



# SCALA SMPNJ-P3448-Q Nvidia Jetson Nano Player User Manual

[Home](#) » [scala](#) » SCALA SMPNJ-P3448-Q Nvidia Jetson Nano Player User Manual 



2022.2.24

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## Contents

- [1 Brief introduction](#)
- [2 Product system connection and power on off](#)
- [3 product instruction](#)
- [4 Packing list](#)
- [5 Product Specifications 4HDMI](#)
- [6 Documents / Resources](#)
  - [6.1 References](#)
- [7 Related Posts](#)

## Brief introduction

**Nvidia Jetson Nano Player Smart play** box is a high-end intelligent electronic product that supports Linux operating system. Smart play boxes can be used in a variety of occasions for data collection and (audio & video) advertising. The product includes integrated sound output, local audio and video signal HDMI output, audio and video signal HDMI\_IN conversion HDMI\_OUT, wired network, Bluetooth, WIFI, USB, AUX and other functions. In addition, Products have two series of 2HDMI-Out and 4HDMI-Out, which can be configured with POE and 4G functions. (See Product Specifications for detailed configuration)

- Nvidia Jetson Nano Player Product interface Diagram

Figure 1 Interface definition diagram-Power



Figure 2 Interface definition diagram-4HDMI



Figure 3 Interface definition diagram-2HDMI



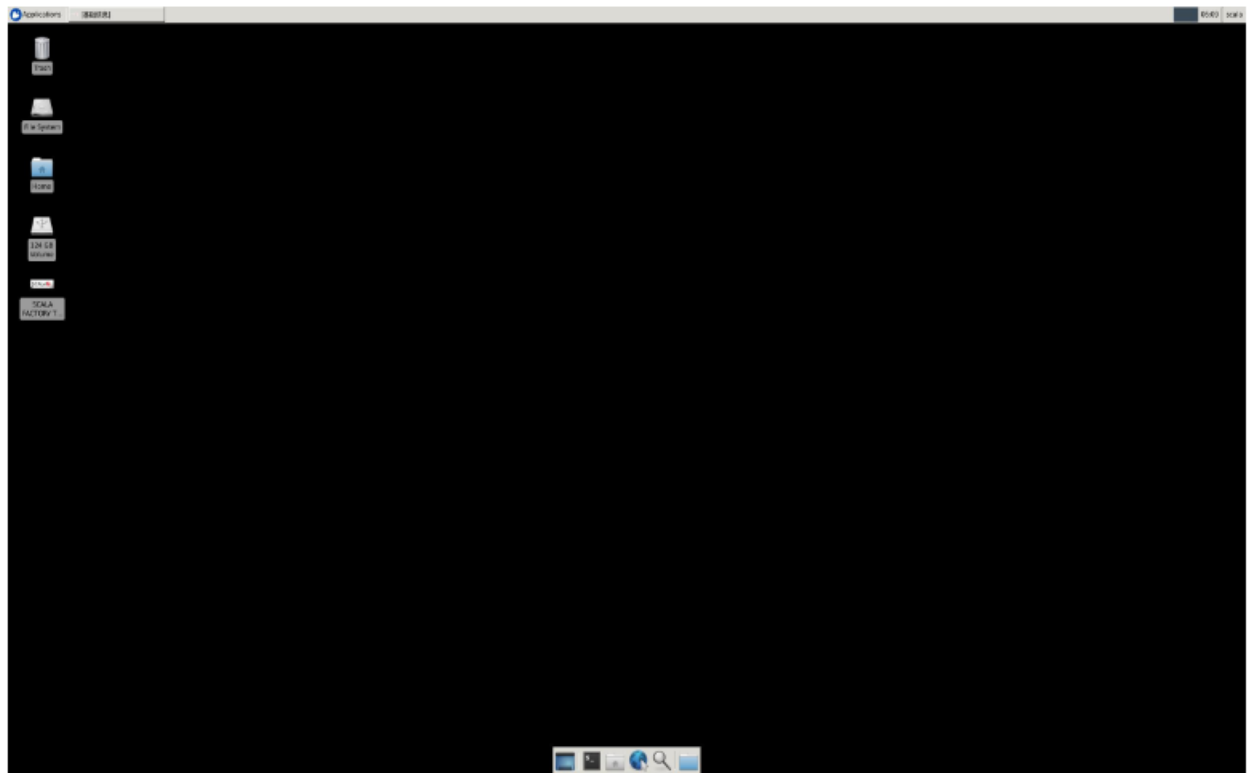
## Product system connection and power on off

