

USER MANUAL



SCOPEPAD-350

OPTISUM

Notice

Important safety precautions and proper operation instruction are included in this manual, in order to avoid any accidents, this manual should be read before using this product .

- ◆ **Precision Instrument Handle with Care**
- ◆ **Do not disassemble, drop or crash CCD, or damage or abnormal display may be caused.**
- ◆ **Our company are out of responsibility of Man-made damage repair, please follow up the user manual for standard operation.**
- ◆ **Do not disassemble the product, do not use alcohol, thinner or benzene to clean the surface of the product**

【Notes】 : Pictures on this manual are only for reference purpose!
Product specifications and appearance may be changed without notice!

Contents

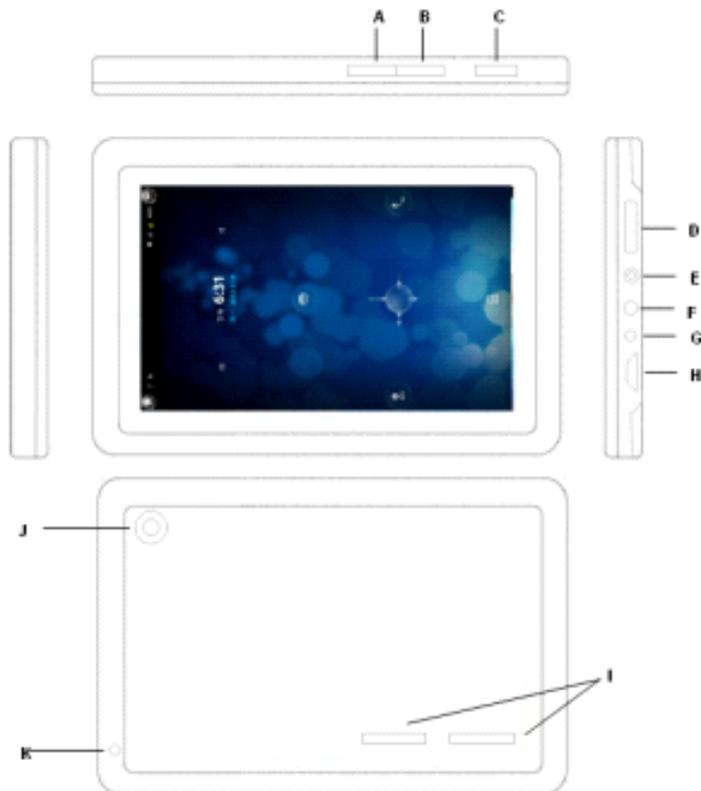
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1.Parameter

Digital Parts	1/2.5 " CMOS Sensor, 5megapixels (2592*1936), Selectable Resolutions for Capturing Images	
	Image-previewing Rate: 30fps at Full Resolution	
	Video Format: 480P/15FPS	
	White Balance Setting: Manual / Automatic / Preset	
	Programmable Controls: Gain, Frame Rate, Frame Size, Exposure	
	Pixel Size: 2.2 μ m x 2.2 μ m	
	ADC: 12bit	
	Dynamic Range: 71dB	
	SNRMAX: 38.1dB	
	Shutter Type: Global Reset Release (GRR)	
	Color Filter Array: RGB Bayer Pattern	
Connection: International Standard C-type Interface Work with Both C-mount and Eyepiece Adapters		
Display	7" TFT LCD HD Screen(1024*600), Maximum Brightness: 350 lumen	
	G-sensor, 5points Capacitance Touch Screen	
Operating System	Android 2.3	
CPU	1GHz	
RAM	512MB DRAM	
Storage Device	Onboard Flash 4GB, Support External TF Card, Maximum Capacity of 32GB	
Application Software	Browser, Calculator, Calendar, Camera, Clock, Email, ES File Explorer, Gallery, Google Search, Music, Setting, Sound Recorder, E-book, MSN/Skype Chatting, Game Playing, etc.	
	Google Android Market Support Thousands of Applications Download	
Battery	Rechargeable Li-Polymer Battery, Capacity: 4500mAh	
WIFI	802.11(b/g/n)	
Bluetooth	V2.1 + EDR	
Sensor Function	G-Sensor	Onboard G-sensor, Support X/Y/Z 3axis Gravity Sensor
Interface	1* Mini USB Interface	
	1* Micro-SD Card Slot (Up to 32GB)	
	1* 3.5mm Standard Stereo Earphone Slot	
Audio	2* Built-in Class-D Digital Power Amplifier Loudspeaker, Built-in Microphone	
Language	Multi Languages: English, Czech, Dansk, German, Spanish, Russian, French, Italian, Dutch, Norwegian, Polski, Portugues, Greek, Portuguese, Svenska, Turkey, Korean, Japanese, Simplified Chinese, Traditional Chinese etc.	
Power Switching Adaptor	DC5V 2000mA, Optional Plug Types: USA , EU, UK and Japan, etc.	
Accessories	Power Adapter, USB Cable, USB Switch Wiring(Short)	
Ambient Condition	0°C — +40°C	

2. Diagram



A .Volume-/Menu: Press the button for once to move into search menu.

Long press the button, the volume decrease menu will appear. You can decrease the volume by one stage per 0.5 second.

B. Volume+/Esc: Press the button for once to return back to the previous menu.

Long press the button, the volume increase menu will appear. You can increase the volume by one stage per 0.5 second.

C. Power/Wakeup: Press the power button for 3-5 seconds to get power on/off.

Press the power button for once to move into standby mode, press once time again, it will come back.

D. TF Card Slot

E. Earphone Jack

F. DC Socket

G. Microphone Port

H. Micro A USB Slot

I. Speakers& Reset Key

3. On First Use

3.1 Battery Management & Charging

❖ **Before first use ScopePad-350, make sure battery is fully charged:**

- Plug charger / adapter cable into the DC jack for charging.
- Keep the first two charging time in 10hours, and then charging time can be around 5hours after the first two times.

