

深圳市晟天维科技有限公司 Shenzhen Saintway Technology Co., Ltd.

V7S User Manual

Ver:001





Amendment Records

Product	Version	Person	Establish/	Reason for	The major change contents
name	number	in charge	amend date	change	The major change contents
V7S	001	Nancy	2024- 8-15	N/A	NEW
Note:		1		1	

1. Please fill the form if there is any update.

2. For the first time saving the file, note "N/A" in the "reason for change" and "major change contents" line.



Safety maintenance:

Please maintain your system properly to make sure its service life and reduce the damage risk.

- It should avoid the humidity and extreme temperature when being used.
- Avoid prolonged exposure of the unit to direct sunlight or strong ultraviolet light.
- Do not drop the unit or let it be in any place with severe shock / vibration.
- Please avoid the collision as the LCD screen is very easy to be scratched. Do not use any sharp object to touch the screen.
- To clean the outside fuselage, please turn off the power, unplug the power cord, scrub / wipe with slightly damp soft cloth. When cleaning the screen, please wipe with the lint free soft cloth.
- Never attempt to disassemble or repair the machine, otherwise the unit may be damaged.
- Do not place your unit or accessories together with other flammable liquids, gases, or other explosive materials, to avoid danger.
- Please unplug the power plug and remove the built-in battery if long-term no-use, or thunder weather.



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1. Product Description

1.1 Brief Introduction

- Android 11 operating system
- 7-inch 1024x600 TFT-LCD screen
- WiFi, 1000Mbps Ethernet port and 4G high speed internet surfing
- > Built-in high-sensitivity receiving module and active GPS antenna
- > 2MP front camera
- ➢ With USB DEVICE and USB HOST
- Support 128GB TF card storage
- Touch button + virtual button
- > Double track earphone port, built-in 2W left and right speaker, with microphone

input

- ➢ RS232 port
- Compliant with IP65 standard
- Support VESA 75MM*75MM mounting & RAM 38MM*30MM
 - **1.2 Optional Functions**
- ➢ 4G Modem Module
- > 2000mAh Li-ion battery (built-in)



1.3 Specifications

Specifications		Description
	Processor	64bit RK3568 Quad-core Cortex-A55, up to 2.0GHz
	Graphic	Mali-G52-2EE, 800MHz
Core	RAM	2GB(4GB optional) LPDDR4
	ROM	16GB(32GB optional) eMMC
	OS	Android 11
	LCD panel	7 inch TFT-LCD, LED backlight
	Resolutions	1024x600
	Brightness	500nits (typical)
Display	Contrast Ratio	800:1
	View Angle (°)	75/75(L/R), 70/75(U/D)
	Touch panel	G+G multi-touch capacitive touch panel
	WiFi	IEEE 802.11 b/g/n (optional)
	Bluetooth	Ver 4.0
Wireless	Cellular	4G Full Netcom (3G optional)
	Positioning	Integrated GPS+GLONASS+BEIDOU(optional)
	Speaker	Built-in speaker(2W, 8Ω) x 2
	Microphone	Internal microphone
	Camera	2M CMOS (Front)
	Video	Video Decode: 4K@60fps H.264&H.265&VP9 Profile0/2 video decode, 1080P multi video decode
Multimedia	Video	Video Encode: 1080P video encoding for H.264 and H.265
	Audio	MP3, WMA, OGG, APE, FLAC, AAC etc.
	GPO	12V,500mA (Max)/Optional
	G-sensor	optional
	Gyroscope	optional



