

**WTC**  
WONDER TECH



## WP680/WP685 DMR Portable Radio

Lightweight and robust the WP680/WP685 is an open-standard DMR radio capable of providing superior quality voice communication in an ergonomic design approved to IP67 and MIL-STD 810.

With a long-lasting battery is the ideal solution for organizations looking for a cost-effective clear digital communication with all-round digital functions, and remarkable quality to increase your management efficiency and enable you to be responsive to emergent situations.

## Features

- **Robust and Stylish**

WP680/WP685 is compact and light weighted, and it is easy to carry and wear. The unique aluminum-alloy housing enables better wear-resisting and better heat dissipation. Compliant to MIL-STD-810 C/D/E/F/G and IP67 standards, WP680/WP685 delivers excellent performance in demanding environment.



- **Clear and Loud Voice**

Equipped with an 2W optimized powerful loudspeaker, WP680/WP685 delivers clear and loud voice even in noisy environment. AI-based noise cancellation technology decreases background noise and howling by 30dB, ensuring clear and smooth voice calls.



- **Easy to Operate**

Simple to use, user-friendly and intelligent to deliver better user experience. 1.8-inch color LCD screen, users can check battery status, field strength indication, and caller information at any time according to actual working scenarios. 360° rotary channel knob, convenient channel switching, programmable buttons and keys make radio operation easy and swift.

- **Multi-Mode Operation**

It supports analog conventional, digital conventional, MPT trunking, and DMR Tier III trunking, facilitating smooth analog-to-digital transition. Multiple advanced analog signaling, including MDC1200, DTMF, 2-Tone and 5-Tone, provides higher expansion capacity in current communication systems.

- **Secure Communication**

Provides basic and advanced encryption capability, including ARC4, DES, and AES256 bit encryption to further enhance the communication security.



- **Long Battery Life**

WP680/WP685 with standard 2000mAh battery can work up to 13-15 hours. It has 2500mAh larger battery as optional.



- **Enhanced Safety**

WP680/WP685 is designed to enhance safety in your organization with rapid response by a single press on the alarm. The built-in man-down and lone worker functions protect your personnel at the workplace.

- **Multimedia Service**

WP680/WP685 supports rich voice and data service, including all kinds of voice call, text and status message, GPS location, VOX, emergency call, priority call and all call.

- **Enhanced Service**

In addition to conventional communications service, WP680/WP685 provides richer enhanced service, including Tx interrupt, roaming, dual-slot pseudo trunking, kill, stun, retrieve, remote monitoring, radio check, VOX, vibration, real time clock, scan etc.

# 01

Multi-function antenna, capable of GPS/BDS positioning



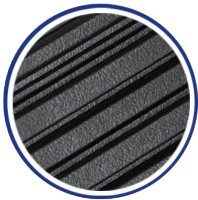
# 07

Emergency Alarm Key



# 02

2W speaker for clear and loud voice | Superior Audio Quality Empower by 2W Speaker



# 06

360° Rotary Channel Control



# 03

Comfortable touch with large keypad keys | User Friendly Keypad Design



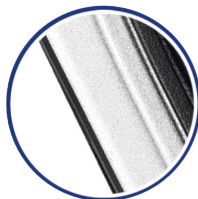
# 05

1.8" TFT color LCD | Intuitive UI built on 1.8" TFT Color Display



# 04

Concise Aluminum-alloy Design



# Specifications

## General

Frequency Range	UHF: 400-470MHz; VHF: 136-174MHz
Channel Capacity	1024
Zone Capacity	248
Channel Spacing	12.5kHz/20kHz/25kHz
Operating Voltage	7.5V DC±20%
Battery	2000mAh(Standard), 2650mAh(Optional)
Battery Life (2000mAh) (5-5-90 Duty Cycle, High TX Power)	Analog:13.5 hours@2000mAh Digital: 15.5 hours @2000mAh
Frequency Stability	±0.5 ppm
Antenna Impedance	50Ω
Dimensions(H-W-D) (with standard battery, without antenna)	123mmx55mmx33mm(2000mAh)
Weight(with standard battery)	353g(2000mAh)
LCD Display	1.8inch, 5 rows(Only DP680)