❖ **The machine adopts built-in polymer battery, special battery charger must be used to charge the device:**

- In charging, the battery icon on screen would be scrolling.
- When charging is finished, the battery icon on screen will turn green and stops scrolling.
- To extend the life of the machine, for the first two charge-discharge circle, it is recommended to be charged only if there left no capacity of battery.
- When leave the device unworked, be sure power off the device.

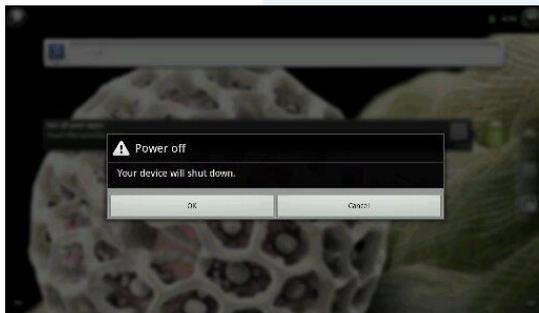
【Note】 :

- ① **When leave the device stored away, in order to avoid battery damage caused by excessive consumption, make sure the machine within one month to complete a charge and discharge cycle time, so as to prevent battery depletion.**
- ② **Low power shutdown, plug in the charger, the device will hint low power ,in charging, please wait a minute, the device will automatically enter the main interface until get needed power .**

3.2 Power On/Off

Switch button on top, press and hold "switch" button for 3-5seconds can power on.

Press the power button for 3-5 seconds to get power-off button and click "OK" to shut down the equipment; or press the power button for another 3 seconds to shut down.



4. ScopePad-350 Hardware Installation

4.1 Interface

International Standard C-type Interface. It can be installed on the monocular, binocular, trinocular, stereo, video microscope, dissecting Microscope and various kinds of microscopes or telescopes.

● Installation

Screw the ScopePad-350 onto the C-mount adapter first, and then inset the C-mount adapter into the trinocular tube.(Shown as picture 1)



【Note】 : It is not included the C-mount adapter, please purchase from your microscope supplier based on your needs (0.5X/1X). The appearance and outlooking size of C-mount on various microscopes are different, however, as long as the screw is standard C-mount type, can work with this ScopePad-350.

4.2 Optional Accessories

Includes: 0.5X Nose piece with $\Phi 23\text{mm}$, $\Phi 30\text{mm}$, $\Phi 30.5\text{mm}$ adapter rings to the eyepiece.
(Shown as picture 2)

Pic 2

Pic 3

4.3 Connection Method of Eyepiece Adapter

① Screw the upper end of eyepiece adapter with the thread onto the ScopePad-350 interface(Shown as picture 3), and inset the bottom end of eyepiece adapter into ocular tube, which diameter is $\Phi 23\text{mm}$.

② If the diameter of ocular tube is large, optional adapter ring need to be added on the ocular tube, there are 2types of adapter ring with diameter of $\Phi 30\text{mm}$ or $\Phi 30.5\text{mm}$ for option.(Shown as picture 4)



③ Insert the eyepiece adapter into adapter ring and then insert the adapter ring onto the ocular tube.(Shown as picture 5)

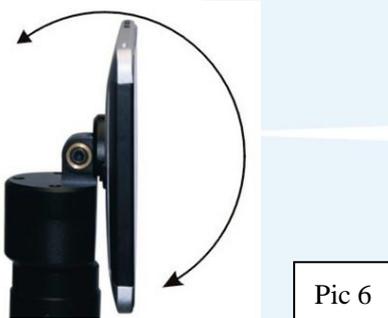


【Warnings】 :

The wide view angle is adjustable 0-90 Degree inclined. (Shown as picture 6)

Don't rotate the screen beyond such field.

Don't rotate the screen too frequently to avoid damaging the equipment.



5. Software Applications & Operation

5.1 Usage of the Camera

5.1.1 Enter the Capture Interface

Shown as picture 7, drag the lock icon toward any direction to unlock the screen, click

the icon  to go into the main menu.



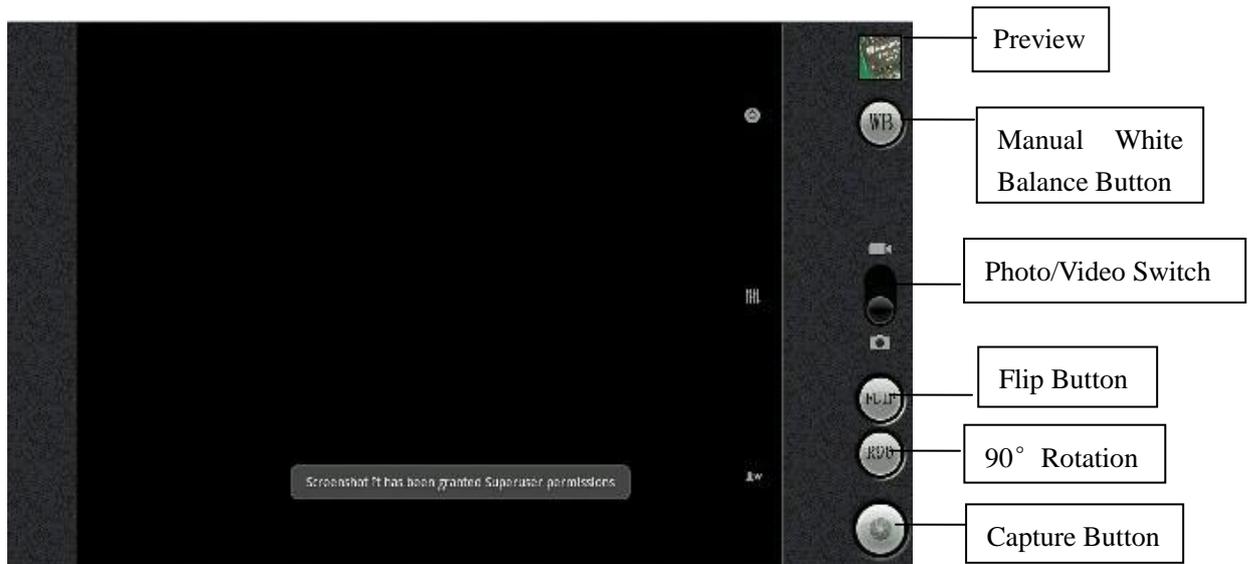
Pic 7

Shown as picture 8, click the "camera" icon  to go into the capture interface.