	Onboard I/O ports	1 x TF card slot(up to 128GB) 1 x SIM card slot 1 x USB 3.0 Host						
		1 x DC in 1 x RJ45(10/100/1000 Mbps) (support POE)						
		1 x RS422/485						
	Cable 1							
		1 x RS232 1 x OTG 2.0						
Extended I/O ports								
(on pigtail cable)		1x DC in						
		1 x ACC						
	Cable 2	2 x CAN bus(optional)						
		1 x AV IN (support NTSC)						
		1 x reverse gear trigger						
	Function Key	Power, Menu, Volume+, Volume-, Reset						
	Power light	LED light						
	DC In	12V DC (9~36V)						
Power Supply	Battery	3.7V 2000mAh, Lithium-Polymer battery pack						
Power	Normal mod	≤ 6W						
consumption	Charging mode	≤ 10w						
	IP rating	IP65						
Environment		-20° C ~ 70° C (w/o battery)						
	Operating Temp.	-20° C ~50° C (w/ battery)						
	Storage Temp.	-20° C ~ 80° C						
	Dimensions	200W x138H x 36D mm						
Mechanical	Weight	0.79kg						
	mount	75MM*75MM VESA or 38MM*30MM RAM						
A	Standard	DC adaptor , Extended Cables						
Accessories	optional	Sunshade						

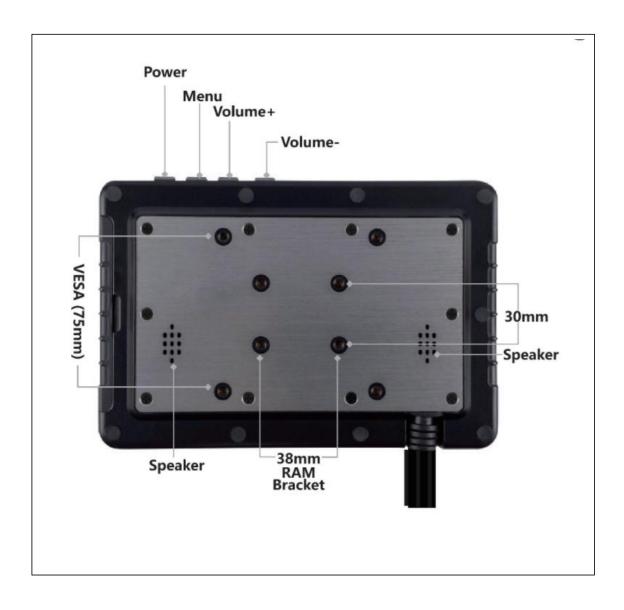
2.Structure Function Explanation

2.1 Interface



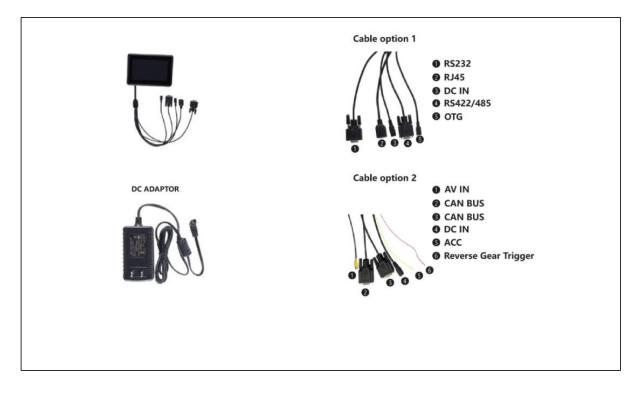








Accessory



- 1. Power Key: Short Key:sleep/ wake up V7S Length Key: boot, power off
- 2. Menu: Enter the menu interface
- 3. Volume +: Increase the volume
- 4. Volume -: Decrease the volume
- 5. TF Card: Extended to 128G TF card
- 6. SIM Card: Identify network communication
- 7. USB ports: be able to connect with USB driver/ mouse/ keyboard
- 8. LED:

