Giada

www.giadatech.com

DN84 User Manual

Shenzhen JIEHE Technology Development Co., Ltd.

Statement

Safety Notice

• Read the user manual carefully before setting up the Giada product.
• Disconnect the power cord before installing the internal components
• Most electronic components are sensitive to static electrical charge, please wear a wrist-grounding strap when installing the internal components.
• Don't disconnect the power cord when the system is running to avoid damage to the sensitive components caused by instantaneous surge voltage.

Contact Information

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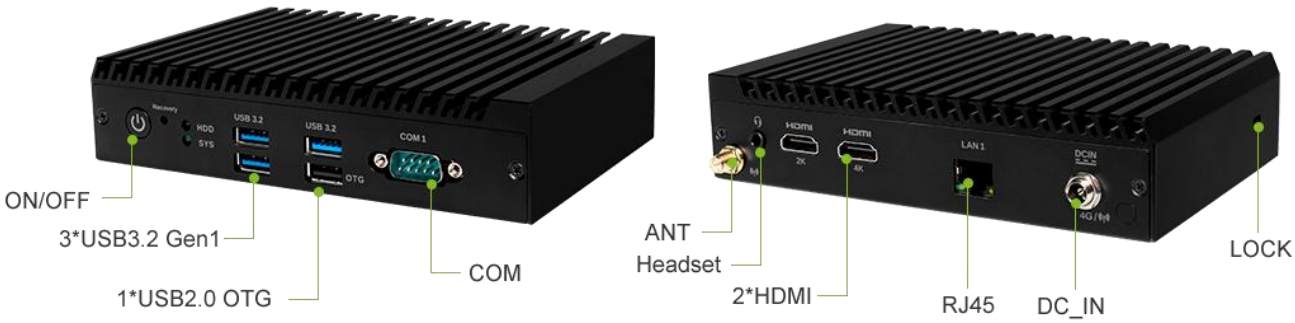
Table of Contents

1. Product Introduction

Based on Rockchip RK3576 platform, Giada DN84 adopts an octa-core ARM processor with integrated NPU, supporting efficient edge AI computing. It features onboard memory and eMMC storage. With dual HDMI display outputs, it supports 4K resolution. Wi-Fi 6, Bluetooth and optional 4G network are supported. The fanless design ensures high reliability, making it suitable for digital signage, kiosks and edge AI applications.

2. Interface Description and Hardware Specifications

2.1 Interface Description



2.2 Hardware Specifications

Processor	**CPU**	Rockchip RK3576 processor
	Processing Units	4 Cores Cortex-A72 & 4 Cores Cortex-A53
	NPU	6 TOPs, support int4/int8/int16/FP16/BF16/TF32 acceleration
	TDP	6W
Memory	**Type**	4 GB, Onboard LPDDR4/LPDDR4x
	Socket	Onboard
	Max Capacity	Optional 8GB

Graphics	**GPU**	ARM Mali-G52MC3
	Graphic Engine	OpenGL ES3.2, OpenCL2.0, Vulkan
	Multi-Media	8K30 H.264/H.265/VP9/AV2/AVS2 Decoder 4K60 H.264/H.265 Encoders
	HDMI	1 x HDMI (Max. 3840 x 2160 @60 Hz) 1 x HDMI (Max. 2560 x 1600 @60 Hz)
Network	**Controller**	Realtek RTL8211F Gigabit Ethernet
	Interface	1 x RJ45 (Optional: 2 x RJ45)
I/O Interface	**USB**	3 x USB3.2 Gen1, 1x USB2.0 (OTG)
	Serial Port	1 x RS232 (Optional: 1 x RS232, 2 x RS485)
	Audio	1 x 2-in-1 Headset (MIC-IN & AUDIO-OUT)
	WiFi/BT	Onboard Wi-Fi/BT module
	SIM	1 x SIM Slot
	M.2	1 x B-key M.2 (3042) for 3G /4G
Storage	**eMMC**	64 GB, Onboard eMMC
	M.2	Optional: 1 x M-Key M.2(2242) PCIe3.0 X4 for SSD
JAHC	**JAHC**	Watchdog / Auto power on/ RTC
Operation System	**OS**	Android 14 / Debian 12
Power	**Power Type**	Lockable DC-IN
	Input Voltage	12 V/3A
Mechanical	**Construction**	Metal
	Mounting	VESA Mounting Kit (JC502) / Wall Mounting Kit (JC283)
	Dimension (W x D x H)	165 mm x 108 mm x 40 mm（6.50″ x 4.25″ x 1.57″）
	Color	Black
Environment	**Operating Temperature**	0°C ~45°C (32°F~113°F) @0.7m/s Air Flow
	Relative Humidity	95%@40℃ (non-condensing)
Certification		CE, FCC Class B, UKCA
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	Processing Units	4 Cores Cortex-A72 & 4 Cores Cortex-A53
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3. Accessories Installation Steps

⚠ For safety reasons, please ensure that the power cord is disconnected before opening the case.

