

Zora P1 With System Installation Guide



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1. Zora P1 (A311D-4G-01) Development Board Introduction

1.1 Front View



1.2 Back View





Zora P1 (A311D-4G-01) Development Board Introduction (continued from previous page):

1.3 Hardware Interface Specifications

Processor	Amlogic A311D, Quad A73+ Dual A53
RAM	4GB DDR4
Storage	32GB EMMC
	Interchangeable EMMC module (16GB, 32GB, 64GB)
Micro SD	Up to 128GB
MIPI-CSI	1 x MIPI-CSI + 8M HDR ISP
MIPI-DSI	1 x MIPI-DSI
USB	2xUSB 3.0 + 2xUSB 2.0 + 1xUSB XHCI OTG 2.0
HDMI	HDMI 2.1
Wifi/BT	WIFI 802.11a/b/g/n/ac, 2x2 MIMO; Bluetooth 5.0
Ethernet	RJ45 Gigabit Ethernet
PoE	Pin + PoE Module (Available As Accessory)
Microphone	On-board
PDM	PDM Interface Microphone Supported
Debug	Micro USB
Buttons	Power, Reset, ADC, Update
Antenna	IPEX Wi-Fi + Bluetooth Antenna
LED	Power Status Indicator
42Pin GPIO	Detail in 42Pin GPIO Introduction
DC-IN	12V/2A, 2.1mm
OS	Android 9.0, Ubuntu 18.04
System Swap	By Replacing the EMMC Module
Upgrade mode	USB Update

1.4 42 Pin GPIO Guide (from 01 to 42)

TX (01)	SDA					
RX	SCL					
GND	SDA2					
S_MO	SCL2					
S_M1	GND					
S_CS	P_D1					
S_CK	P_D0					
GND	P_SY					
I_MCK	P_CK					
I_SCK	GND					
I_LR	GCLK					
I_DO	32К					
GND	GND					
GPIO1	GPIO5					
GPIO2	GPIO6					
GPIO3	GPIO7					
GPIO4	GPIO8					
GND	GND					
PWM2	PWM1					
5V	3.3V					
5V	3.3V (42)					



Zora P1 (A311D-4G-01) Development Board Introduction (continued from previous page):

1.5 UART Guide (from 01 to 04)

3.3V (01)
RX
ТХ
GND (04)

1.6 PMD Guide (from 01 to 04)

3.3v (01) 3.3v GND PDM_DCK GND PDM_DINO PDM_DIN1 GND (07)

1.7 RTC Guide

GND (01) VBAT (02)

2. Preparation for System Installation

2.1 Method 1: Long Press "Update" Button to Enter Update Mode (Recommended)

a. Connect the development board's OTG to a Windows computer through micro USB cable









Preparation for System Installation (continued from previous page):

c. Connect power adapter through DC-in port



d. Successfully linked to the USB Burning Tool

Note: Please make sure the USB Burning Tool is launched from the computer, 'Update' button is pressed, and the board is connected to the computer through a micro-USB cable before plugging in the power supply.

2.2 Method 2: Use ADB Tool to Enter Update Mode (For Pre-Installed Android Only)

- a. Power on the development board by connecting the power adapter
- **b.** Open the computer CMD console
- c. Connect the computer and development board through the micro USB port
- d. In CMD console, type in "adb reboot update "
- e. Successfully linked to the USB Burning Tool

Note: Please make sure the USB Burning Tool is launched from the computer, the board is connected to the computer through a micro-USB cable with functional Android system installed, power supply is connected and the computer has the adb environment configured.

Click to Download USB Burning Tool



3. Installation Guide for Android/Ubuntu System

3.1 Configuration requirements for computers:

- a. Windows 10 operating system
- b. Antivirus software may need to be turned off
- c. High-speed USB 2.0 or USB 3.0 interface

3.2 Updating the System: Method 1

- a. Long press the update button on development board
- **b**. Use a micro USB cable to connect OTG to the computer
- c. Open the software "USB Burning Tool V2.2.x"

😸 USB_Burn_T File Language	ool_V2.2.0 View About								-	o x
Device II) Status		Т	ime	Statisti	c	Star	:	Refres	h
							Configu ☑ Erasu ☑ Erasu □ Rese □ Whe Key(Ov	iration e flash mal erase e bootload t after sud ther overv erwrite)	der ccess vrite key Av	vailable
Cevice ID	Time	Result				>	 Notice 1.Make hub is 2.Select load bu 3.Select 4.Click 5.Befor to pull "Stop". 6.Please 	sure the connected t "File"-"In ming ima t burning "Start"; re close th out device e click "st	devices l; nport ir age pack configu e tool, y es then op" & d	and the mage" to cage; ration; you need dick ose tool
Ready				To	tal :	Suc	ess:	Error :		

- d. Connect power adaptor to the board
- e. USB Burning Tool successfully connected to the development board

Device ID	Status		Time	Statistic	Start	Refresh
HUB1-11	Connect success					
					Configuratio ⊡ Erase flas	n h
					Normal e	erase ~
					Erase boo	otloader
					Reset after	er success
					Whether	overwrite key
¢				,		
< Device ID	Time	Result		2	< Notice	
< Device ID	Time	Result		,	 Notice 1.Make sure hub is conn 2.Select "Fill load burnin 3.Select bur 4.Click "Stat 5.Before do to pull out a "Stop". 	e the devices and the ceted; "Import image" to g image package; ning configuration; rt"; se the tool, you nee devices then click devices then click

f. Import System Image (x.img)