Red light: charging the battery Green light: battery charging saturation

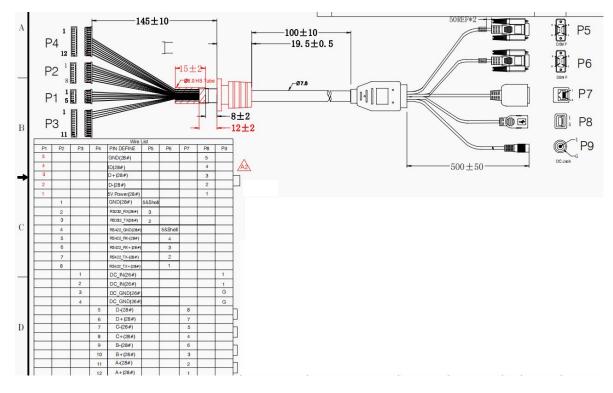


- 9. Front camera
- 10. Microphone interface
- 11. Reset key: used in mechanical down without reset operation
- 12. 38mm*30mm RAM mounting screw holes
 - 75mm*75mm VESA mounting screw holes
- 13. Speaker

3 Extended Cable

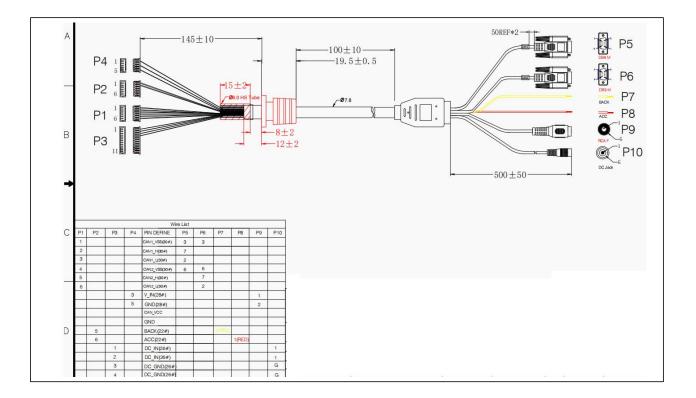
3.1 Definition:

Cable 1





Cable 2





3.2 Serial port

RS232/ RS422 test:

Connect RS232 or RS422 with DB9 testing jig and click Device_test_RS232, and print the data as below:

RS232

/dev/ttyS5Test B

RS422

/dev/ttyS0Test A

Device_Test(0/1)		
串口测试		
/dev/ttyS0]Test A /dev/ttyS0]Test A	[/dev/ttyS5]Test B [/dev/ttyS5]Test B	
返回测试界面		返回上一项测试



3.3 CAN test interface

CANÈ	自独测试
送测试	
: 10:05:57-077 can1 011 01 02 03 04 05 06 07 08	
: 10:05:57-418 can1 011 01 02 03 04 05 06 07 08	can1
t : 10:05:58-145 can1 011 01 02 03 04 05 06 07 08	Carry
: 10:05:58-474 can1 011 01 02 03 04 05 06 07 08	
: 10:05:59-222 can1 011 01 02 03 04 05 06 07 08	
: 10:05:59-539 can1 011 01 02 03 04 05 06 07 08	发送测试
: 10:06:00-292 can1 011 01 02 03 04 05 06 07 08	
: 10:06:00-617 can1 011 01 02 03 04 05 06 07 08	
: 10:06:01-352 can1 011 01 02 03 04 05 06 07 08	
	接收测试

		CAN	单独测	ll试		
接收测试						
枚 : 10:05:22-511	mCommand : candu	mp can1				
₩ • 10.05.36-626	can1 000 [8] 41 42	2 43 44 45 46 47 48			can1	
枚:10:05:37-547	can1 000 [8] 41 42					
友 : 10:05:38-168	can1 000 [8] 41 42	2 43 44 45 46 47 48				
枚 : 10:05:38-603	can1 000 [8] 41 42	2 43 44 45 46 47 48			发送测试	
枚 : 10:05:39-138	can1 000 [8] 41 42	2 43 44 45 46 47 48				
枚 : 10:05:39-900						
枚 : 10:05:41-466	can1 000 [8] 41 4:	2 43 44 45 46 47 48				
					接收测试	



4. Micro SIM Card & Memory Card Instructions

- In order to avoid damaging of the 3G/4G card & memory card, please insert the card smoothly and push slightly before you draw it out.
- The memory card will be heat after long time working.
- If you don't correctly use the memory card or cut the power when it being read, maybe some data will be damaged.
- If you don't correctly use 3G/4G card or cut the power when it being read, the network will be interrupted.
- If you do not use Micro SD card for a long time, please put it into packing box.