How to open the top cover and bottom cover

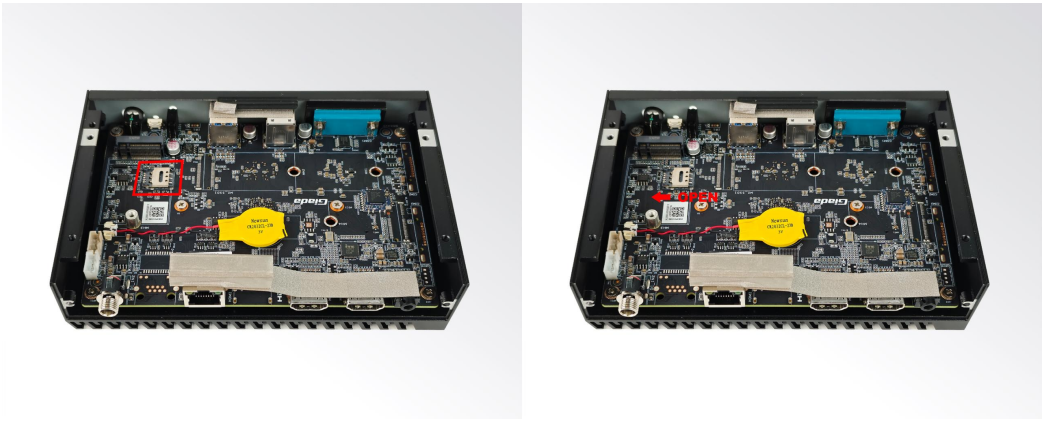
1. Remove the screws on the bottom side, rear panel, and the lockable DC power connector.
2. Slide the bottom cover in the indicated direction, then lift it to open.
3. Disconnect the antenna cable.
4. Remove the bottom cover completely.

(M.2 slot for 3G/4G and SIM card slot are on the bottom side).

3.1 SIM Card Installation

⚠ This product supports standard SIM card with the size of 12.3mm × 8.8mm.

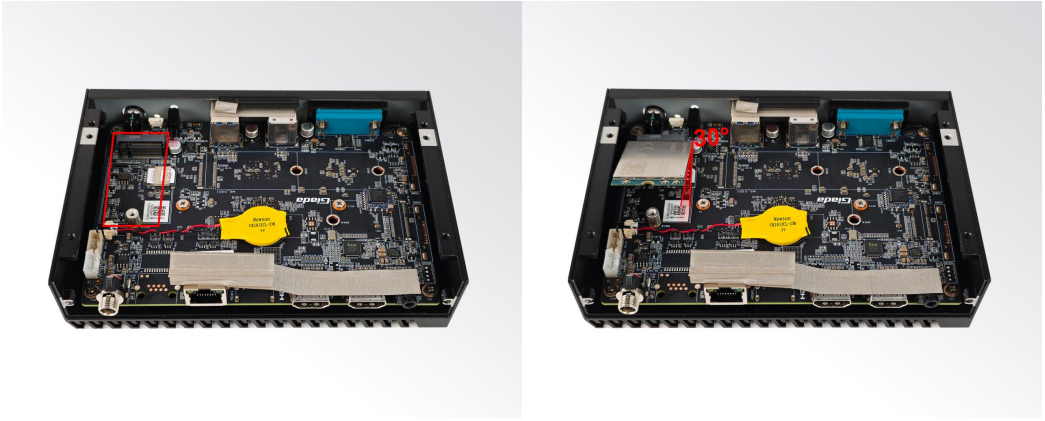
1. Locate the SIM card holder on the mainboard.
2. Slide the holder to the open position.
3. Insert the SIM card into the holder.
4. Slide the holder to the locked position to secure the SIM card in place.

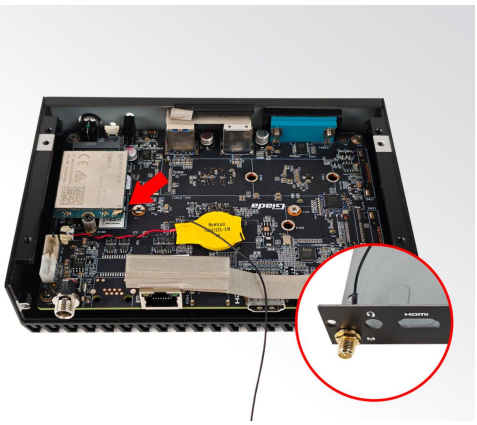


3.2 3G/4G Installation

⚠ Default SMA connector and cable is for WIFI. Please change to 3G/4G SMA connector and cable.

1. Locate the M.2 WWAN slot on the mainboard.
2. Insert the module into the slot at an angle of approximately 30°.
3. Press the module down and secure the module with a screw to fix it in place.
4. Connect the antenna cable to the antenna connector on the module. Route the antenna cable properly and connect them to the external antenna.





