

PDA800C - Industrial VoIP PDA



Pearl PDA800C is an industrial grade intrinsically safe wireless intelligent terminal developed specially for the coal mining industry. Integrating functions of data terminal, [GSM cell phone](#), VoWLAN (Voice over Wireless Local Area Network) cell phone, [RFID card reader](#) and card writer, [GPS location system](#) and digital photographic camera integrated, PDA800C all-roundly satisfies the needs of mining industry users in information release, task order, speech communication, data acquisition, location, scene investigation and other areas.

In response to the severe environmental conditions of mining industry, Pearl has designed the circuit board and battery of PDA800C based on the intrinsically safe circuit standard, which ensures the safe operation of the product in the gas and coal dust environment. PDA800C is also an industrial grade wireless intelligent terminal, whose design has fully considered [waterproofing](#), [dustproofing](#), [shockproof](#), [high temperature resistance](#) and [anti-static](#) needs. Its protection class reaches IP66.

With the multimode wireless communication technology adopted, PDA800C supports such wireless communication systems as GSM/GPRS, Wi-Fi/WAPI and RFID, and integrates functions of talkback, [group call and one touch SOS](#), meeting the needs of industry users with regard to real-time, reliability, high bandwidth and diversity of communication.

PDA800C is developed on Windows mobile 6.5 mainstream PDA platform. Its powerful application extension performance may provide varieties of effective wireless data solutions to industry users and enterprises.

Product Features

1. [Intrinsically safe](#) circuit, in compliance with Mining Products Safety Standards.
2. MA certified anti-explosive batteries used to ensure safety.
3. [Dustproof, shockproof and waterproof designed](#); beautiful external form, sturdy and durable; IP66 protection class.
4. Industrial grade half transparent and half reflecting LED, 3.5 inches size and VGA (640x480) resolution.
5. Wi-Fi phone function, supporting roaming switching of wireless base station and keeping fluent speech.
6. Supporting Wi-Fi "[PUSH TO TALK](#)" without server.
7. Supporting GSM voice communication and GPRS data transmission.
8. Supporting 13.56MHz RFID performance (ISO14443A/B).
9. Supporting [2.4GHz RFID](#) for customer base expansion.
10. Supporting multiple exterior interfaces: USB, serial ports and GPIO (two).
11. Developed on Windows mobile 6.5 intelligent operating system, with powerful application extension performance.

12. Supporting stand charging (more reliable) and miniUSB charging.
13. Supporting Wi-Fi power saving mode under both stand-by and operating conditions.
14. In-house developed hardware, software and structure, with independent intellectual property; function customization for customers.

Specifications

Physical parameters	
Dimension	143x73x23 mm
Weight	230g
Screen	Color 3.5 inch VGA (640*480), half-reflecting TFT LCD
Touch screen	Toughened glass resistive screen
Backlight	LED backlight
Battery	3.7V/2000mAh
Expansion slot	T-flash card; 8GB maximum
Communication interface	USB1.1 client, serial port (with 2 configurable GPIO ports)
Notice method	Sound and multi-color LED
Keyboard	Digital; several definable function key shortcuts
Audio	Microphone, receiver, speaker, earphone
Performance parameters	
CPU	Marvell Xscale PXA310 624MHz high performance processor
Operating system	Microsoft® Windows Mobile® 6.5 Professional
Memory	256MB DDR, 256MB flash memory
Service environment	
Working temperature	-10°C ~ 50°C
Storage temperature	-40°C ~ 70°C
Humidity	95% (no condensation)
Shockproof ability	Falling from 1.2m high to cement floor under working temperature for two times for every side (totally 6 sides).
Tumbling	Tumbling from 0.5m high for 250 times (equivalent to 500 falls)
Sealing	IP66
Electrostatic discharge (ESD)	12KV
Battery performance	
Stand-by time	120 hours
Conversation time	8 hours (GSM), 7 hours (VoWLAN)
Data acquisition (optional)	
Option	1D Scanner, 2D Scanner
Color camera lens	
Resolution	3 megapixel
Illuminance	Controllable flash
Lens	Auto focus
Engine for 1D and 2D imager	
Optical resolution	752 H x 480 V pixel
Rotation angle	360°
Tilt angle	± 60° off normal position
Focal range	40mm ~ 235mm

Wireless WAN voice and data communication	
Radio	GSM GPRS 2.5G
Frequency band	Quad-band (850, 900, 1800 and 1900 MHz)
Antenna	Built-in
Integrated GPS	
GPS	Integrated auxiliary GPS (A-GPS)
Wireless LAN voice and data communication	
Radio	IEEE® 802.11b/g
Safety	WEP (40 or 128-bit), TKIP, AES, WPA, WPA2
Antenna	Built-in
Data rates supported	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48 and 54 Mbps
Working channel	Channel 1-13 (2412-2472 MHz)
Voice communication	Supporting IP voice communication, SIP VoIP communication, PTT function
RFID Parameters	
Frequency	13.56M
Standard	ISO14443A/B
Peripheral equipment and appliances	
Communication and charging cable	Cable only for charging, USB charging
Battery charger	Single groove stand charging