5.Basic Operation

5.1 Click and Slide:



5.2 Long-press and Drag

Drag

5.3 Install APK

Settings→Security→Unknown sources→Install APK

E N			E 🛛 6.13	• 🗄 (N /		0 8 6:14
E Seatty				Internal Memory	Skype	
Encrypt tablet				A Stime Int	Do you want to install this application? It does not require	Editor Editor
Patroneta				Pictures	any special access.	
Make passwords visible	Your tablet and personal data are more by apps from unknown sources. You as solely responsible for any damage to y data that may result from using these	gree that you are our tablet or loss of		Podcasts		
Device administrators tree of description desire advers		CANCEL OK		Ringtones		
Unencwn sources Atom sectifieling of any an o			(129)	Screenshots		
Consistent attempts				🐞 skype 8.15.0.339.apl	CANCEL INSTALL	
		d) 🖾		Q		©1

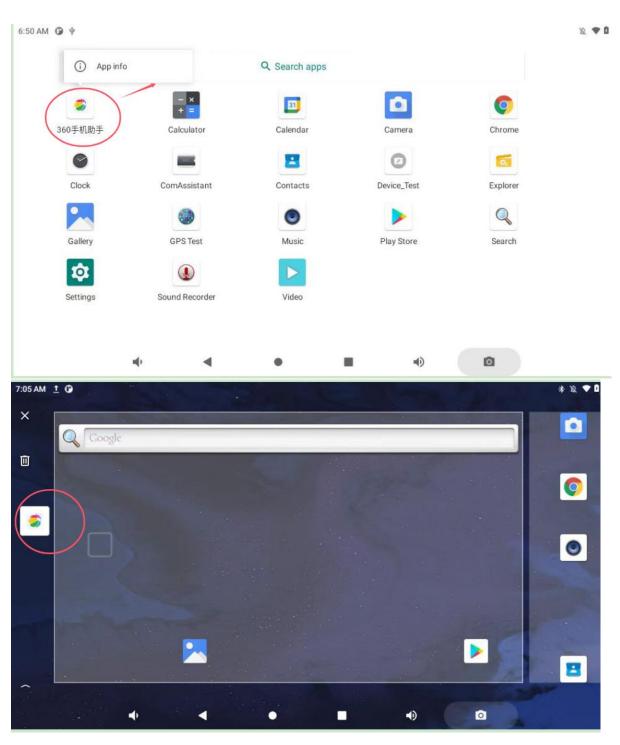
5.4 Delete

5.4.1 Delete APK

Long-press the application icon, and drag to the Home screen, then drop to the recycle, lift-up to delete this software.



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6.MENU

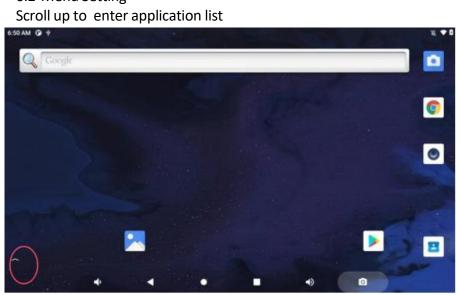
6.1 Icon Bar

Icon bar shows on the top of screen:

Icon	Name	Description
▼	Wi-Fi	Wi-Fi signal connection and status of signal weakness or strength.
	No SIM card	Icon displayed when no SIM card.
	Mobile Network	Network available but not surf the Internet via 2G/3G/4G.

		INTWAY Smart Technology Shenzhen Saintway Technology Co., Ltd.
36		Signal connection and status.
3:25	Time	Current time
0	Wi-Fi Hotspot	Wi-Fi Hotspot available
*	Bluetooth	Bluetooth available
•	Position	GPS positioning
4	Flight Mode	Flight mode status

6.2 Menu Setting





6.2.1 Drop down from the top of the screen to enter notification bar.The notification bar shows system, running and error notice.