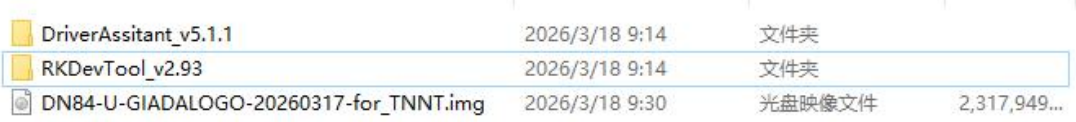
4. Firmware Upgrade Guide

4. 1 Preparation:

- DN84 player
- Archive of DN84 firmware provided by Giada technical support
- Host PC with screen and installed the Windows operation system.
- USB OTG Cable (RP-SMA Male↔RP-SMA Male)

After you get the Archive from Giada technical support, copy the Archive to your host PC, you will find below files inside:

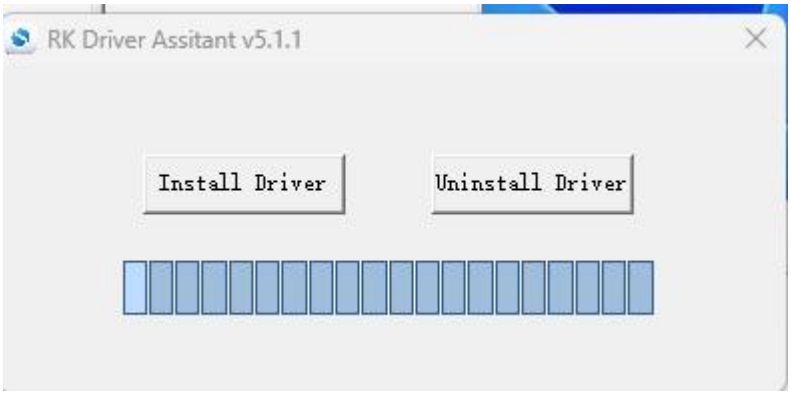
- Android Tool - tool for updating
- DriverAssitant - tool to install drivers and firmware image file
- DN84 Firmware image.



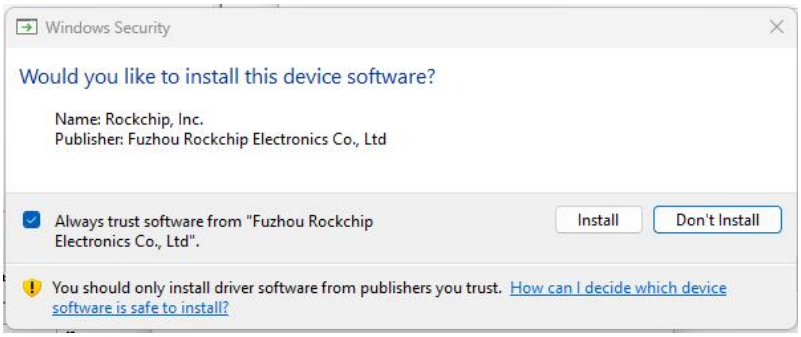
4.2 Upgrade the firmware

4.2.1. Install the driver in your host PC by following steps:

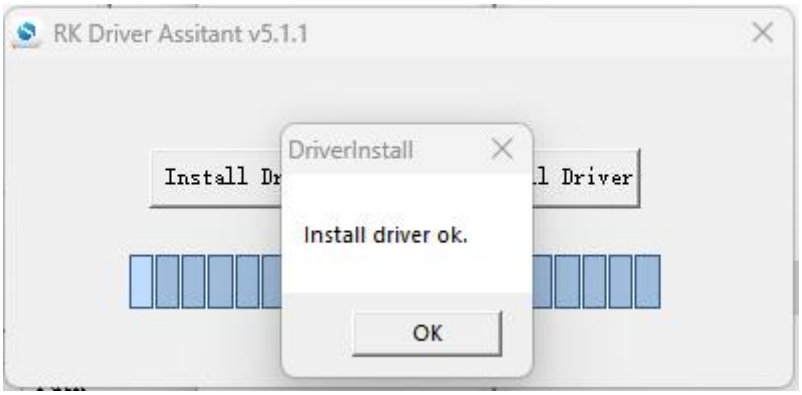
a. Click the DriverAssitant file. Launch RK DriverAssitant and press “Install Driver”.



Apply all changes and warnings during the installation.