Pic 8

5.1.2 Menu on the Capture Interface (Shown as picture 9)



Pic 9

✧ Function Instruction:

① Preview: Click the  icon to go into photo gallery, left or right drag the screen by finger can choose the image or video to be previewed or simple managed.

② Manual White Balance Button: Under the manual white balance mode, click the  icon, the system memorize the current white balance setting and finish the manual white balance.

③ Photo & Video Functions Shift: Drag the round icon  can switch between image capture and video record.

④ Shutter: Click the  icon to capture, then the image can be saved in image Gallery of the RAM automatically.

⑤ Video Record: Drag the round icon to  video record mode first, click  to start recording, and click again to stop recording, the video will be saved automatically.

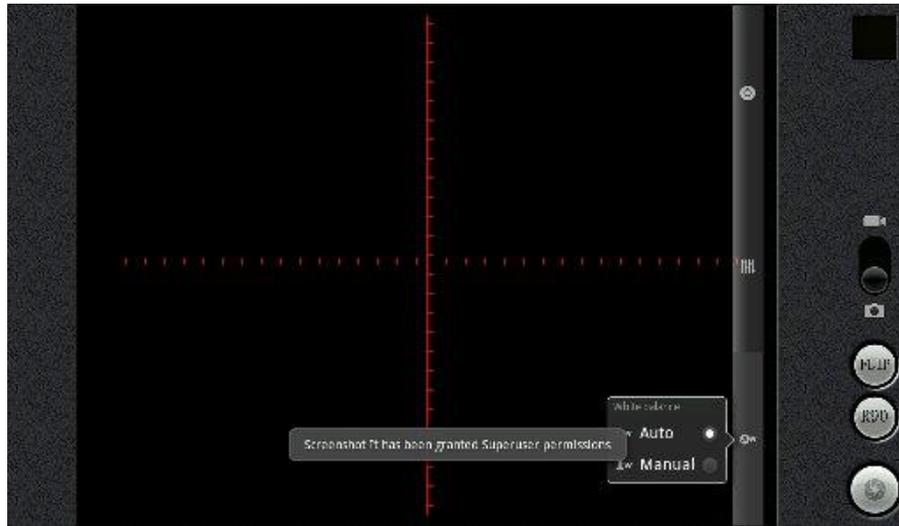
⑥ Flip: Click the flip button , the picture's top part will come to the bottom and the bottom part will go to the top(Mirror Function).

⑦ R90: Click the R90 button , it will clockwise rotate for 90 degree.

5.1.3 White Balance Adjustment

❖ Auto White Balance

Shown as picture 10, when "Auto White Balance" mode selected, the color and brightness of image can be adjusted to the best by itself according to the the current lighting environment.



Pic 10

❖ Manual White Balance

Click the icon  to select "manual white balance", there are 2 methods to operate the white balance base on different types of microscopes as follows:

① When the illumination of the microscope is the reflection light (such as stereo and metallurgical

microscope),place a white paper onto the microscope to get clear imaging. Then click the icon , then the system is processing the white balance automatically and "Setting white balance ...after then

close it" will appear on the screen. When the setting finish, click the  icon, the system will memorize the current white balance data and "Set white balance successful" will appear on the screen.

② When the illumination of the microscope is the transmission light (such as biological microscope), no need to put anything under the microscope lens. Adjust the light source to get a suitable brightness, not

too bright. Then click the icon , the system is processing the white balance automatically. When the

setting finish, click the  icon, the system will memorize the current white balance data and "Set white balance successful" will appear on the screen.

5.1.4 Exposure Set

Two exposure set modes can be selected: Manual Mode and Auto Mode.

- ❖ When Auto Mode is selected, the exposure data can be adjusted automatically according to the current light environment.
- ❖ When Manual Mode is selected, you can change the exposure data by yourself.



【Advice】 : "Manual Exposure Time" and "Manual White Balance" should be matched to use. The exposure data is setting as low as possible.(The longer exposure time is, the slower speed of frame rate is).

5.1.5 Contrast and Saturation Adjustment



Pic 11

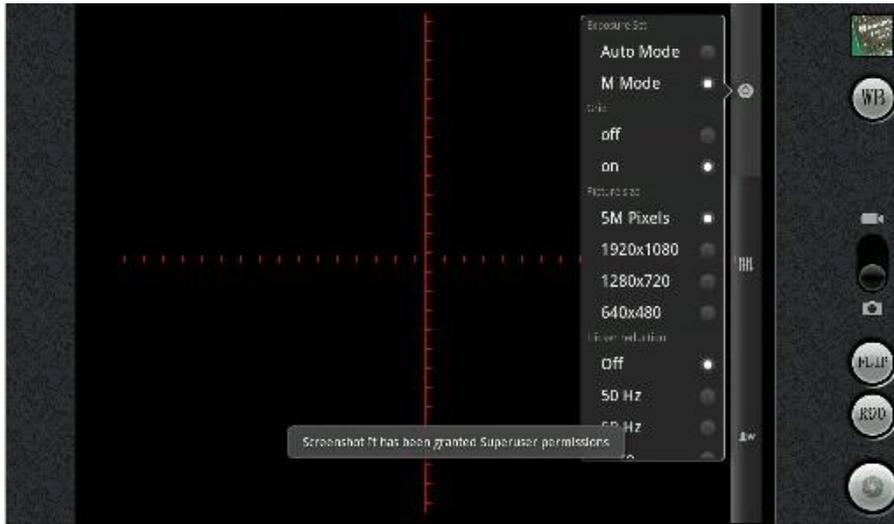
Drag the rectangle icon on the parameter menu to adjust the "contrast" and "saturation" value.(Contrast value is suggested to be under 4-0, shown as Pic11)

5.1.6 Grid Function

Grid on/off Control: As system default, the crossing-line appear on the capture image interface automatically. If you want to close, click "off" under the "Grid" menu. Click "on"

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once time, the grid will appear again.(Shown as picture 12)



Pic 12

5.1.7 Picture Pixel Selection

Picture size selection: Change the picture size by choosing different resolutions. The system default resolution is 2592x1936.



