Quick Start Guide

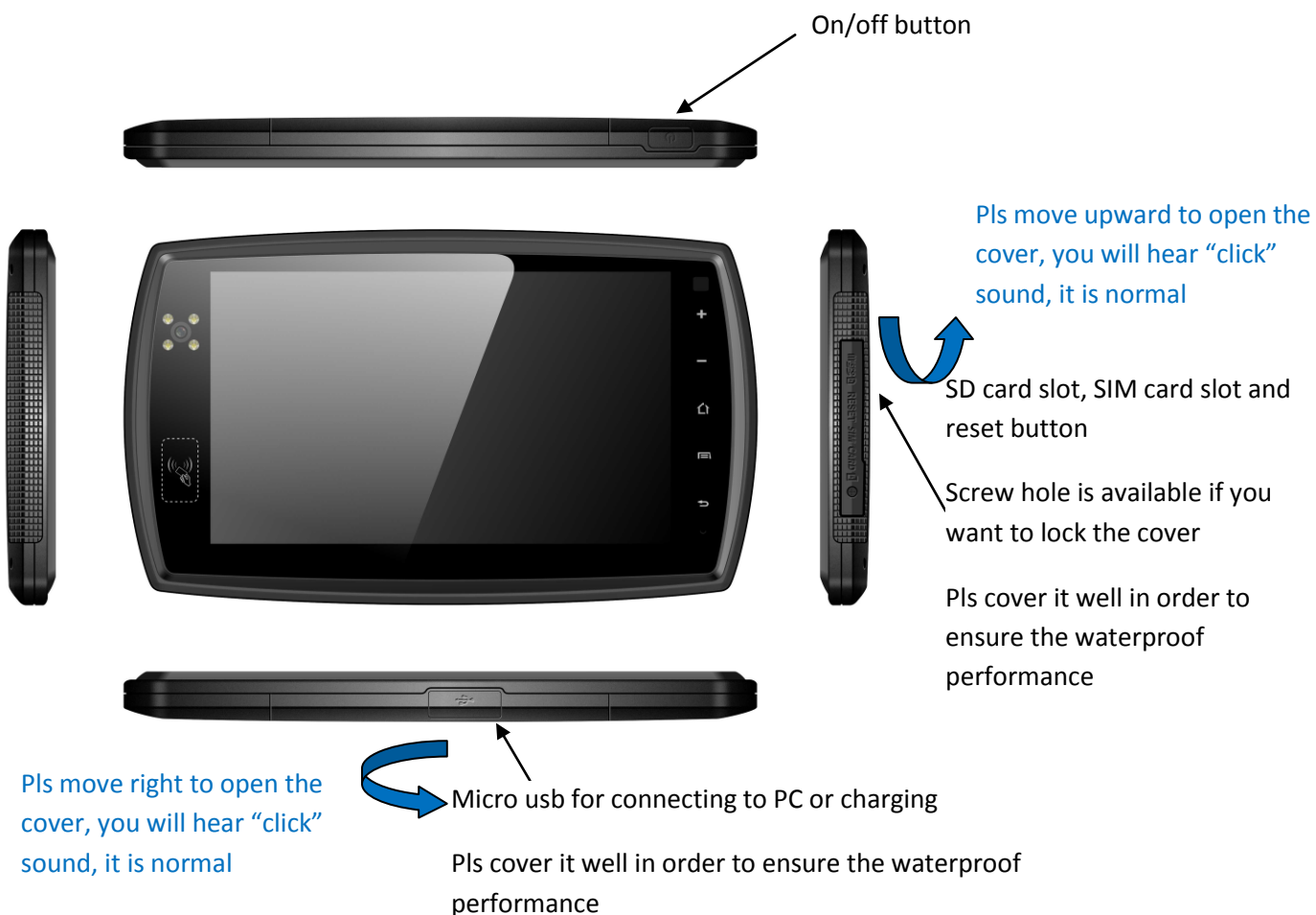## Product introduction

CTFPND-9 has many features (wifi, BT, GPS, 3G, back camera, front camera, RFID, lightsensor, gyroscope, accelermeter)

Highlights:

3G – pls insert the SIM card when the device if complete off

front camera – there are 6 IR LED around the camera. if you enable the flash function in front camera, then you will see the IR LED is on. In this case, the picture will be in black and white
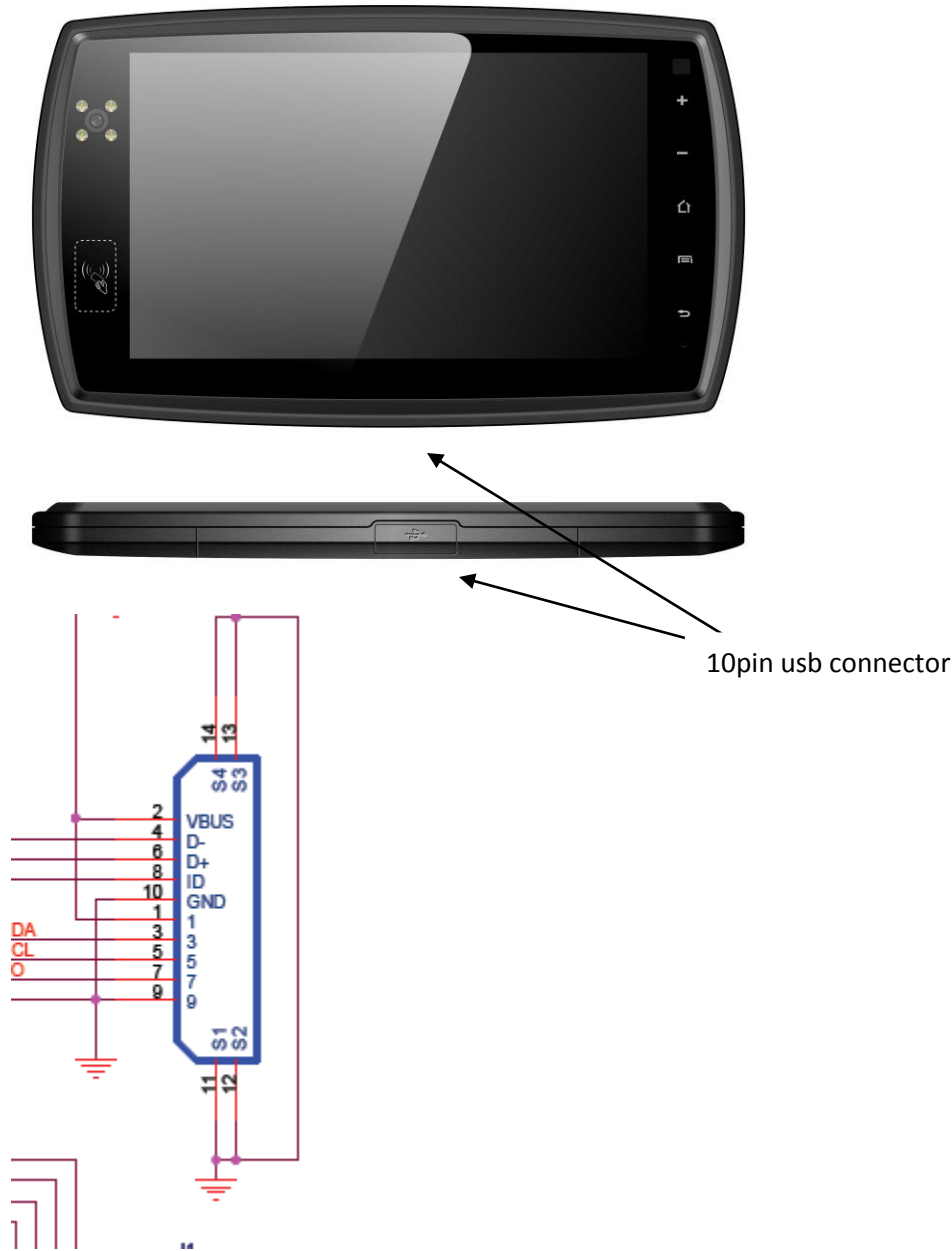
On/off button