b. Click “ok” after the installation finish



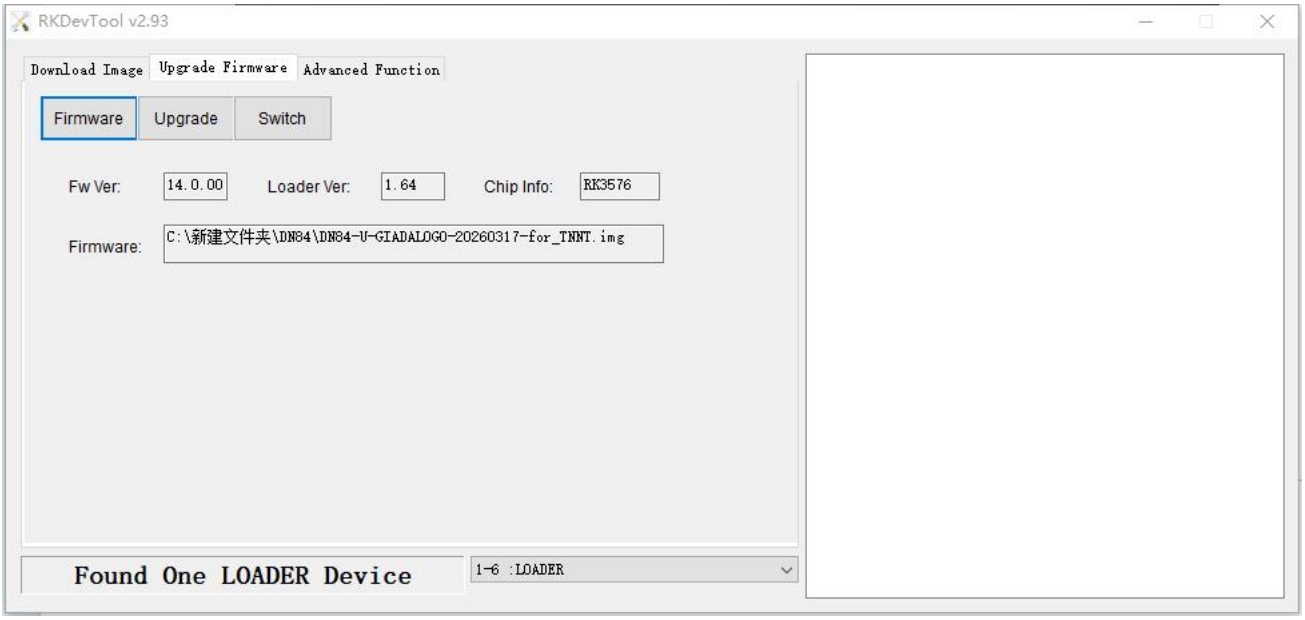
4.2.2. Connect the DN84 with host PC

In order to connect the DN84 with Host PC and run bootloader mode, you should perform following steps:

a. Please ensure that the power of the DN84 player is disconnected
b. Run Android tool V2.93 under the windows of the host PC.
c. Connect the DN84 player to the host PC via USB OTG port (please refer to Fig1for location of the OTG port)
d. Firstly, hold the DN84 player recovery button (please refer to Fig1 for the location of the button), then connect the power adaptor to the player, you will see “Found a MSC Device” or “Found One Loader Device”. (Please refer to Fig2)

⚠ Please don't loosen the button and don't press twice until you see the 'Found a MSC Device'or'Found One loader device'

(Fig1)

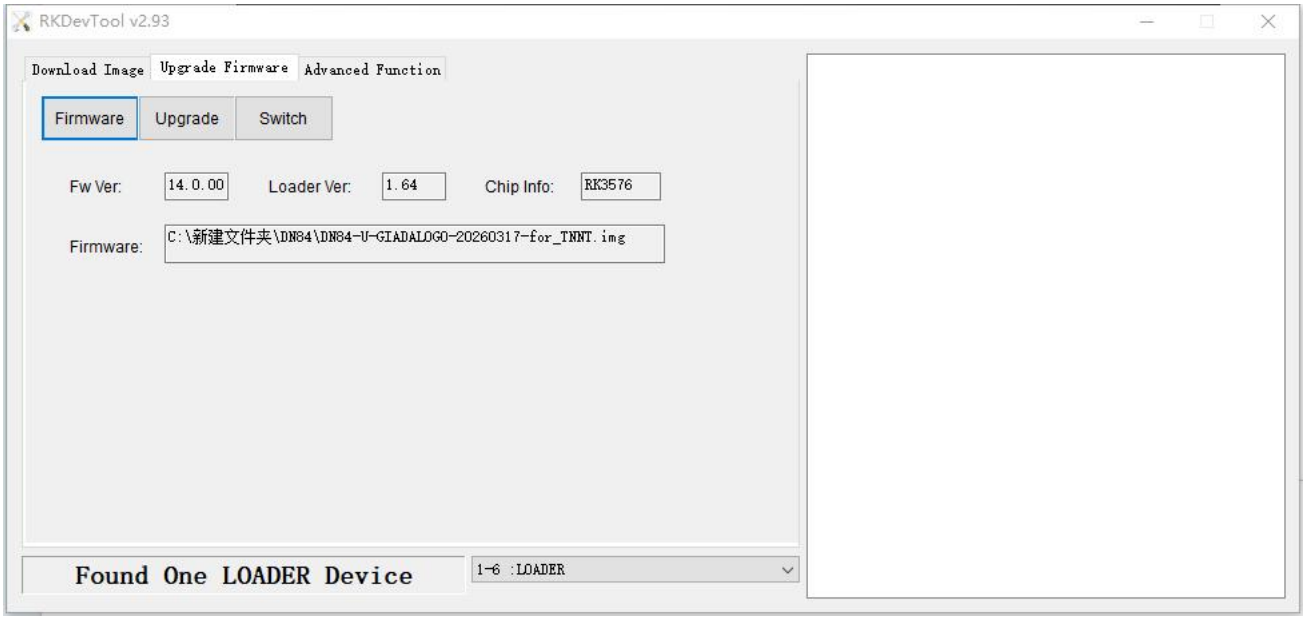


(Fig2)