【Notes】 : The parameter adjustment on video recording model is as same as that of the capture photo model.

5.1.8 Power Frequency Selection

Flicker reduction selection: The system default is "Off".

Different frequency in different countries, please confirm with the correct power frequency base on your own country's standard. Otherwise, it may cause the problem of screen waves.

For example, the frequency in China is 50Hz, click "50 Hz" under the "Flicker reduction "

menu.



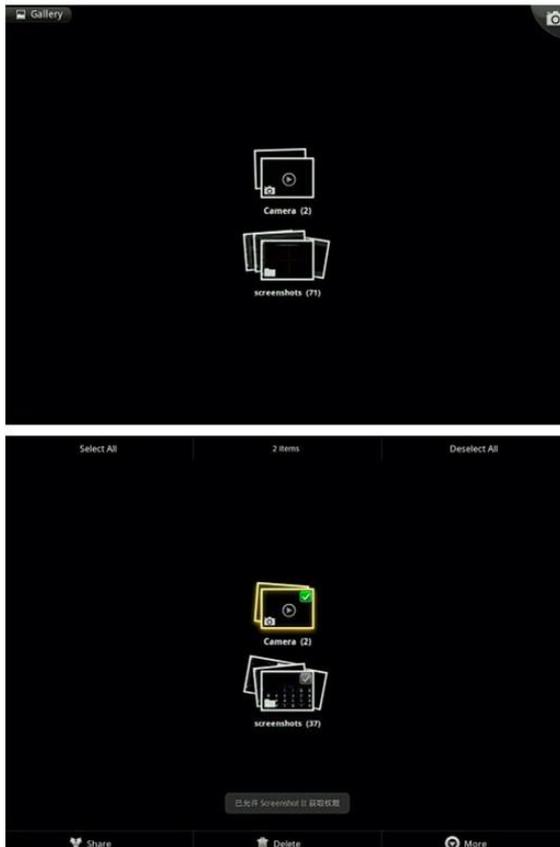
5.2 Files Preview

- ❖ **Method 1:** On the capture interface, click the  icon to go into the photo gallery. You can preview, share, delete and edit the photos or videos. (Shown as picture 13)



Pic 13

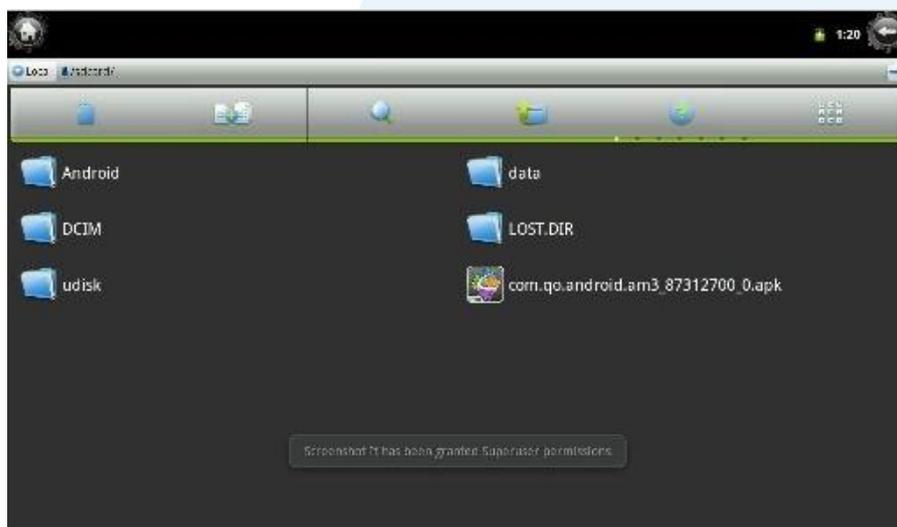
- ❖ **Method 2:** Under the main menu, click the  icon to go into the gallery to preview. Press any photo for 2 seconds, then click the pane on the top right corner of the photos or videos, a green hook will appear, which means that the photos have been chosen. You can select anyone which you want to share, delete and edit.(Shown as picture 14)



Pic 14

5.3 Storage Space

- ❖ Click the icon "ES File Explorer", there are 3 storage spaces for the device: Local storage space, SD card storage space and external USB flash disk storage space. (Shown as picture 15)



Pic 15

Open "ES File Explorer"

"sdcard" folder is corresponding to local storage space.

"extsd" folder is corresponding to TF card storage space.

"udisk" folder is corresponding to external USB flash disk storage space.

Go into corresponding folder, where you can browse, copy, cut, paste and delete the files inside.

5.4 TF Card Application

5.4.1 TF card Installation

Open the back black plastic cover, you'd find the TF card slot, insert the TF card. When you hear a click sound which means it's well installed.



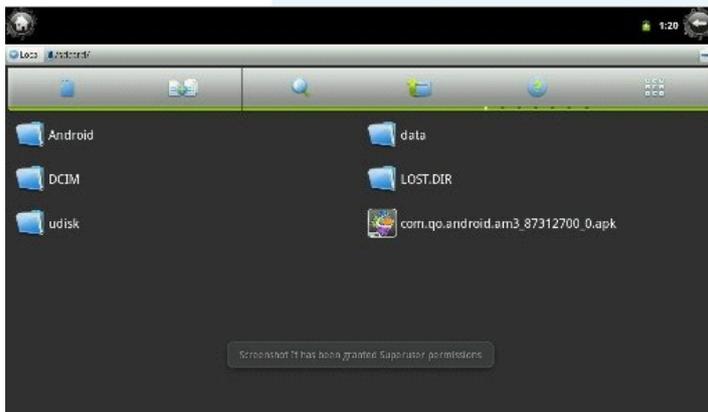
(keep TF card character up to screen position when insert the card)

【Note】 : The TF card is optional accessory, that the card slot position is possible to change without any notice.

