS Interface

The 2.4-inch LCD screen of the PT590EG is semi-transparent and semi-reflective, ensuring clear readability in direct sunlight and reducing eye strain. The PT590EG abandons the traditional list-style menu and has a new friendly UI design. The 9-grid menu design helps your personnel get immediate access to the function and the shallow menu structures design reduces the menu level and operation steps, thus ensuring your personnel to access the settings quickly and accurately. Moreover, the conversational short message interface allows your personnel to view all the history messages at one time.



LIGHT FOR ALL-DAY COMFORT

285 g
Weight

31 mm
Depth

Delightfully light and surprisingly slim, this radio is just 285 g in weight and 31 mm in depth. It is easy to carry all day long and comfortable to operate with one hand. The anti-slip case made of plastic and liquid silicone rubber allows the PT590EG to be securely held in wet environments.

Moreover, keys are re-engineered for better user experiences. The large, textured PTT button and the independent four navigation keys are more finger-friendly. The three programmable buttons can be optionally set as quick access to frequently used features with a single press.



PROFESSIONAL USB TYPE-C PORT

One-fits-all
Function

Reliability
Nanostructure Coating

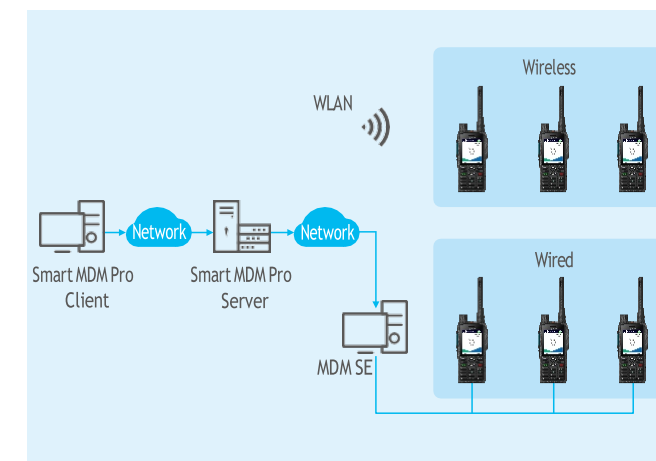
The PT590EG is the TETRA radio outfitted with a USB Type-C port. Besides the charging function, this USB Type-C port provides programming and upgrading functions as well. This unique design brings you unprecedented convenience especially when no programming cable is available at hand. To ensure the reliability of this port, advanced nanostructure coating technology is adopted to protect the internal structure from corrosion and oxidation. This helps ensure a stable connection after a long time of use.



MINIMIZE DOWNTIME, MAXIMIZE EFFICIENCY

45%
Faster in Programming

With Hytera Smart MDM software and wireless connectivity, the PT590EG with WLAN feature activated can be remotely programmed anywhere and anytime. No huge time and effort are put into the radio recollection and process anymore. The PT590EG just stays on the side of your personnel and ensures non-disrupted operations in the field. The Smart MDM can also provide other high-efficiency capabilities such as batch programming, log diagnosis, and device management, helping reduce cost and complexity in management and maintenance.



CONTROL YOUR RADIO ON VOICE

Wake-up
by Voice

>20
Voice Commands in English

In an emergency or some critical moment, your personnel need to initiate a call but fail to reach the radio nearby or just have their hands occupied. Is it still possible for them to make a call successfully? The PT590EG says yes. Your personnel can still control and operate the PT590EG by their voice.

We introduced the function of the voice command in the PT590EG for the first time. This function supports group call, talk group change, and function switch like turning on location service. When it is impossible to make a call by hand, the PT590EG voice command just brings extra hope for information transfer. The most important is, this may bring hope to live in the extreme moment.