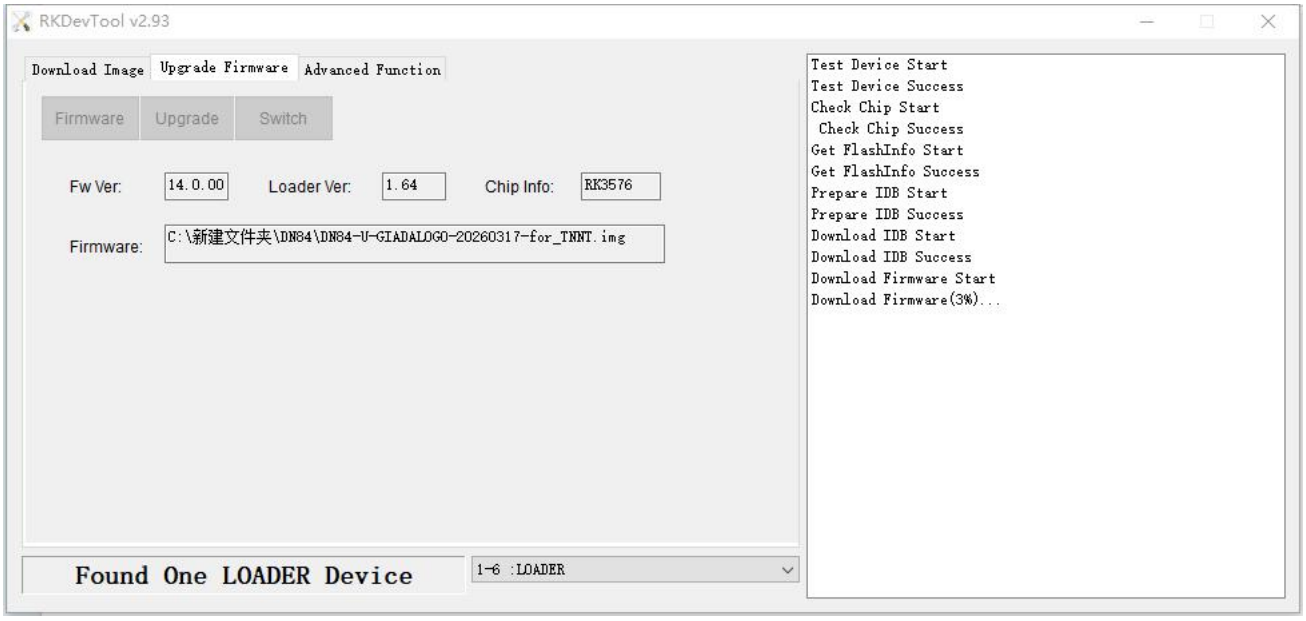
4.2.3. Start the firmware updating.

a. Click “Firmware” button and specify the path to the firmware file which is stored in the host PC (Please refer to Fig2).

b. Wait around 5 seconds to upload the program, FW information will display on the screen. After the “Upgrade” button turns to black, you can click “Upgrade” to update the firmware (please refer to Fig3 and Fig4).

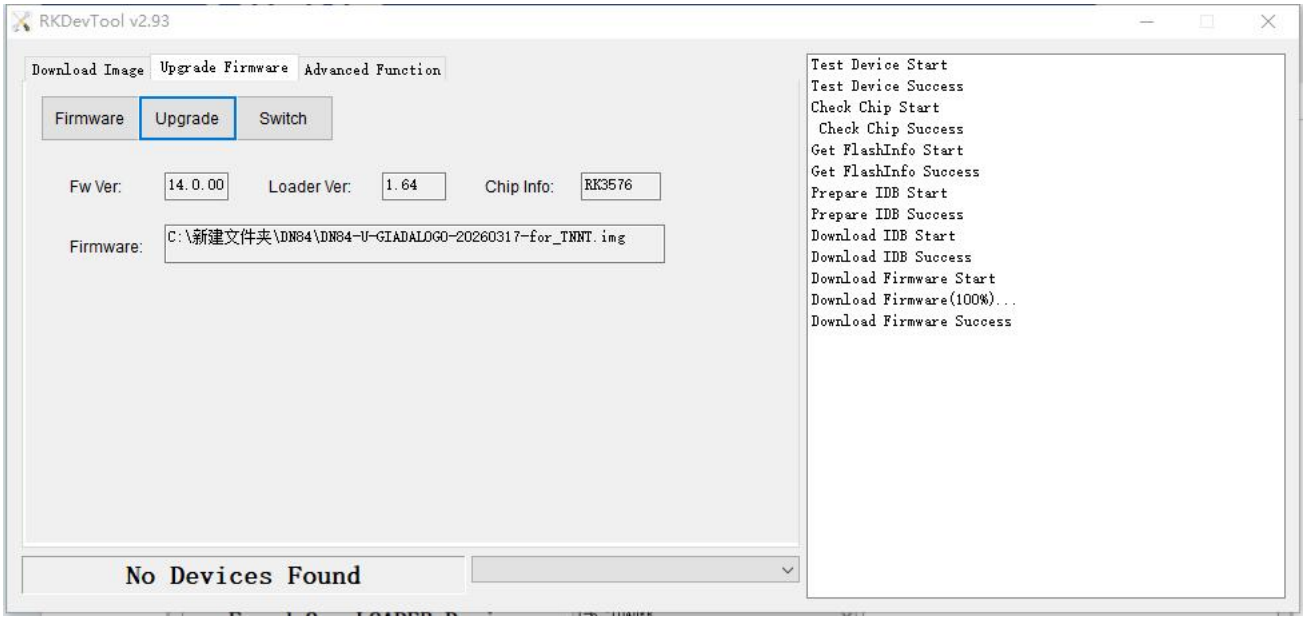


(Fig3)



(Fig4)

b. In the end, you will see a report indicating a successful operation.



