

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

PH600/PH660 integrates professional appearance layout, perfect PTT function design and professional manufacturing technology. It makes the user's work easier, 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-colored 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 skillfully. With voice prompt, the user can grasp status and informations 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 Conventional System), optional board and so on.



### 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)

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)

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

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)

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

## Standard Accessories

		
Antenna	Belt Clip	Desktop Charger
		
Power Adapter	2600mAh Li-ion Battery	



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General Disclaimer:  
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