### 2.1 Product system connection

1. Connect the 12V/3A power adapter to the power socket (110 to 240VAC). Connect the adapter connector to the DC12V socket of the device, and tighten the nut.
2. Connect the external display to the HDMI OUT port of the product through the HDMI data cable. The number of connections can be selected according to the user's on-site requirements. USB1 to 6 can be connected to peripheral devices, such as a mouse and keyboard, for user interface operations.

### 2.2 Power off and indicator state display

After the system connection is complete, the device will start up automatically. After startup, the following interface is displayed.



When the equipment is on or off, the color changes of the power and status indicators are described as follows to determine whether the sample is working normally.

Power button indicator Status: Power on, the power indicator is green, and the Status indicator is green.

Power button indicator Status: Power off, the power indicator is red and the Status indicator is off.

When the RESET button is pressed, the power indicator is green → red → green, and the Status indicator is green → off → red → green.

## **product instruction**

### **3.1 Basic device information**

Click to open the SCALA FACTORY TEST TOOLS APP on the desktop and follow the following steps to view the firmware version, mainboard ID, MAC, memory and other basic information.

Process: SCALA FACTORY TEST TOOLS → factory test → previous process → basic information

### **3.2 External USB device**

The USB2.0 and ports of the player box can be connected to external devices such as mouse and keyboard to realize data input and output and interface operation.

In addition, the insertion of a USB flash drive or a mobile hard disk can achieve data transmission and storage. (When the device is inserted into the USB port, it will be automatically displayed on the initial interface).

### **3.3 Video display**

Player box HDMI Out1 to 4 four HDMI signal output ports can play local and network real-time video. You can also play video from the HDMI IN input.

In the “SCALA FACTORY TEST TOOLS” APP, local video playback path: FACTORY TEST → aging process → browser → Display\_0 → player.

HDMI IN input provides video playback path: Factory test → pre-process → HDMI-IN.

### **3.4 Wired network setup**

Player box RJ45 port Connection Network cable Connected to a valid network port, you can access the Internet through a cable.

In the “SCALA FACTORY TEST TOOLS” APP, Operation path: FACTORY TEST → previous procedure → wired

network.

### **3.5 Wireless Network Settings**

The player box comes standard with integrated WIFI.

In the “SCALA FACTORY TEST TOOLS” APP, Operation path: FACTORY TEST → previous procedure → wireless network.

### **3.6 Bluetooth Settings**

The player box comes standard with integrated Bluetooth.

In the “SCALA FACTORY TEST TOOLS” APP, Operation path: FACTORY TEST → previous procedure → Bluetooth.

### **3.7 Audiocast**

When the playback box connects to the audio equipment through the AUX port, the audio signal can be output.

### **3.8 Serial port**

COM port on the player box can be used for serial communication. if required, contact the manufacturer.

### **3.9 POE functions**

POE is optional. If you need the POE functions, contact the manufacturer.


### **Firmware upgrade**

This product can be used for secondary development on various occasions, if you need to customize functions or upgrade firmware, please contact the manufacturer.