5. JAHC APP

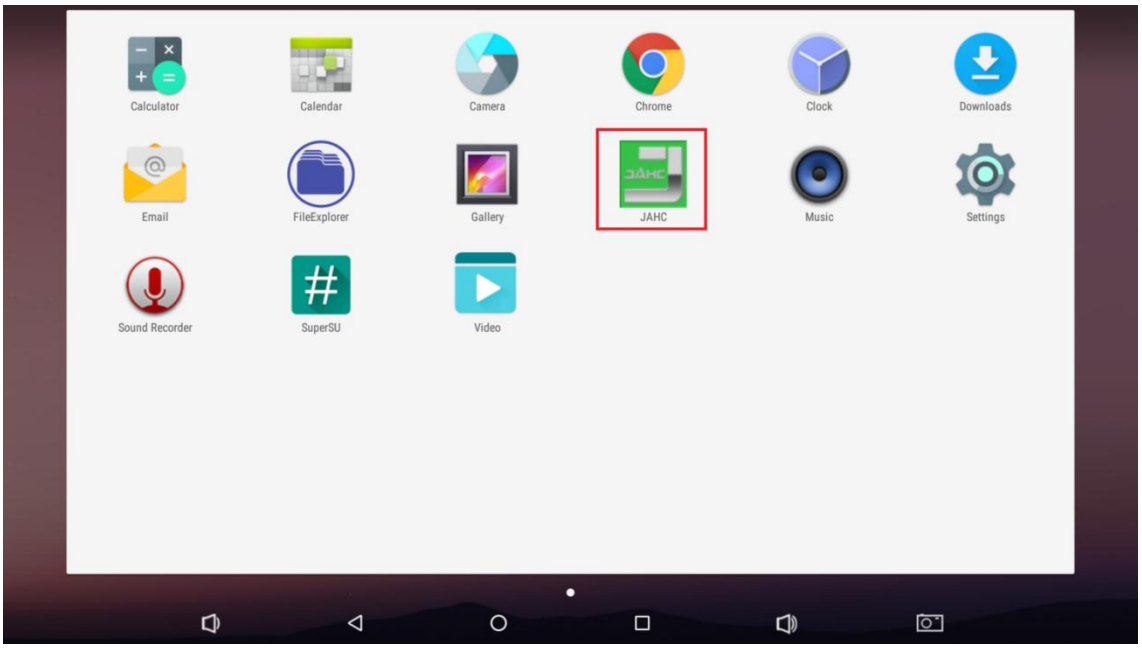
5.1 JAHC APP functions

The user can set up automatic startup and shutdown, one week as a circle

5.2 Startup (open) & shutdown (close) time setup

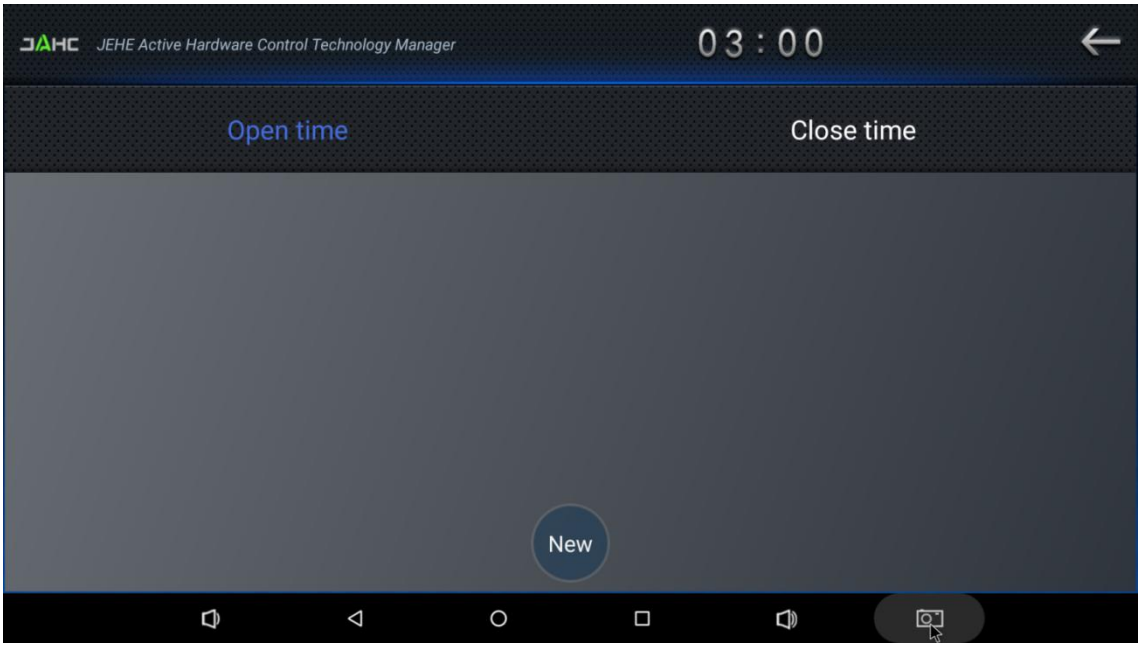
System Requirements:

- Giada player with JAHC APP function.
- Android OS includes JAHC APP（please refer to Fig1）.



(Fig1)

a. After enter the Android desktop, click the JAHC APP icon and the JAHC interface will pop up (please refer to Fig2)

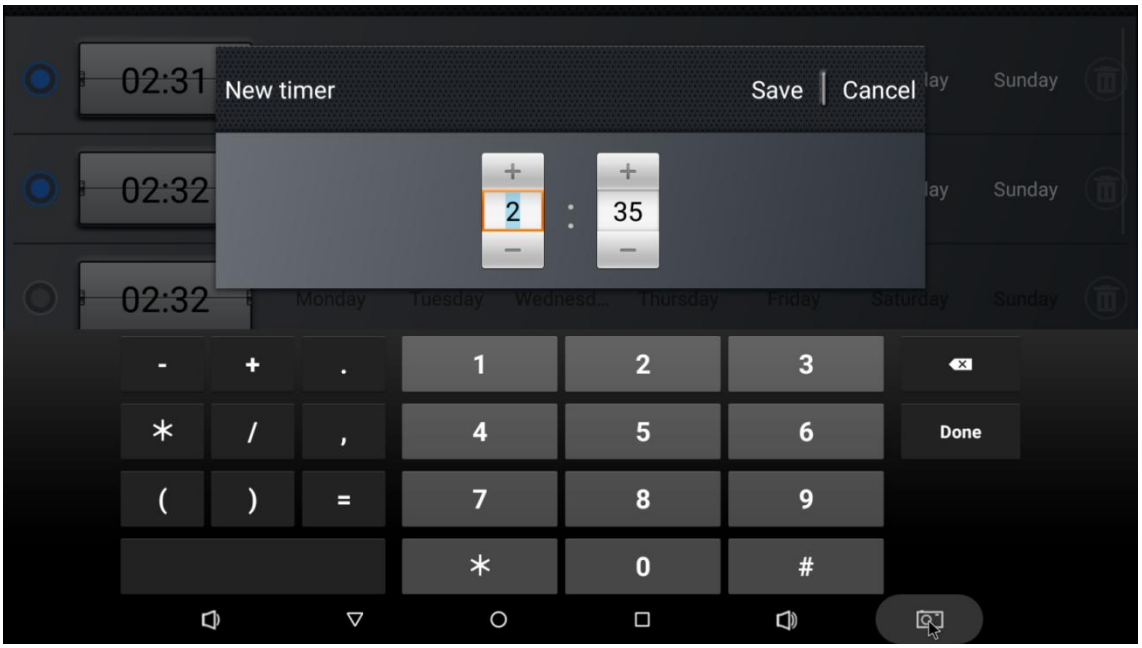


(Fig2)

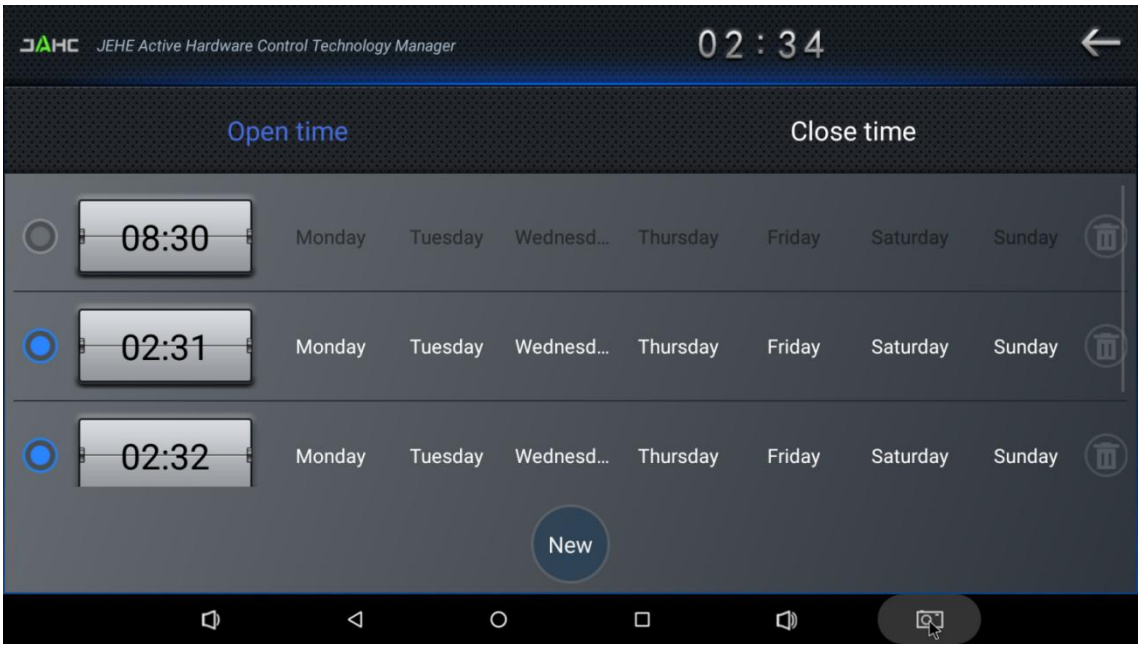
b. Click ‘New’ button to set open time (Fig3) and then click Close time button to set close time. One week as a circle, maximum 3 schedules per day. Select each schedule to set up the Open time and Close time.

c. After finishing the setup, click circles to launch the schedule.