	-		¢	
60手机助手		*	Θ	rome
0	TP-LINK_D84A	Bluetooth	Do Not Disturb	
Clock	\diamond		R	olorer
	Auto-rotate	Battery Saver	Mobile data No SIM card	2.
Gallery	*	()	~	arch
\$	Airplane mode	Screen Record Start	Nearby Share	
Settings	0	• •	٤ (۵	3
	() 4			

 $6.2.2\ {\rm Click}\ {\rm `Settings'}\ {\rm to}\ {\rm launch}\ {\rm setting}\ {\rm in}\ {\rm the}\ {\rm application}\ {\rm list}$

Setting according to users' needs. Click search icon to search function options on the upper right corner of screen. To set Wi-Fi, Bluetooth, mobile network

Internet option. VPN, Hotspot, Ethernet functions in 'Network & Internet' option.

9:26 AN	10 *	12 * 8	9:25 AM	G							* 2 * 8
Ŷ	Network & internet WHF, mobile, data usage, and hotspot		÷	Network & inter	rnet						۹
[10]	Connected devices Bluetoott, Androa Auto		((-	Wi-Fi TP-LINK_D84A							۰
	Apps 8. notifications Recent apps, dofault apps		4	Mobile network							
1	Battery 75% - Should last until about 10:45 AM		★ ↔	Airplane mode Ethernet							0
٩	Display Walipaper, sleep, font size			Mobile plan							
4)	Sound Volume, vibration, Do Not Disturb		~	Advanced Hotspot & tethering, D	Data Saver, VF	PN, Private DNS					
	Storage 35% used - 10.36 GB free										
				4	6	•	٠	-	40	۵	

6.2.3 To view and set brightness, wallpaper, screen rotation, screen timeout in 'Display' option.

9:44 AM	4 11 ± 0)					* 2 🗢 🛙
÷	Display					۹
	Brightness level					
	70%					
	Dark theme Off / Will never turn on automatical					
	On 7 will never turn on automatical	y				
	Adaptive brightness					
	Off					
	Wallpaper					
	Screen timeout					
	Never					
	Screen Rotation					
	Colors					
	Natural					
	-	•	•	40	Ø	



T	View I	RAM	in the	'About	tableť	option		
9:40 AM	1 G							* # 🕈 🖬
÷	About tablet							Q
				Ow	ner			
	Device name V7S_CAM							
	MDN Unknown							
	Legal information							
	Baseband version EC25EUXGAR08A17N	11G						
	SIM status Not available							
	RAM ROM 2+16							
	4			•		•0	۵	

6.2.4 To manage language& input and reset options in 'System' option. Add new language is available.

0:02 AM	10	* # # \$	9:59 AN	± ©					* 2. 🕈 :
÷	Languages & input	م	÷	Languages					Q
Â	Languages English (United States)		1	English (United States)					
	KEYBOARDS		+	Add a language					
	On-screen keyboard Gboard and 手机助手输入法								
	Physical keyboard Not connected								
	TOOLS								
	Spell checker Gboard spell checker								
	Autofill service								
	• • •			*	4		•	Ø	

6.2.5 When unrecovered problems occurred, try to click 'Backup' & 'reset' and 'Factory data reset' then follow the instructions. Device will delete settings and applications after restart, and restore to factory defaults. (Please backup all important files before reset. Otherwise files will be deleted automatically and restore to factory defaults.

10:06 AN	1 G	* 12	10:05 A	4 <u>†</u> O					* 22. 🛡 S
÷	Backup		←	Reset options					۹
Ð	Back up to Google Drive			Reset Wi-Fi, mobile & Bluetooth					
	Easily restore your data or switch devices at any time. Learn more			Reset app preferences					
	Backup includes:			Erase all data (factory reset)					
	Apps and apps data Cal Interry Device attracting (Inducting Wi-Fipasswords and permasters) SMS								
	Your backups are uploaded to Google and encrypted using your Google Account password. For some data, your device's screen lock PIN, p password is also used for encryption.	attern,							
									٩
				0.40		_		-	
				a) a	•		•0	۵	

6.2.6 To set date & time and accessibility in 'System' option. View Android version, Build number, kernel version, status information in 'About tablet ' option.