Import im	age								
Checking				Ti	me	Statistic	Start	Re	efresh
Exit	\$ '	ect success					Juir		circon
							Configuratio ⊡ Erase flag	on sh	
							Normal (erase	~
							Erase bo	otloader	
							Reset aft	er succes	55
							Whother	ovonurit	
							Key(Overwr	ite)	Availa
< Device ID	Time		Result				Key(Overwr	ite)	Availal

g. Click the start button to start the update process

Device ID	Status		Time	Statistic	Stop	Pefresh
HUB1-11	3%:Download UE	800T	5		5000	
					 Erase flash Normal eras Erase bootlo Reset after s 	e ~ ader uccess
					K OLIVE NICEPHICITO 1	0.00000
:					key(Overwine)	Availab

h. Complete system installation, click the stop button then close the software

Device II	D Status		Time	Statistic	Stop	Refresh
HUB1-11	100%:Burning succes	ssfully	3:25	0/1		
					Erase flash Normal eras Erase bootlo Reset after si Whether ove Key(Overwrite)	e v ader Jocess rwrite key Availa
< Device ID HUB1-11	Time 2020-03-06 10:11:00 971	Result [0x00000000]Burning successfully		2	Notice 1.Make sure the hub is connecte 2.Select "File"- load burning in 3.Select burning in	e devices and ed; Import imag nage package o configurati



Installation Guide for Android/Ubuntu System (continued from previous page):

3.3 Burn firmware with ADB tool (For Pre-Installed Android Only)

- **a.** Power on the development board by connecting the power adapter
- **b**. Open the computer CMD console
- c. Connect the computer and development board via the micro USB port
- d. In CMD console, type in "adb reboot update"
- e. Successfully linked to the USB Burning Tool

Device I	D Status		Time	Statistic	Start	Refresh
HUB1-11	Connect success	5			Configural Erase fl Normal Erase b Reset al Whethe Key(Overw	tion ash erase ~ ootloader fter success r overwrite key urite) Available
٢						(interior)

f. Import system image (x.img), and repeat steps f to h from method 1 to finish the update

le Language	View Ab	out					
CheckImg Recent file	s >			Time	Statistic	Start	Refresh
Exit C						Configuratio Erase flas Normal e Erase boo Reset afte Whether o Key(Overwri	n h hrase ~ tłoader r r success soverwrite key te) Available
Vevice ID	Time		Result			Notice Notice Notice Notice Select "File load burning Select bur A.Click "Star Sefore clo to pull out d "stop". G.Please clic	the devices and the scted; "-"Import image" to image package; ining configuration; t"; se the tool, you nee levices then click
						in the second seco	K "STOD" & CLOSE TOO

3.4 Burn firmware to multiple development boards at the same time

- Connect boards to the computer through a powered USB hub
- 2. Use the same operation as step 3.2
- **3.** Supports two or more development boards to be updated at the same time

3.5 Ubuntu 18.04 Login Information

The default username of the system is 'orbbec', default password: 'orbbec'



4. Set ADB Debugging (Android)

- a. The development board supports ADB debugging by default.
- b. Connect directly through OTG interface.
 - (Before connecting, please make sure the computer has the ADB driver installed)
- c. Open terminal window and type in 'adb shell'



5. EMMC Module Instructions

emmc goldfinger emmc goldfinger EMMC SEC 937 SEC 937

EMMC pluggable expansion module

(Optional capacity: 16GB, 32GB, 64GB)

Picture shows the EMMC module installed





6. PoE Module Introduction

6.1 Introduction and Product Images

The PoE module supports IEEE 802.3at and is compatible with the IEEE 802.3at standard.

a. Top and bottom view



b. Side views



6.2 Connecting the PoE Module

a. Connect the PoE adaptor to the connector on the bottom of the board as shown below





PoE Module Introduction (continued from previous page):

After the installation is completed, please flip the development board to its recommended position, as shown in the picture below:



 b. Select a switch or router with PoE function.
 Note: To ensure normal GPIO output and network bandwidth, select a Gigabit Ethernet switch or router that supports the 802.3at standard



c. Connect the board's RJ45 (Gigabit Ethernet) port to the switch or router's LAN port that supports the 802.3at standard.



d. Power and network access will be delivered to the board without additional power supply

eth0	⁵ Link encap:UNSPEC Driver meson6-dwmac inet addr:10.10.6.46 Bcast:10.10.7.255 Mask:255.255.254.0 inet6 addr: fe80::7d1e:fe24:249b:8f98/64 Scope: Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:33778 errors:0 dropped:0 overruns:0 frame:0 TX packets:1026 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 traqueuelen:1000 RX bytes:3069942 TX bytes:82126
lo	Link encap:UNSPEC inet addr:127.0.0.1 Mask:255.0.0.0 inet6 addr: ::1/128 Scope: Host UP LOOPBACK RUNNING MTU:65536 Metric:1 RX packets:43 errors:0 dropped:0 overruns:0 frame:0 TX packets:43 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:1 RX bytes:6011 TX bytes:6011



7. System Download

Android:

Click to Download Latest Android System Image

Ubuntu

Click to Download Latest Ubuntu System Image

8. Development Board Accessories

Available accessories:

- PoE Module
- RTC Battery (Coming Soon)
- Touch module and LCD display (Coming Soon)
- Microphone array (Far field pickup with noise reduction algorithm) (Coming Soon)

9. Product Certifications

Certifications	Availability	Comments
FCC ID	YES	
PSE	YES	
CE	YES	
RoHS	YES	



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