5.4.2 Usage of TF Card

Insert the TF card, the main screen display "Preparing SD card". After such characters disappear, you can operate the TF card.

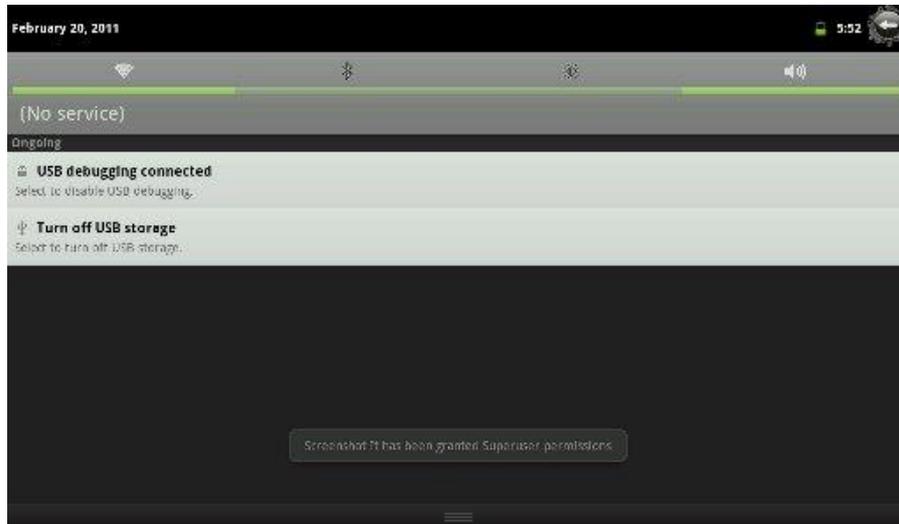
Open "ES File Explorer", and then click folder named "extsd", you can operate the TF card.(Shown as picture 16)



Pic 16

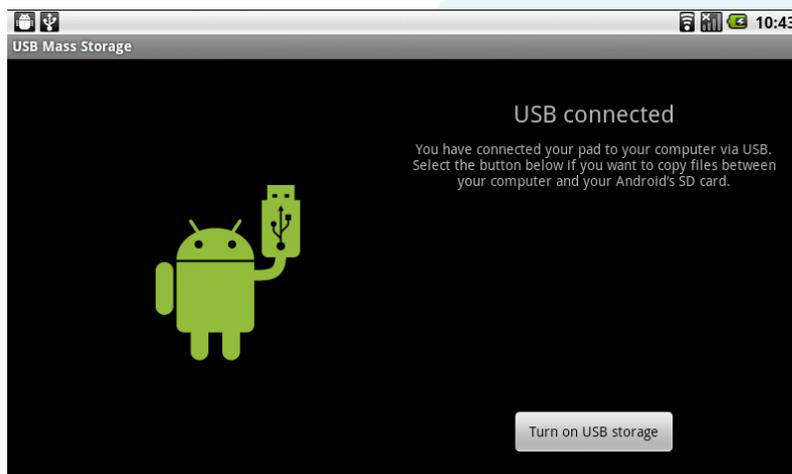
6. Export the Document to PC via USB

1. Connect the data cable of ScopePad-350 with the USB2.0 interface of computer, pull down top menu, there would pop up below interface shown as picture 17, please click the bar of "USB Connected".



Pic 17

2. After enter the interface of "USB connected"(shown as picture 18), touch the right down bar "Turn on USB storage" , and then click button "OK" shown as picture 19, the device would connect with computer successfully.