Pls move upward to open the cover, you will hear "click" sound, it is normal

SD card slot, SIM card slot and reset button

Screw hole is available if you want to lock the cover

Pls cover it well in order to ensure the waterproof performance

Pls move right to open the cover, you will hear "click" sound, it is normal

Micro usb for connecting to PC or charging

Pls cover it well in order to ensure the waterproof performance

Direction of SIM card and SD card
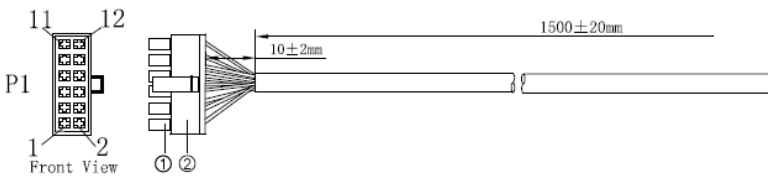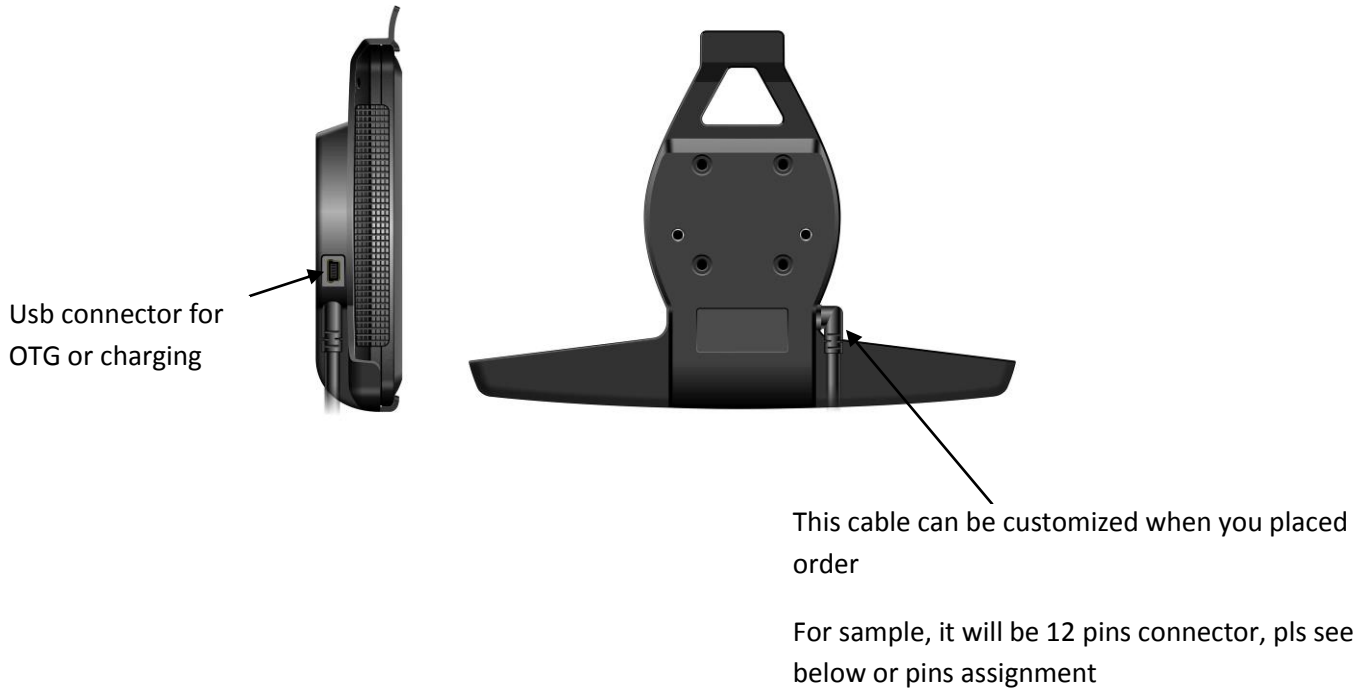
Interface

1. There is TTL serial port (Tx/RX) or OTG from 10 pin usb connector

10pin usb connector

pls see the above schematics of our USB connector in our PND, it is 10 pin connector.
Pin 4 and 6 can be used for USB or TTL serial interface (Rx/Tx) and Pin 8 is ID pin which is used to distinguish for USB or serial interface.
if it is connected to GND, then the pin 4 and 6 will be Rx/Tx interface.
if it is connected to Vcc, then the pin 4 and 6 will be D- and D+.

