DP810/DP815

Intrinsically Safe

Kirisun Intrinsically Safe DMR portable radio DP810/DP815 is specially designed and engineered to operate safely in hazardous environments, providing additional safety and reliability, keeping your workers safe in the toughest environments such as flammable gases and combustible dust and other hazards.

IECEx IP68 MIL-STD

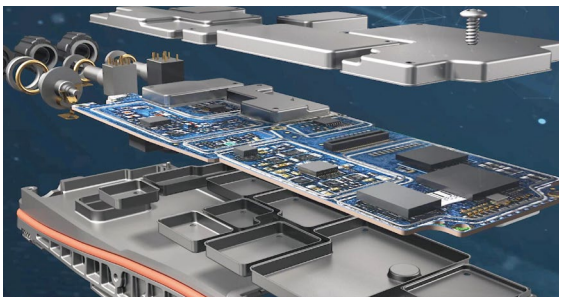
Highlights

• Ergonomic Product Design

DP810 1.8-inch LCD color display enables excellent readability even when light conditions are bright. The large keypad design allows to operate device easily. The prominent appearance of “Kirisun Explosion-Proof Bright Blue” enhances device identification for crew under hazardous environment, ensures working and manufacture safety.

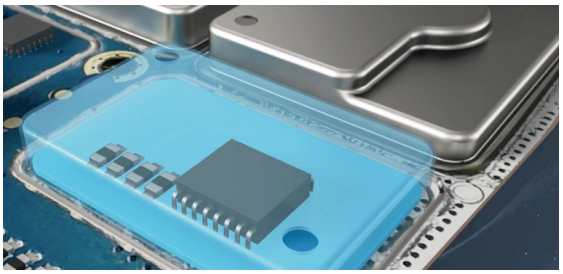
• Redundancy with Separated Component PCB Design

All protection circuit components are approved by certification authorities providing high reliability and the highest level of redundancy ensuring safety even in harshest environment.



• Silicone Encapsulating

The Silicone Encapsulating technology is applied both in DP810/DP815 main unit and battery, which efficiently separate internal circuit from liquid, dust, and harmful gas intrusion.



• Anti-skid Design

Anti-skid design keeps user to hold the device tightly.

• Electrostatic Free Design

The high performance electrostatic free material avoids spark caused by static electricity, thus protect hazardous environments from being ignited.

• Special Battery Rail Guide

The guided rail battery installation allows the battery to be locked tightly with the main radio in case of dropping that might cause a spark.

• High-Protective Desktop Charger

The desktop charger meets the strictest Intrinsically Safe design requirements, avoids external power supply destroying the battery or main unit to extend safety.

• IP68

DP810/DP815 is designed based on IP68 standards, allowing use in harsh environments.

Features

• Enhanced Safety

Kirisun DP810/DP815 ensures your safety with Built-in Man-down, GPS and Lone Worker functions, as well as a dedicated emergency button, which could be easily triggered in case of any accident, to send an alarm and initiate a voice call to a pre-programmed work fellow or group immediately.

• High-Capacity and Safe Design Battery

2100mAh battery supplied in the standard package, operates up to 16-19 hours in 5-5-90 mode. The battery circuitry is fully encapsulated to prevent damaged by high temperature and humidity.

• High Quality Audio

Extreme high volume (up to 130 decibels) ensures listening and speaking clearly in a noisy environment to satisfy well communication in heavy equipment, engines, trucks, and factories.

- **GPS Location**

  Integrated GPS enables real time tracking of your team members.

- **Encryption for Communication Security**

  It provides basic and enhanced encryption capability, including ARC4 and enhanced AES/DES up to 256 digit-encryption algorithms. It ensures secure communication on voice call and data transfer among team members.

- **Vibration**

  Vibration alert reminds reception of message and calls in noisy environment. Supports call alert vibration, incoming call vibration, incoming SMS vibration, emergency alarm vibration.