## Receiver

Sensitivity Analog	0.22μV(12dB SINAD)
Sensitivity Digita	0.22μV/BER5%
Selectivity TIA-603 ETSII	60dB@12.5kHz, 70dB@20/25kHz(TIA-603) 60dB@12.5kHz, 70dB@20/25kHz(ETSI)
Intermodulation	70dB@12.5kHz/25kHz(TIA-603) 65dB@12.5kHz/25kHz(ETSI)
Spurious Response Rejection TIA-603 ETSI	70dB@12.5/20/25kHz(TIA-603) 70dB@12.5/20/25kHz(ETSI)
Hum and Noise	40dB@12.5KHz, 45dB@20/25KHz
Audio Power Output	2W
Rated Audio Distortion	≤3%(typical)
Audio Response	+1~-3dB
Conducted Spurious Emission	-57dBm@ < 1GHz,-47dBm@1GHz

## Transmitter

RF Power Output	1W/4W(UHF), 1W/5W(VHF)
FM Modulation	11K0F3E@12.5kHz; 14K0F3E@20kHz; 16K0F3E@25kHz
4FSK Digital Modulation	12.5kHz Data: 7K60F1D&7K60FXD, 12.5kHz Voice: 7K60F1E&7K60FXE Combination of 12.5kHz Voice and Data: 7K60F1W
Modulation Limiting	±2.5kHz@12.5kHz, ±4.0kHz@20kHz, ±5.0kHz@25kHz
FM Hum & Noise	40dB@12.5kHz, 45dB@20/25kHz
Adjacent Channel Power	60dB@12.5kHz, 70dB@20/25kHz
Audio Response	+1~-3dB
Audio Distortion	≤3%
Digital Vocoder Type	AMBE+2™
Digital Protocol	ETSI-TS102 361-1,-2,-3 ,-4

## Environmental

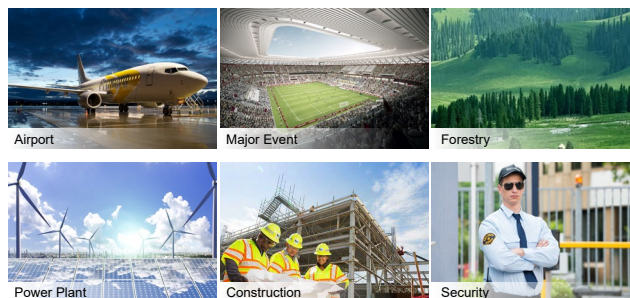
Operating Temperature	-30°C~ +60°C
Storage Temperature	-40°C ~ + 85°C
ESD	IEC61000-4-2(Level4) ±4kV(Contact) ±8kV(air)
American Military Standard	MIL-STD-810-C/D/E/F/G
Dust & Water Protection	IP67 Standard
Humidity	Per MIL-STD-810 C/D/E/F/G Standard
Shock & Vibration	Per MIL-STD-810 C/D/E/F/G Standard

## GPS

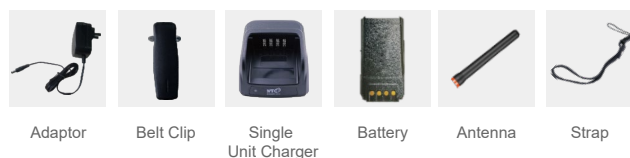
Accuracy specs are for long-term tracking (5 satellites visible at nominal -130dBm)	
TTFF(Time To First Fix) Cold Start	<1 minute
TTFF(Time To First Fix) Hot Start	10 seconds
Horizontal Accuracy	10m

All specifications are tested according to applicable standards, and subject to change without notice due to continuous development.

## Scenarios



## Standard Accessories:



## Optional Accessories:

