

# XPI-3568 User 's Manual

V1.0



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### **REVISION HISTORY**

Date	Version	Change Describe	Authuor	Remarks
2023/2/14	1.0	Initial document	Wanghx	

# 1. XPI3568 Operating System

XPI3568 currently supports Linux Debian 10 system and Android 11 system, this article

mainly introduces the instructions for Debian 10 system.

# **2.Linux System Installation**

# 2.1 Burning tool preparation

USB burner cable\*1, type-c power supply\*1

<image>

Windos PC\*1

# 2.2 Driver Installation

#### Download and install DriverAssitant\_v5.0

Link: https://mega.nz/folder/Be900Q7a

Key: qm2Rb9kCM44KKD9HwgFMYQ

Double-click to open DriverAssitant\_v5.0, then double-click DriverInstall.exe and

click "Driver Install", click OK after success.

▲ 瑞芯微驱动助手 v5.0 ×		
	DriverInstall X	
驱动安装    驱动卸载	安装驱动成功.	
	确定	*

# 2.3 Upgrade Firmware

Download and unzip the firmware, double click to open

RKDevTool\_Release>RKDevTool.exe

存储	地址	名字	路径			
 í 🛛	0x00000000	loader	\rockdev\MiniLoaderAll.bin			
	0x00000000	parameter	\rockdev\parsmeter.txt			
	0x00004000	uboot	\rockdev\uboot.img			
	0x00006000	nisc	\rockdev\misc.ing			
1	0x00008000	boot	\rockdev\boot. ing			
	0x00028000	recovery	\rockdev\recovery.ing			
1	0x00068000	backup				
•	0x01C78000	oen	\rockdev\oen.ing			
r	0x00078000	rootfs	\rockdev\rootfs.ing			
			\rackdor\urardata ing			
			\rackdor\urardata ing	-		

Click upgrade firmware, then click firmware, select rockdev->update.img to upload



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🔀 瑞芯微开发工具 v2.92.		×
下载鏡像 土级固住 高级功能	_ X 打井 查抵范围(I)	× • • • • • • • • • • • • • • • • • • •
固件 升级 切换	名称	修改日期
2 固件版本: Lowder版本: 芯片信息:	快速访问 <b>B</b> update.img 3	2023/1/31 16:00
固件:	<b></b>	
	库 ————————————————————————————————————	
	し、一般の時間の「日本」の「日本」の「日本」の「日本」の「日本」の「日本」の「日本」の「日本」	
	<u>چ</u>	4 >
	网络 文件名(N):	~ 打开(0)
没有发现设备	文件类型(I): Firmware(*.img), Load	ler (*. bin) ~ 取消

Plug the USB cable into one of the blue USB burner ports on the bottom of the dual-

layer USB port, and the other end into the  $PC_{\,\circ}$ 



Press and hold the burn button and turn on the power until the burn tool displays "A

LOADER device is	recogi	nized",	click	Upgra	de

🔀 瑞芯微开发工具 v2.92		_	$\times$
下载镜像       升级固件       高级功能         固件       升级       切換         固件版本:       1.0.00       Loader版本:       1.01         固件:       E:\I页目\中性\XPI3568\rk3568-debian_EX	测试设备开始 测试设备成功 核验芯片开始 校验芯片成功 较取FlashInfo开始 获取FlashInfo成功 准备TDB开始 准备TDB成功 下载TDB成功 下载TDB成功 下载TDB成功 下载TDB成功 下载TDB成功		
发现一个LOADER设备	2-8 :LOADER V		

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# **3. System Function**

- 3.1 System Access
- 3. 1. 1 Serial port access:

Prepare a serial cable\*1, connect it to the debug port, and connect the other end to

the PC. open Device Manager->Port,

Check the recognized port number. Then open the serial debugging software and

select COM port with baud rate 1500000

#### 3. 1. 2 Graphical interface access

Connect the XPI3568 to the monitor w it h the HDMI cable, enter the desktop, click

on the bottom left corner -> System Tools - > LXTerminal to open the terminal software,

enter sudo su to log in



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# 3. 1. 3 SSH remote connection:

Connect t h e PC to the XPI3568 on the same LAN, get the IP address and use SSH to

connect through the serial port tool (SecureCRT/TeraTerm)