(Do NOT operate if unfamiliar with 'Developer options')



* \$ \$ 8

10:09 AM	10	* & V 10
÷	System	م
	Languages & input Gboard	
Ŀ	Gestures	
0	Date & time GMT+00:00	
۲	Backup Off	
Ð	Reset options Network, apps, or device can be reset	
Do	Multiple users Signed in as Owner	
Ŧ	System update	
10:11 AM		* 12. 🗢 ()
÷	About tablet	۹
	Device Wi-Fi MAC address c0:f5:35:bf:7a:75	
	Bluetooth address 22:22:f1:37:02:00	
	Ethernet MAC address 02:C6:50:3B:8D:AB	

7. Accessories

10:09 AM 1 🛈

7.1 Standard accessories:

- DC 12V adapter 1pc
- Extension Cable 1pc

7.2 Optional accessories:

• Sunshade 1pc

8. Update firmware

8.1 Supported host OS

- Windows XP (32/64bit)
- Windows 7 (32/64bit)
- Windows 8 (32/64bit)
- Windows 10 (32/64bit)



8.2 Install RK USB Driver

Uncompress DriverAssitant.zip, then run DriverInstall.exe inside.

8.3 Connect Device

8.3.1 Use USB OTG cable to connect host and V7S together.

8.3.2 Plug in the power

8.3.3 Run AndroidTool.exe: (Note: If using Windows 7/8, you'll need to right click it, select to run it as Administrator)

If AndroidTool defaults to display in Chinese. We need to change it to English. Open config.ini with an text editor (like notepad).

The starting lines are:

#选择工具语言:Selected=1(中文);Selected=2(英文)	
[Language]	
Kinds=2	
Selected=1	
LangPath=Language\	

Change "Selected=1" to "Selected=2", and save. From now on, AndroidTool will display in English.

8.4.Flash update.img

8.4.1 Switch to "Upgrade Firmware" tab page. Show "found one MSC device"

8.4.2 Click "Firmware" button and open the image file. Detail information of the image file, like version and chip

8.4.3 Click "Switch" button to change ADB Device to LOADER Device.

8.4.4 Click "Upgrade" button to start flash.

8.4.5 Flash update success, Auto reset device.

RKDevTool v2.			di-				- • 2
Download Image		are Adv Switch	EraseFlash			Switch Rockusb Start Switch Rockusb Success	
Fw Ver:	11.0.00	Loader		Chip Info:	RK3568		
Firmware:	₣:\软件\レマー3	568软件\	、V7S-8431固件\V7S_	843_0.0.5_202	230315_CAM. in		
	Fou	nd O	ne ADB Dev	vice			
	Fou	inu U	IC ADD De	VICE			



9. Trouble Shooting

9.1 Power Problem Cannot boot up

• Wrong cable connection:

Connect Extended cable with device first, and connect the AC end of DC adapter with DC input port of Extended cable, then the other end of DC adapter connect with power plug socket.

• Bad connection: Check every connection and socket of power source.

9.2 Screen Problem

- No picture on screen.
- The application reaction time is too long and cannot be activated when clicked.
- The image appears delay or still when switching.

Please restart your system if the device has any problem as described above.

Display screen is misty. Please check whether the display screen surface has dust filth or not. Please simply wipe with clean and soft cloth.

Warning:

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Statement:

This equipment has been tested and found to comply with the limits for a Class B Digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that Interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/ TV technician for help.

The equipment complies with FCC Radiation exposure limit set forth for uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

Note: Due to constant effort to improve products and product features, specifications may change without prior notice.