

Caltta<sup>®</sup>

PH600

PH660



# PH600/PH660 DMR Digital Radio

**Rugged and Compact For Professional Users  
to Stay Connected**



Cost-effective and feature-rich



Long battery life



Loud and clear sound



High level protection



## PH600/PH660 KEY FEATURES

PH6XX series integrates a professional appearance, perfect PTT function design and professional manufacturing technology. Making the user's work easier and the organization's operation more efficient. It is the first choice for PTT communication.



### Professional appearance and light weight

The height of PH600/PH660 is only 100mm, which makes it very cute. Based on dual coloured shell design and classic layout, PH600/PH660 looks compact but full of strength. The total weight is less than 290g, and user can carry it easily.



### Loud and clear voice quality

With a 36mm front speaker and high efficiency amplifier, PH600/PH660 can provide loud and clear voice, which is more than 90dB, and can help user capture every key voice command in the noisy environment.



### Friendly user interface and easy to use

PH600/PH660 has a classic compact radio layout, so the user can operate it skilfully. With voice prompt, the user can grasp status and information easily.



### Rich features, facilitate daily work

In addition to basic DMR voice and data services, PH600/PH660 can also support many optional features, such as GPS, voice recording, advanced encryption, ECS (Enhanced



### Long battery life makes work flexible

Equipped with a 2600mAh standard battery, PH600/PH660 can work for 20 hours under a 5-5-90 duty cycle in DMR conventional mode. A long battery life can help user to focus on their essential job.



### Solid and reliable quality

PH600/PH660 meets IP68 and Mil-STD 810G certifications. It can be used in tough and harsh environments as a professional and reliable communication tool.

# Function List

## Voice Services

Private Call, Group Call and All Call, Call Alert, Priority Interrupt, Background Call

## Working Mode

Digital Conventional, Analog Conventional, ECS (Enhanced Conventional System)

## Connections

Bluetooth 2.1+EDR/4.0, GPS/BDS Positioning System, Vibration, Real Time Clock, Open API.

## Data Services

Text Message, Status Message, Location

## Supplementary Services

Roaming, Programmable Buttons, One Click Upgrade.

## Security Protection

Emergency Alarm, Man Down, Lone Worker, Registration Authentication, End-to-End Encryption, Remote Stun/Revive

# Application Scenarios

PH600/PH660 is a cost-effective DMR radio with compact design, friendly UI, large battery, excellent sound quality, making it deployable in all commercial industries.



Port & Airport



Logistics



City Management



Utilities

# Specifications

General	
Digital Protocol	ETSI TS 102 361-1,-2,-3
Frequency	UHF1: 400-470MHz; VHF: 136-174MHz
Channel Capacity	32 (PH600) / 1024(PH660)
Zone Capacity	2 (PH600) / 64(PH660)
Channel Spacing	12.5kHz/20KHz/25KHz
Frequency Stability	±0.5ppm
Operating Voltage	7.4V
Battery Capacity	2600mAh
Battery Life(5:5:90)	16 hours (Analog) / 20 hours (Digital)
Size (HxWxD)	100x54.5x36.5mm (Without Antenna)
Weight	About 290g (PH660) / 270g (PH600)
Screen	1.74" Transflective LCD, 240x180 (PH660)
Vocoder	AMBE++
Bluetooth	BT2.1+EDR / 4.0 (optional)
Location	GPS / Glonass (optional)
Man down / Vibration	Support
Real-time Clock	Support (PH660)
Encryption	Support SW and HW Encryption (Optional)

GPS	
Accuracy specs are for long-term tracking (95th percentile values>5satellites visible at nominal -130 dBm signal strength)	
TTF (Time To First Fix) - Cold Start	<60s
TTF (Time To First Fix) - Hot Start	<10s
Horizontal Accuracy	<10m

Environmental	
Operating Temperature	-30°C ~ +60°C
Storage Temperature	-40°C ~ +85°C
ESD	IEC 61000-4-2 (level 4) ±8kV (Contact)±15kV(Air)
Dust and Water Resistance	IP68
Reliability	MIL-STD-810 G

Transmitter	
Power Output	1W/4W (UHF1), 1W/5W (VHF)
FM Modulation	12.5KHz: 11K0F3E / 20KHz: 14K0F3E / 25KHz: 16K0F3E
4FSK Digital Modulation	12.5KHz Data Only: 7K60F1D&7K60FXD
	12.5KHz Voice Only: 7K60F1E&7K60FXE
	12.5KHz Voice And Data: 7K60F1W
Conducted/Radiated Emission	-36dBm ≤1GHz ; -30dBm >1GHz
Modulation Limiting	±2.5KHz @12.5KHz /±4KHz @20KHz /±5.0KHz @25KHz
FM Hum and Noise	-40 dB@12.5KHz /-43dB@20KHz /-45 dB@25KHz
Adjacent Channel Power	60 dB@12.5KHz /70 dB @20/25KHz
Audio Distortion @ Rated Audio	≤3% (Typical)
Audio Response	+1~-3dB(TIA603D)

Receiver	
Sensitivity(Analog)	0.22uV(12dB SINAD)
Sensitivity(Digital)	0.22uV (5% BER)
Adjacent Channel Selectivity	60 dB@12.5KHz/70 dB@20/25KHz (TIA603A) -1T
	45dB@12.5KHz /70 dB@20/25KHz (TIA603D) -2T
	60dB@12.5KHz /70 dB@20/25KHz ( ETSI )
Intermodulation	70 dB (TIA603D) / 65 dB (ETSI)
Spurious Rejection	70 dB (TIA603D) / 70 dB (ETSI)
Blocking or Desensitization	80dB(TIA603D) / 84dB(ETSI)
Co-channel Rejection	-12~0 dB @12.5KHz/-8~0 dB @20/25KHz
Hum and Noise	-40 dB@12.5KHz /-43 dB@20KHz /-45 dB@25KHz
Rated Audio Power	0.5W
Max Audio Power	2.0W
Audio Distortion @ Rated Audio	≤3% (Typical)
Audio Response	+1~-3dB (TIA603D)
Conducted Spurious Emission	-57 dBm (TIA603D)

## Standard Accessories



## Optional Accessories