- **Transmit Interrupt**

  Enables users to interrupt another radio call to deliver critical communication exactly when and where it is needed.

- **Multiple Signaling**

  Multiple advanced analog signaling, including MDC-1200, DTMF, 2-Tone and 5-Tone, providing higher expansion capacity in current communication systems.

- **Dual-slot Pseudo Trunk**

  This feature can improve frequency efficiency by allocating free slot to a member providing you to communicate timely in emergencies.

- **DMR III and MPT Working Mode**

  It supports DMR III and MPT1327 working mode easily by license control.

- **Integrated Bluetooth**

  Built-in bluetooth for enables users to communicate with others through a bluetooth earpiece,and wireless & immediate data sharing is made possible between devices.

Certification

ATEX is the European Union directive to which all two-way radios must comply if used in potentially explosive environments. It replaces the CENELEC classification in all European Union member states and EFTA countries. ATEX widely accepted all over the world.

II 2G Ex ib IIC T4 Gb
II 2D Ex ib IIIC T120℃ Db

IECEx Scheme is the future route to global compliance certification. Its aim is to harmonize standards to allow free movement of goods by establishing a world-wide accepted standard.

Ex ib IIC T4 Gb
Ex ib IIIC T120℃ Db

ATEX Gas Protection

T4=Device surface temperature will not exceed 135°C
IIC=Protection in gas groups up to IIC
ib=Type of intrinsic safety protection
Ex=Explosion-proof equipment
2G=Device category 2 equipment (Gas)
II=Gas group II for other environments (non-mining)

ATEX Dust Protection

IP6X=Ingress protection level for Dust Totally protected against dust
T120℃=Maximum temperature of device surface
IIIC= Protection in dust groups up to IIIC
ib=Type of intrinsic safety protection
Ex=Explosion-proof equipment
2D=Device category 2 equipment (Dust)
II=Gas group II for other environments (non-mining)

Applications

Oil Exploration Industry

Power Generating Companies

Storage of Hazardous Chemicals

Fire Fighting

Pharmaceutical Factory

Refineries

Accessories


Single Unit Charger


Battery


Antenna


Belt Clip


Strap


Adapter

Specifications

General	
Frequency Range	136-174MHz,330-370MHz, 350-400MHz, 400-480MHz
Channel Capacity	1024
Zone Capacity	248
Channel Spacing	12.5kHz/20kHz/25kHz
Operating Voltage	7.4V DC±20%
Battery(Standard)	2150mAh
Battery Life (2100mAh) (5-5-90 Duty Cycle, High TX Power)	Analog: 16 Hours Digital: 19 Hours
Frequency Stability	±0.5 ppm
Antenna Impedance	50Ω
Dimensions(H·W·D) (with standard battery, without antenna)	157.5mmx56mmx41.4mm
Weight (with standard battery)	500g
LCD Display	1.8inch, 5 rows

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

Transmitter	
RF Power Output	＜2W
FM Modulation	11K0F3E@12.5kHz; 14K0F3E@20kHz; 16K0F3E@25kHz
4FSK Digital Modulation	12.5kHz Data: 7K60F1D&7K60FX-D,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

Environment Specifications	
Operating Temperature	-20℃~+50℃
Storage Temperature	-40℃~+85℃
ESD	IEC610000-4-2(Level4) ±4kV(Contact) ±8kV(air)
American Military Standard	MIL-STD-810-C/D/E/F/G/H
Dust & Water Protection	IP68 Standard
Humidity	Per MIL-STD-810 C/D/E/F/G/H Standard
Shock & Vibration	Per MIL-STD-810 C/D/E/F/G/H Standard
Anti-explosion levels (ATEX)	II 2G Ex ib IIC T4 Gb II 2D Ex ib IIIC T120℃ Db
Anti-explosion levels(IECEx)	Ex ib IIC T4 Gb Ex ib IIIC T120℃ Db

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.

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