### **Packing list**

1. 12V/3A multi-function DC anti-straightener adapter, 1PCS
2. Wall mounting bracket, 1PCS
3. With pad M4\*4, screw \*6
4. External hex wrench, 1PCS
5. DB9 to RJ11 RS232 converter cable, 1PCS


### **Product Specifications 4HDMI**

Product Descriptions	Scala NVIDIA Jetson Nano Player PCB(4 x HDMI Output)	
		
Hardware & OS	Core	NVIDIA Jeston Nano Module
	CPU	ARM® Cortex® -A57 MPCore (Quad-Core) Processor with NEON Technology. Maximum Operating Frequency: 1.43GHz
	GPU	Maxwell 128-core GPU   End-to-end lossless compression   Tile Caching   OpenGL® 4.6   OpenGL ES 3.2   Vulkan™ 1.1   CUDA®   OpenGL ES Shader Performance (up to): 512 GFLOPS (FP16) Maximum Operating Frequency: 921MHz

	Multi-Media	<p>Video Decode</p> <p>H.265 (Main, Main 10): 2160p 60fps   1080p 240fps</p> <p>H.264 (BP/MP/HP/Stereo SEI half-res): 2160p 60fps   1080p 240fps</p> <p>H.264 (MVC Stereo per view): 2160p 30fps   1080p 120fps VP9 (Profile 0, 8-bit): 2160p 60fps   1080p 240fps</p> <p>VP8: 2160p 60fps   1080p 240fps</p> <p>VC-1 (Simple, Main, Advanced): 1080p 120fps   1080i 240fps MPEG-2 (Main): 2160p 60fps   1080p 240fps   1080i 240fps</p> <p>Video Encode</p> <p>H.265:2160p 30fps   1080p 120fps</p> <p>H.264 (BP/MP/HP): 2160p 30fps   1080p 120fps</p> <p>H.264 (MVC Stereo per view): 1440p 30fps   1080p 60fps VP8: 2160p 30fps   1080p 120fps</p> <p>JPEG (Decode and Encode): 600 MP/s</p>
	Memory	Dual-Channel LPDDR4 (4GB Standard)
	Storage	16GB High-Speed eMMC 5.1 M.2 NVMe SSD (Optional)

	<b>OS</b>	SUPPORT LINUX
	<b>I/O Ports</b>	1 x DC input[with anti-loose mechanism], 1 x HDMI Input (HDMI 1.4 up to 1080P@60fps, support HDCP 1.4 a), 4 x HDMI Output (HDMI 1.4 up to 1080P@60fps, support HDCP 1.4), 6 x USB 2.0 Host, 1 x USB 2.0 Service, 1 x 4G Antenna, 1 x WiFi Antenna, 1 x AUX, 1 x Recovery Key, 1 x Reset Key, 1 x RJ11 for Power Extension Cable Port, 1 x RJ11 for Serial Port, 1 x RJ45 for Gigabit Ethernet, 1 x LED Status, 1 x Power button with LED.
<b>Power</b>	<b>Power input by a dapter</b>	DC12V, 3A
<b>Connectivity</b>	<b>RJ45</b>	10/100/1000 BASE-T Ethernet
	<b>WIFI</b>	WiFi 2.4GHz/5GHz Dual-Band Support 802.11a/b/g/n/ac
	<b>Bluetooth</b>	Built-in BLE 5.0 Beacon

<b>General information</b>	<b>Case Material</b>	Aluminum
	<b>Storage Temp</b>	(-15 — 65 degree)
	<b>Working Temp</b>	(0 — 50 degree)
	<b>Storage/Working Humidity</b>	(10 — 85 )
	<b>Dimension</b>	238.5mm*124.7mm*33.2mm
	<b>Net Weight</b>	TBD

<b>Product Descriptions</b>	<div><div><b>Scala NVIDIA Jetson Nano Player(2 x HDMI Output)</b></div><div></div></div>	
<b>Hardware &amp; OS</b>	<b>Core</b>	NVIDIA Jeston Nano Module
	<b>CPU</b>	ARM® Cortex® -A57 MPCore (Quad-Core) Processor with NEON Technology.  Maximum Operating Frequency: 1.43GHz
	<b>GPU</b>	Maxwell 128-core GPU   End-to-end lossless compression   Tile Caching   OpenGL® 4.6   OpenGL ES 3.2   Vulkan™ 1.1   CUDA®   OpenGL ES Shader Performance (up to): 512 GFLOPS (FP16) Maximum Operating Frequency: 921MHz