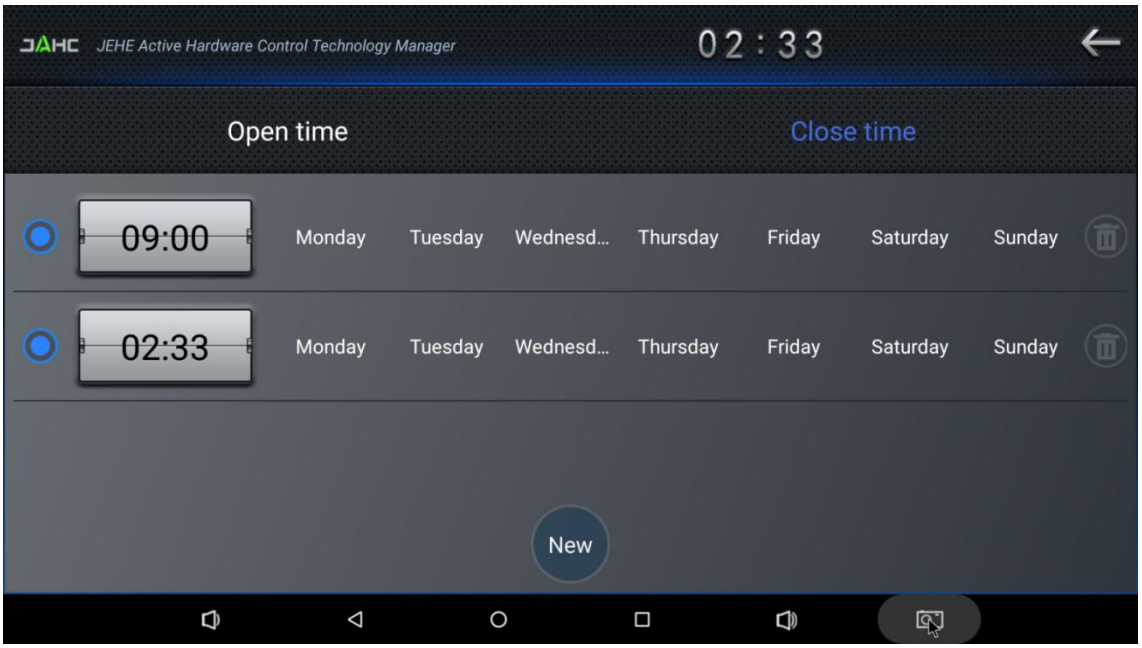
User can click delete to remove the schedule.


02:31
New timer
Save
Cancel
Sunday
02:32
Sunday
2
35
02:32
Monday
Tuesday
Wednesd...
Thursday
Friday
Saturday
Sunday
-
+
.
1
2
3
*
/
,
4
5
6
Done
(
)
=
7
8
9
*
0
#

(Fig3)


JEHE Active Hardware Control Technology Manager
02:34
Open time
Close time
08:30
Monday
Tuesday
Wednesd...
Thursday
Friday
Saturday
Sunday
02:31
Monday
Tuesday
Wednesd...
Thursday
Friday
Saturday
Sunday
02:32
Monday
Tuesday
Wednesd...
Thursday
Friday
Saturday
Sunday
New

(Fig4)



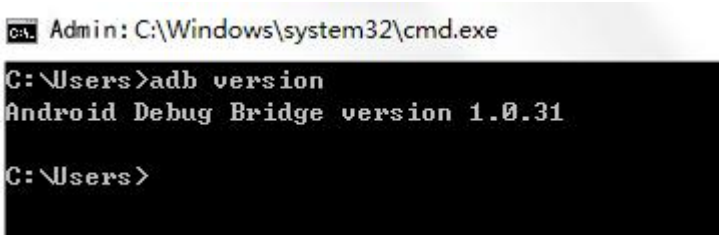
(Fig5)

⚠ Caution: If the interval from shutdown time to next resume time is less than 3 minutes, the system will not shut down.

6. ADB SOP

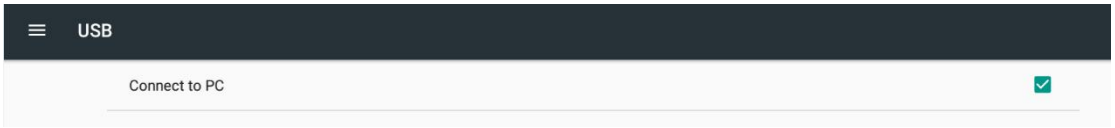
The user can debug APP with ADB driver by below steps:

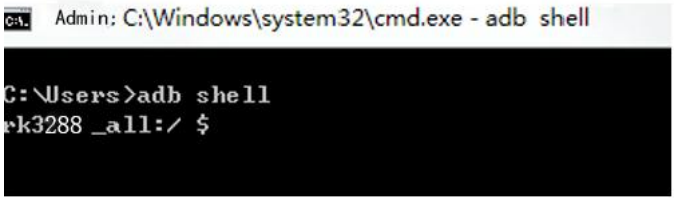
a. Use command ADB version to check if Windows ADB tool is installed.



b. Install Rock chip driver.

- Connect DN84 with windows PC host by OTG cable.
- Select ‘Connect to PC’ under android OS->Settings->USB->connect to PC.
- Then you can use ADB shell command to enter ADB.




Admin: C:\Windows\system32\cmd.exe - adb shell
C:\Users>adb shell
rk3288_all:/ $

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