# Specifications

## General

| | |
|---|---|
| Explosion-proof Levels | CQST: Ex ib IIB T3 Gb / Ex ibD 21 T150°C |
| Frequency | UHF1: 400-470MHz |
| Channel Capacity | 1024 |
| Zone Capacity | 64 (Maximum 32 groups per area) |
| Channel Spacing | 12.5kHz/20KHz/25KHz |
| Frequency Stability | ±0.5ppm |
| Operating Voltage | 7.4V |
| Battery Capacity | 2200mAh (Standard) |
| Battery Life | Analog: 14 hrs<br>Digital: 18 hrs<br>(5:5:90 duty cycle, highpower Tx) |
| Size (H×W×D) | 126*54.5*32mm (without Antenna) |
| Weight | About 290g (with the Antenna and Battery) |
| Screen | 2.0" Transflective LCD, 240×320, 6 Lines |
| Vocoder | AMBE++Vocoder |
| VOX | Support |
| Man Down | Support |
| Location | Beidou/GPS |
| Encryption | Support basic software encryption, optionally high - level software encryption or TF card hardware encryption |

## Environmental

| | |
|---|---|
| Operating Temperature | -20℃ ~ +60℃ |
| Storage Temperature | -40℃ ~ +85℃ |
| ESD | IEC 61000-4-2 (level 4) ±8kV (Contact) ±15kV (Air) |
| Dust and Water Resistance | IP68 |
| Reliability | GJB 150A-2009 & MIL-STD-810 G |

## GPS

Accuracy specs are for long-term tracking( 95th percentile values > 5 satellites visible at nominal - 130 dBm signal strength )

| | |
|---|---|
| TTFF (Time To First Fix) - Cold Start | <60 s |
| TTFF (Time To First Fix) - Hot Start | <10 s |
| Horizontal Accuracy | <10 m |

## Receiver

| | |
|---|---|
| Sensitivity (Analog) | 0.18uV(12dB SINAD) |
| Sensitivity (Digital) | 0.18uV (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) |

## Transmitter

| | |
|---|---|
| Low Power Output | 1 W |
| High Power Output | ≤ 3.5W (UHF1) |
| 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 | ≤3% (Typical) |
| Audio Response | +1～-3dB(TIA603D) |

Remarks: The above specifications are in accordance with the applicable standard test, due to the continuous development of technology, in the future data may change without notice.

# Explosion-proof Digital Radio

## Safer and Lighter

MODEL PH690Ex

www.caltta.com

# Features

## Clear and Loud

2W high-power loudspeaker, combined with excellent sound.

chamber and noise-reduction design, brings a clear and loud voice with no fear of noisy environments.
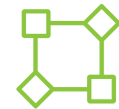
## High Sensitivity, Longer Communication Distance

The Rx sensitivity reaches 0.18uV, providing longer communication distance and ensuring efficient transmission of every call and message over a longer range.

## IP68 Protection, Military Standard Quality

With IP68-level protection, it is not afraid of rain, water immersion and dust. It has passed the certification of Standard MIL-STD-810G.

## Digital and Analog Compatible, Extended ECS

It suppo rts DMR digital and compatible with analog. Supports digital DMO/Repeater dual ti me slots and can be expanded to ECS. Automatic cross-st ation roaming provides uninterrupted call.

## High-capacity, Long-lasting Battery Life

Equipped with a 2200mAh explosion-proof high-capacity battery, can work for 18 hours under a 5-5-90 duty cycle in digital mode. A long battery life facilitates user's focus on essential job.

## Rich Configuration, Complete Services

Support VOX to free your hands, making call more convenient, also support coordination with the dispatching system, achieving more efficient command and dispatch.

## Multiple Security Protection

It provides functions su ch as lone worker, emergency alarm, and man-down alarm to protect users' operation security. Combining with GPS/BDS positioning system, it provides solid guarantee for users' safe operation.

## IIB T3 Standard Explosion-proof

Gas and dust double explosion-proof, it meets Ex ib IIB T3 Gb/Ex ibD 21 T150°C explosion-proof standard, providing more secure communication guarantee.

# Application



Energy Exploitation

Chemical Industry

Gas Station

Food Processing

# Accessories

## Standard Accessories



| Desktop Charger | 2200mAh Li-ion Battery | Power Adapter | Antenna | Belt Clip |

## Optional Accessories



| 8-way Charger | Explosion-proof Earphone | Laryngeal Explosion-proof Earphone | Half-bone Explosion-proof Earphone | Bone Conducti Explosion-proof Earphone | Explosion-proof Shoulder Microphone | Programming Cable |

# After-sales Services

With abundant technologies and a highly specialized technical team, Caltta is able to provide users with high-quality products, tailored solutions, and perfect after-sales services. Each product provided by Caltta has undergone strict factory tests, can meet communication requirements in harsh and dangerous environments, and provide users with secure, reliable, and efficient communication. Meanwhile, Caltta also provides users with professional pre-sales and after-sales technical support, comprehensive technical documentation and training services, expert remote telephone support, local after-sales service, active software maintenance, software updates, etc. All-round services bring a worry-free user experience all the way.