Protocol: SSH2

Username: linaro

#### Password: linaro

Ent	er Secur	e Shell Password	×			
lina Plea	ro@192.1 ase enter	.68. 1. 104 requires a password. a password now.	OK Cancel			
Use	ername:	linaro				
Pas	sword:	•••••				
	<u>S</u> ave pass	sword	S <u>k</u> ip			
File File Session Manager	2.168.1.1 Edit ID2.16 Inux T He pro he exa ndivid ecmitt inaro@ oot@li	104 - SecureCRT View Options Transfer C Enter host <alt+r> 8.1.104 inaro-alip 4.19.172 grams included with ct distribution term ual files in /usr/sh GNU/Linux comes with ed by applicable law linaro-alip:~\$ sudo naro-alip:/home/lina</alt+r>	Script Tools Win Script Tools Win 28 SMP Mon Dec the Debian GNU/ s for each prog hare/doc/*/copyr ABSOLUTELY NO 10 su su	ndow Help 26 09:42:09 C Linux system a ram are descri ight. WARRANTY, to t	ST 2022 aarch64 re free software bed in the he extent	2;



# 3.2 Hardware Interface





Ò

No.	Name	Description
1	PK25691SOC	*1
1	KK35085 500	
2	LPDDR4	*1
3	USB Connector	*1(It can be used for Wi-Fi/BT port)
4	40 Pin GPIO header	*1
5	MIPI CSI Connector	*1
6	MIPI DSI Connector	*1
		*1(The upper interface of J1 supports OTG
7	USB double layer connector	function, the bottom interface of J1 supports
		USB 3.0 function)
8	USB2.0 double layer connector	*1
9	RJ45	*1(10/100/1000Mbps)
10	DC IN	*1(5V/3A USB Type-C)
11	SW1	*1(Power on key)
12	HDMI Connector	*1(up to 4KP60)
13	IR	*1
14	SW2	*1(Recovery Key)
15	A55 Core debug console	*1
16	eMMC Flash	*1
17	Micro SD card Slot	*1



#### 3.3 Wired Ethernet

Connect the network cable and execute the command **ifconfig** to see if the IP

address is obtained

```
root@linaro-alip:~# ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
         inet 192.168.6.101 retmask 255.255.255.0 broadcast 192.168.6.255
inet6 fe80::5e3c:eabc:4889:c1c9 prefixlen 64 scopeid 0x20<link>
                                     txqueuelen 1000 (Ethernet)
         ether ac:db:da:59:8a:fd
         RX packets 215 bytes 23202 (22.6 KiB)
         RX errors 0 dropped 0 overruns 0
                                                  frame O
         TX packets 107 bytes 14230 (13.8 KiB)
         TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
         device interrupt 41
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
         inet 127.0.0.1 netmask 255.0.0.0
         inet6 ::1 prefixlen 128 scopeid 0x10<host>
         loop txqueuelen 1000 (Local Loopback)
         RX packets 4 bytes 332 (332.0 B)
         RX errors 0 dropped 0 overruns 0
TX packets 4 bytes 332 (332.0 B)
                                                   frame 0
         TX errors 0 dropped 0 overruns 0
                                                  carrier 0
                                                               collisions 0
```

### 3.4 TF Card

Insert the TF card and execute the command to see if it is mounted

```
fdisk -1 //View partitions
```

```
df -h //View mounts
```

```
Disk /dev/mmcblk1: 1.9 GiB, 1999110144 bytes, 3904512 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x00000000
Device
                                     End Sectors
                  Boot Start
                                                     Size Id Type
                           129 3904511 3904383
/dev/mmcblk1p1
                                                    1.9G 6 FAT16
root@linaro-alip:~# df -h
                           Used Avail Use% Mounted on
Filesystem
                    Size
udev
                    853M
                                  853M
                                           0% /dev
                               0
tmpfs
                    185M
                            13M
                                  172M
                                           7% /run
                                          44% /
                                   3.2G
/dev/mmcblk0p6
                    5.9G
                           2.5G
                                           0% /dev/shm
1% /run/lock
                    922M
                                   922M
tmpfs
                               0
tmpfs
                    5. OM
                           4.0K
                                   5.OM
                                           0% /sys/fs/cgroup
tmpfs
                    922M
                               0
                                  922M
tmpfs
/dev/mmcblk0p9
                    185M
                           8.0K
                                  185M
                                           1% /run/user/1000
                                           7% /media/linaro/45f22e42-2e2f-408b-afb9-6b12
                   4.9M
                           302K
                                  4.3M
2a045c2d1
                                          76% /media/linaro/eb78fed6-0ce1-4119-bd9e-17c3
/dev/mmcblk0p7
                     17M
                            12M
                                  3.8M
03ef236d1
tmpfs
                    185M
                               Ο
                                   185M
                                            0%
                                                <del>'run/user/0</del>
/dev/mmcblk1p1 1.9G
                            32M
                                           2% /media/linaro/DISK CARD
                                  1.9G
root@linaro-alip:~#
```