Pic 18

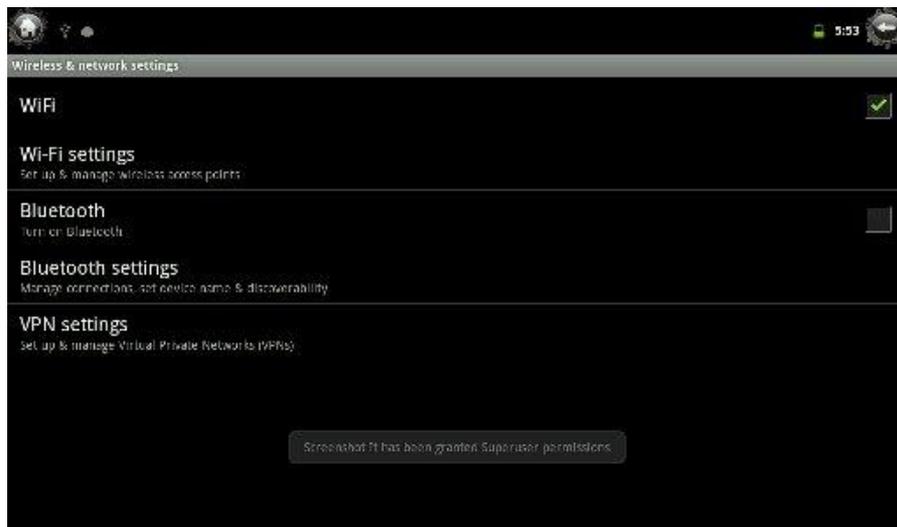


Pic 19

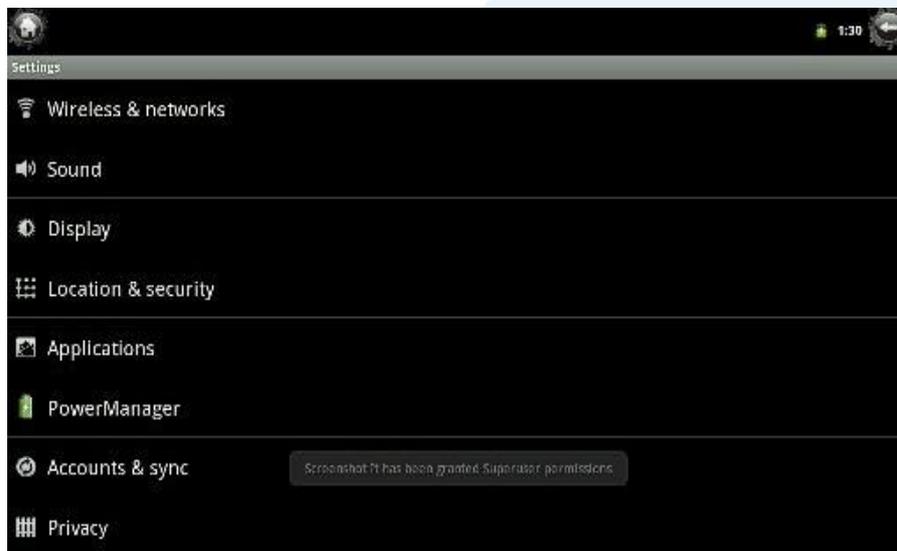
7. Network Configuration

Manage the Wi-Fi Setting and Support Wireless Data Network

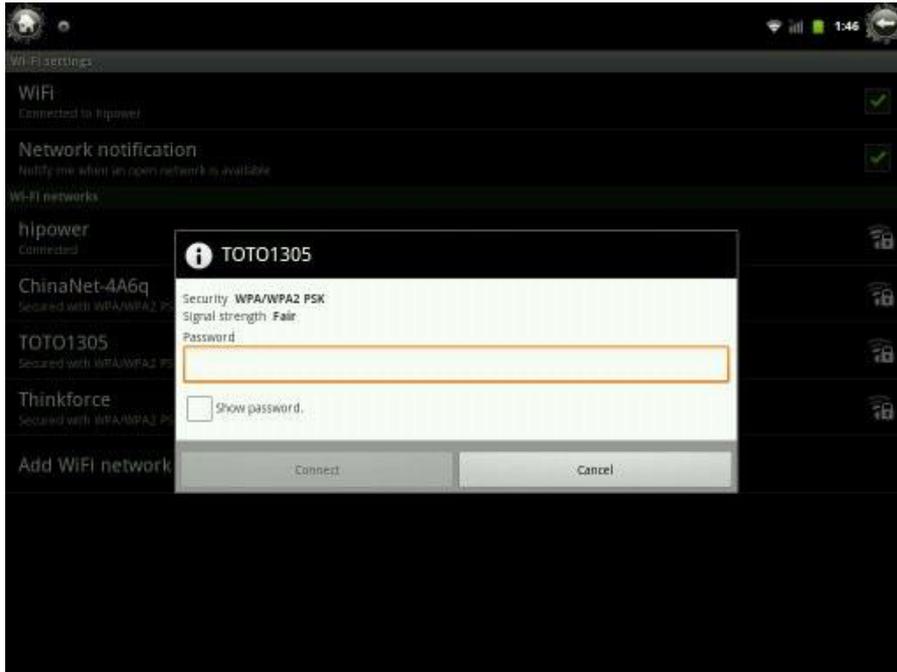
Click the icon  of "setting" on main menu, choose the "Wireless & networks" to enter into the Wi-Fi setting interface. Making sure accept the "Wi-Fi" and "Network Notification" at the same time, the device would search the nearby WIFI SSID automatically, and then choose the correct WIFI SSID, insert the password, you'd connect the pad camera with the WIFI SSID you chose.(Shown as picture 20、 21、 22)



Pic 20



Pic 21

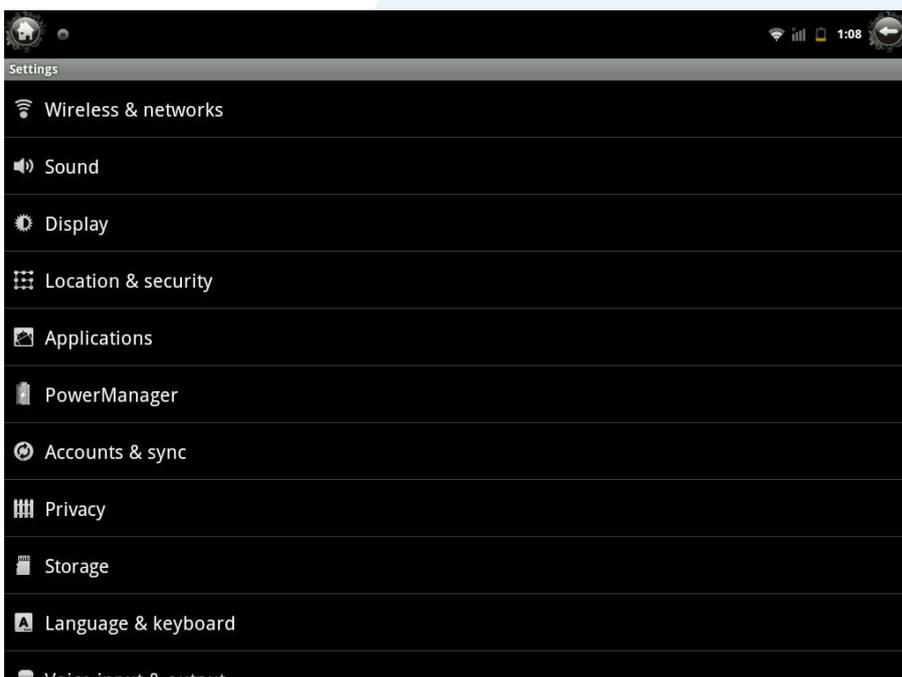


Pic 22

8. Display Setting

❖ Brightness adjustment of LCD display is in the system setting. Properly adjust the brightness of LCD display to get better image visual feeling.