	<b>Multi-Media</b>	Video Decode H.265 (Main, Main 10): 2160p 60fps   1080p 240fps H.264 (BP/MP/HP/Stereo SEI half-res): 2160p 60fps   1080p 240fps H.264 (MVC Stereo per view): 2160p 30fps   1080p 120fps VP9 (Profile 0, 8-bit): 2160p 60fps   1080p 240fps VP8: 2160p 60fps   1080p 240fps VC-1 (Simple, Main, Advanced): 1080p 120fps   1080i 240fps MPEG-2 (Main): 2160p 60fps   1080p 240fps   1080i 240fps Video Encode H.265: 2160p 30fps   1080p 120fps H.264 (BP/MP/HP): 2160p 30fps   1080p 120fps H.264 (MVC Stereo per view): 1440p 30fps   1080p 60fps VP8: 2160p 30fps   1080p 120fps JPEG (Decode and Encode): 600 MP/s
	<b>Memory</b>	Dual-Channel LPDDR4 (4GB Standard)
	<b>Storage</b>	16GB High-Speed eMMC 5.1 M.2 NVMe SSD (Optional)
	<b>OS</b>	SUPPORT LINUX
	<b>I/O Ports</b>	1 x DC input[with anti-loose mechanism], 1 x HDMI Input (HDMI 1.4 up to 1080P@60fps, support HDCP 1.4a), 4 x HDMI Output (HDMI 1.4 up to 1080P@60fps, support HDCP 1.4), 6 x USB 2.0 Host, 1 x USB 2.0 Service, 1 x 4G Antenna 1 x WiFi Antenna, 1 x AUX, 1 x Recovery Key, 1 x Reset Key, 1 x RJ11 for Power Extension Cable Port, 1 x RJ11 for Serial Port, 1 x RJ45 for Gigabit Ethernet, 1 x LED Status, 1 x Power button with LED.
<b>Power</b>	<b>Power input by a dapter</b>	DC12V, 3A
<b>Connectivity</b>	<b>RJ45</b>	10/100/1000 BASE-T Ethernet
	<b>WIFI</b>	WiFi 2.4GHz/5GHz Dual-Band Support 802.11a/b/g/n/ac
	<b>Bluetooth</b>	Built-in BLE 5.0 Beacon

<b>General information</b>	<b>Case Material</b>	WiFi 2.4GHz/5GHz Dual-Band Support 802.11a/b/g/n/ac
	<b>Storage Temp</b>	(-15 — 65 degree)
	<b>Working Temp</b>	(0 — 50 degree)
	<b>Storage/Working Humidity</b>	(10 — 85 %)
	<b>Dimension</b>	238.5mm*124.7mm*33.2mm
	<b>Net Weight</b>	TBD



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 opera

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment. NOTE: 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. Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

Documents / Resources

<div><div><div>Nvidia Jetson Nano Player</div><div>User Manual</div></div><div><div>2020.2.28</div><div>Copyright © 2020 NVIDIA CORPORATION. All rights reserved. NVIDIA, the NVIDIA logo, and Jetson are trademarks or registered trademarks of NVIDIA Corporation in the United States and other countries. All other trademarks are the property of their respective owners.</div></div></div>	<div><div><a href="#">SCALA SMPNJ-P3448-Q Nvidia Jetson Nano Player</a> [pdf] User Manual</div><div>SMPNJ-P3448-Q, SMPNJP3448Q, 2AU8X-SMPNJ-P3448-Q, 2AU8XSMPNJP3448Q, SMPNJ-P3448-Q Nvidia Jetson Nano Player, SMPNJ-P3448-Q, Nvidia Jetson Nano Player</div></div>
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References

- [Scala China - Scala China](#)