# 3.5 WiFi

#### Connected to the WiFi module and then the antenna



Click on the network in the bottom right corner of the desktop, click on "More

networks" and select WiFi and enter the password to connect

geniatech-x3 GOOAGOO-TEST1 HP-Print-76-LaserJet Pro MFP HUAWEI-H10V21 HUAWEI-H10V21\_5G 11 ideal Ethernet Network 1 Ih disconnected -Wi-Fi Networks Linksys35562 1 geniatech-1-24G -Linksys35562\_5GHz Disconnect M MT-VIKI-BF1CA0C3 -1 12345687 salen -1 1 todaycity888 AHJX-15 -1 TP-LINK\_5G\_B8CB\_5G geniatech-1-5G -1 geniatech-google1 TP-LINK\_B8CB-2,4G h geniatech-google2 1 XL XL100M\_03eb VPN Connections Connect to Hidden Wi-Fi Network. A 06:31 Create New Wi-Fi Netw YJ\_2.4G đ H Y]\_5G ZH\_TEST

Room 02-04, 10/F, Block A, Building 8, Shenzhen International Innovation Valley, Dashi Road, Nanshan District, Shenzhen, Guangdong, China Emai: <u>support@geniatech.com</u> Tel: (+ 86) 755 86028588

#### Type ifconfig to check the IP, open the browser normal that function OK

eth0: flags=4163 <up,broadcašt,running,multicast> mtu 1500 inet 192.168.6.101 netmask 255.255.255.0 broadcast 192.168.6.255 inet6 fe80::5e3c:eabc:4889:c1c9 prefixlen 64 scopeid 0x20<link/> ether ac:db:da:59:8a:fd txqueuelen 1000 (Ethernet) RX packets 60 bytes 8527 (8.3 KiB) RX errors 0 dropped 0 overruns 0 frame 0 TX packets 62 bytes 9927 (9.6 KiB) TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0 device interrupt 41</up,broadcašt,running,multicast>
<pre>lo: flags=73<up,loopback,running> mtu 65536     inet 127.0.0.1 netmask 255.0.0.0     inet6 ::1 prefixlen 128 scopeid 0x10<host>     loop txqueuelen 1000 (Local Loopback)     RX packets 84 bytes 5760 (5.6 KiB)     RX errors 0 dropped 0 overruns 0 frame 0     TX packets 84 bytes 5760 (5.6 KiB)     TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0</host></up,loopback,running></pre>
wlx00504302fe01: flags=4163 <jp,broadcast,running,multicast> mtu 1500 inet 10.168.1.146 netmask 255.255.255.0 broadcast 10.168.1.255 inet6 fe80::2dba:208 :62a4:c68e prefixlen 64 scopeid 0x20<link/> ether 00:50:43:02:fe:01 txqueuelen 1000 (Ethernet) RX packets 436 bytes 108673 (106.1 KiB) RX errors 0 dropped 0 overruns 0 frame 0 TX packets 44 bytes 3984 (3.8 KiB) TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0</jp,broadcast,running,multicast>

#### **3.6 Bluetooth**

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Same steps as WiFi to connect two antennas

Click on the Bluetooth icon in the bottom right corner and select "Devices"



Click "search" to search, pair and connect Bluetooth devices





### 3.7 USB

Connect any USB device (mouse, keyboard, U disk, etc.), can be used normally that means the function OK

#### 3.8 IR

Open the folder, use the infrared remote control to select the file up, down, left and right, can be normally selected that function OK

#### 3.9 RTC

#### Disconnect from the network and execute the following command

hwclock -r	//read hardware time
hwclock -w	//write hardware time
date -s "2023-2-14 23:58:00"	//Set the time, you can set other times



#### date

#### //Read the system time

Wait for about 1 minute and then power off, then power on after 1 minute, enter

hwclock -r and date to see if the time advances normally and the function is OK

root@linaro-alip:~# date -s "2022-2-28 23:58:00" Mon Feb 28 23:58:00 UTC 2022 root@linaro-alip:~# hwclock -w root@linaro-alip:~# hwclock -r 激活 Windows 2022-02-28 23:58:07.438472+00:00 root@linaro-alip:~# date Mon Feb 28 23:58:09 UTC 2022

## 3.10 Camera

Access to camera

Click the bottom left corner of the desktop, select Sound&Video->cheese, there is a

camera screen that functions properly



# 3.11 MIPI Screen

After connecting to the MIPI screen and powering up, the backlight will light up and

display the desktop, which can be used by touch Room 02-04, 10/F, Block A, Building 8, Shenzhen International Innovation Valley, Dashi Road, Nanshan District, Shenzhen, Guangdong, China Emai: <u>support@geniatech.com</u> Tel: (+ 86) 755 86028588





### 3.12 HDMI

Connect the HDMI cable and the other end to the monitor. Power on, the resolution is normal, and the interface can be displayed correctly, that is, the function is normal.