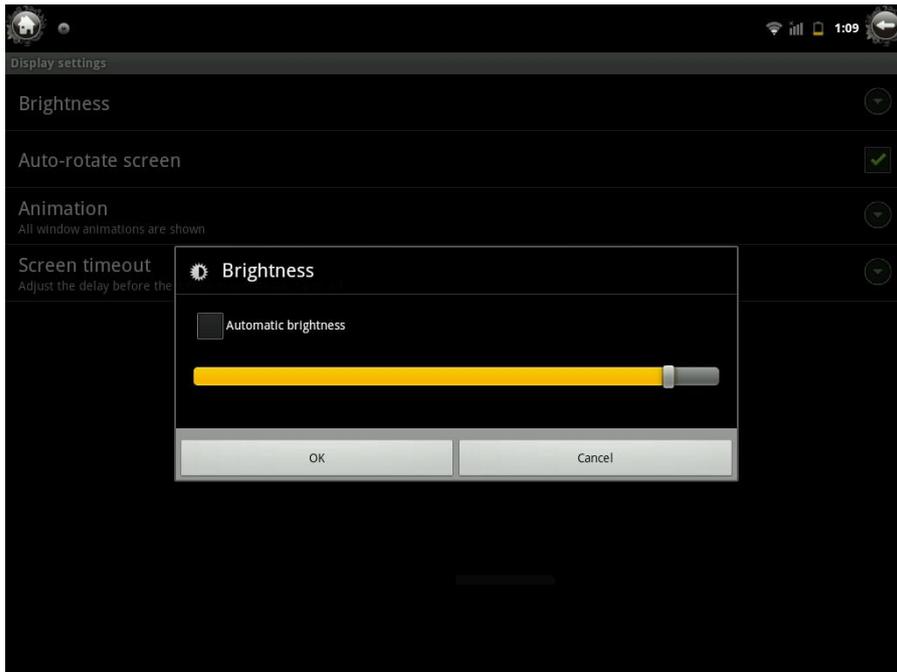
Click the icon  of "setting" on the main menu, choose the "Display" to enter into the display settings interface, touch the "brightness" to adjust the value bar at it's position as 5/6, then click OK (Shown as picture 23、 24 and 25)



Pic 23



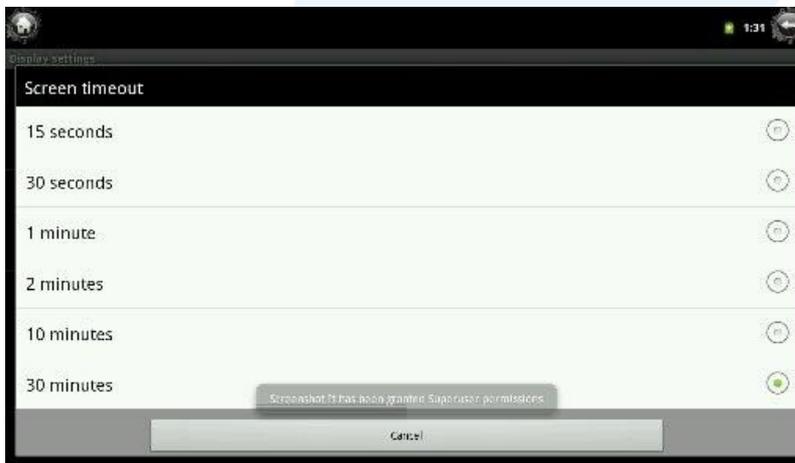
Pic 24



Pic 25

❖ Screen timeout

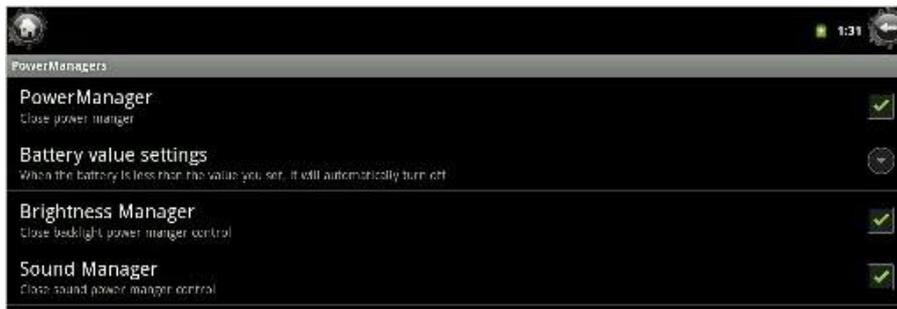
On the "Display settings" interface,click the bar "Screen timeout", there would pop up the selection menu, select the "30 minutes" , without non-operation for a long time, the screen won't go into stand-by and sleep mode within 30 minutes. (Shown as picture 26)



Pic 26

9. Power Manager

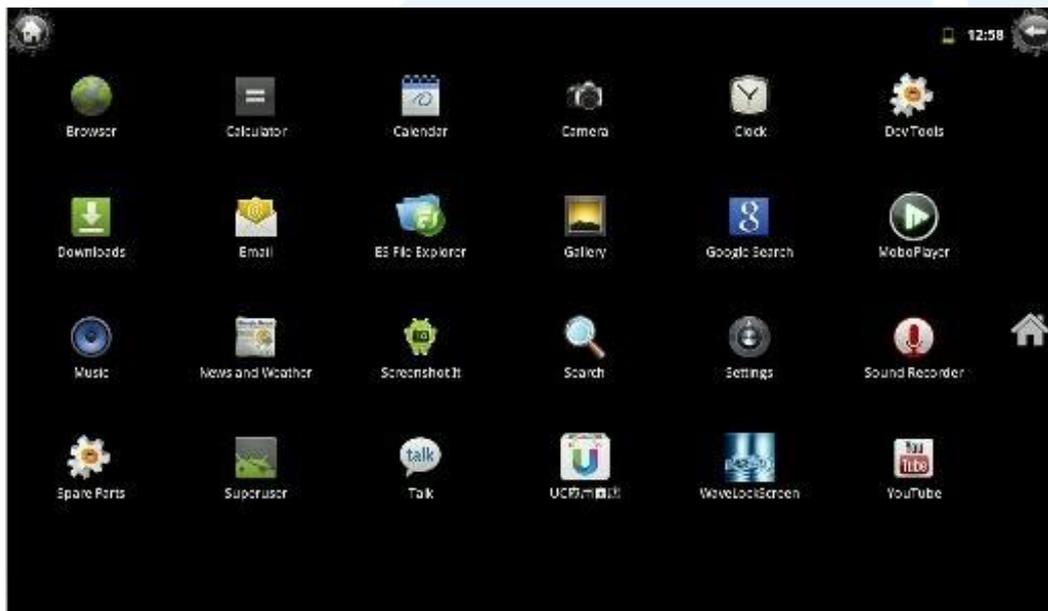
Click the icon  of "setting" on the main menu, select "Power Manger" to enter into the Power Managers interface. Tap the bar "PowerManager", then the "PowerManager", "Brightness Manager" and "Sound Manager" of 3new bars would pop up on the screen with selection box on the right side, please tap three selection boxes to accept three of them together. (shown as pic 27)