2. There are Rs232 interface and OTG from cradle.

Highlights: OTG port from device (10pin usb connector) and cradle are sharing same pins. Only 1 OTG interface can be used.
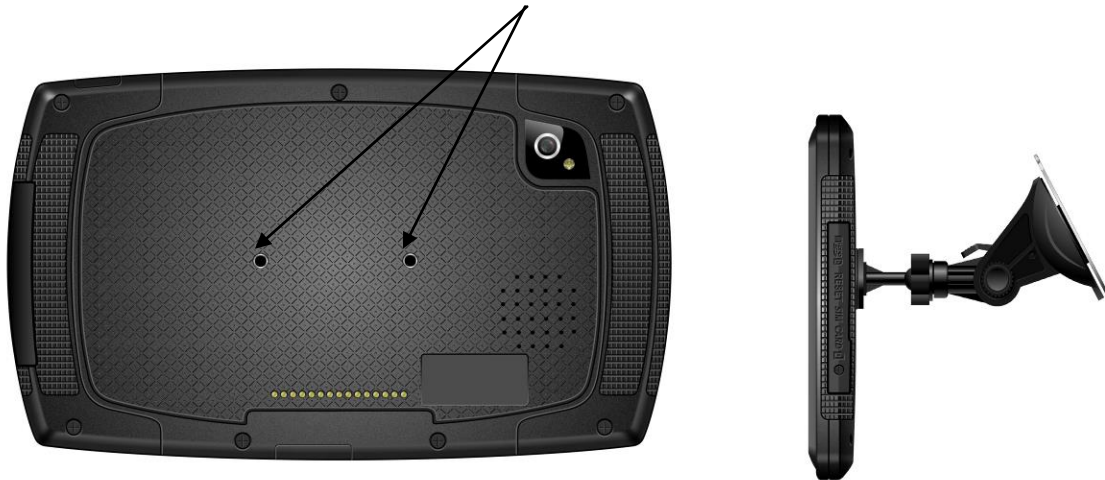
Usb connector for OTG or charging

This cable can be customized when you placed order

For sample, it will be 12 pins connector, pls see below or pins assignment

Pin 1 – Ignition (white)
Pin 2 – GPIO (reserved) (green)
Pin 3 – CTS (red)
Pin 4 – car battery input (12-28V) (black)
Pin 5 – RTS (blue)
Pin 6 – RXD (yellow)
Pin 7 – TXD (purple)
Pin 8 – GND (grey)
Pin 9 – GND (orange)
Pin 10 – NOT connected (brown)
Pin 11 – NOT connected (pink)
Pin 12 – 5V input (white-black)

Device installation
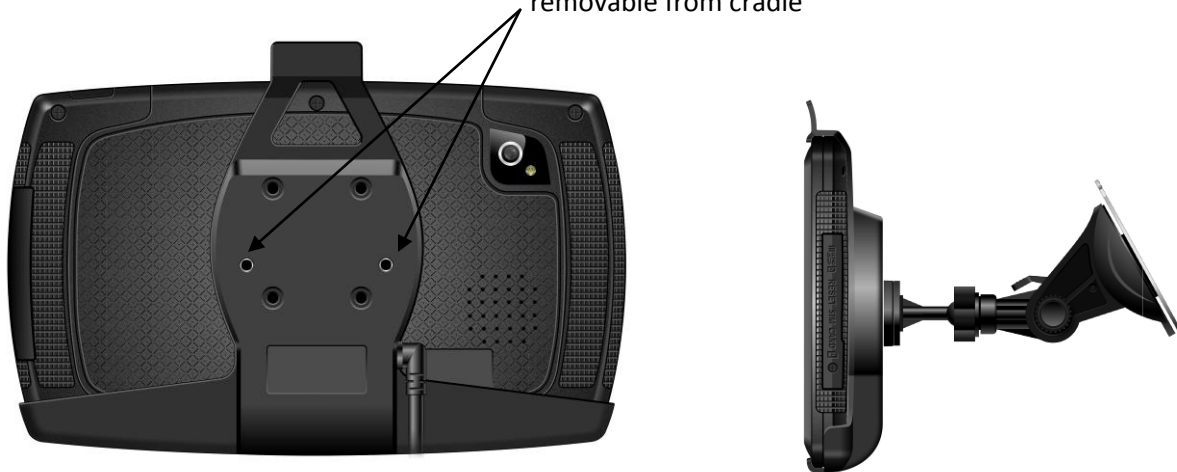
There are few options

1. **Directly attach mount to device (no cradle in this case)**

2 screw hole at the back

Pls use M4 18mm screw

2. **Cradle attached to car mount with different screw length**

2 screw hole at the back

Case 1 – if M4 18mm screw is used, the device will be removable from cradle

Case 2 – if M4 23mm screw is used, the device will be not removable from cradle

Serial ports, software interface

two serial ports are available one the device :

- one shares the the USB data pins of the mini A/B USB connector. Only TX and RX pins are available, voltage is TTL 3.3V.
- one is on the Pogopin interface (pins 3, 5, 6 and 7). TX, RX CTS and RTS are available, voltage is RS232.

On the software side, the tty devices corresponding to these ports are :

- for the RS232 port, /dev/user_external_tty

RS232 interface need to be enable prior to use :
$> echo 1 > /dev/enable_external_tty

After use, it can be disabled with :
$> echo 0 > /dev/enable_external_tty

- for the TTL port, /dev/user_tty

In addition, one I2C port is available both on the USB and Procopin connectors.

- The I2C interface is accessible through /dev/user_i2c