Pic 27

10. Application Software Installation

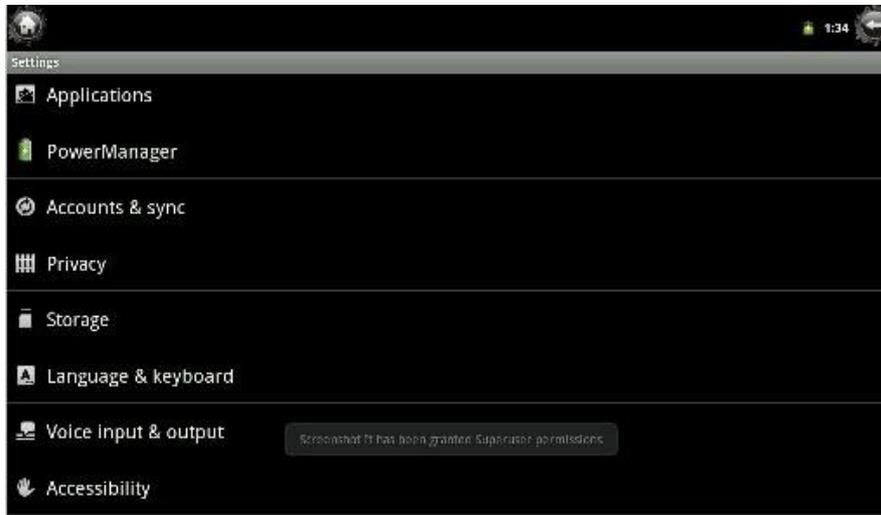
The operating system of this device is Android 2.3, kinds of applications are available for download on Android Market. The icon of installed application can be shown on the main menu.



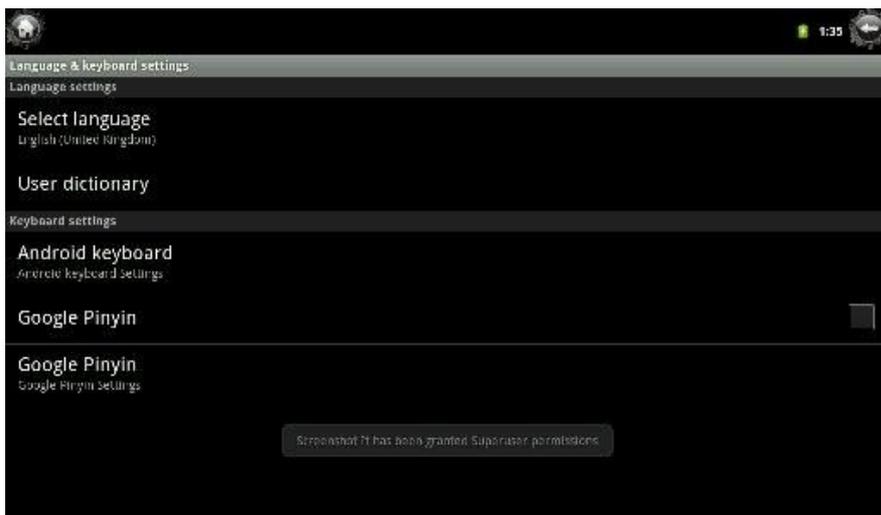
【Notes】 : Android applications are generally refer to those whose suffixs are *.apk.

11. Language Setting

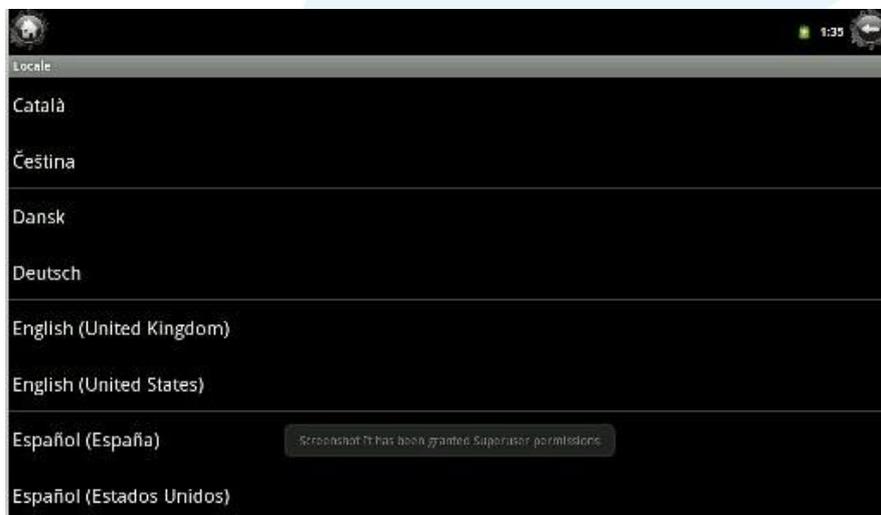
Click the icon  of "setting" on main menu, choose the icon "Language & keyboard", then touch the **Language & keyboard** to select the language. (shown as picture 28、29 and 30)



Pic 28



Pic 29



Pic 30

12. Troubleshooting & FAQs

A. Can't Power On

1. Check the battery capacity
2. Plug out and in power adapter cable, and check again
3. If the ScopePad-350 can not power on even after full charged, please contact with the seller.

B. The Screen is Flashing after Power On or Shut Down Immediately.

1. Low battery, please charging.

C. Hear Nothing

1. Please check the volume to see if it's 0.
2. Please check whether the media document file is destroyed or not, please try other document to test.

D. Can not Copy or Display Documents

1. Please make sure the computer and displayer are connected well.
2. Please check whether there is storage capacity or not.
3. Please check whether the USB cable is damaged or not.
4. Check if the USB is disconnected.

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