

SPECIFICATION

MODEL : PS4 Game Controller

PART NO : NJP411

VERSION : V1.0

Approver		Check		Design
GM	PM	FAE	QA	

Confirm	
Sales	Customer

■ **Document Title****Denomination : PS4 Game Controller****Part No. : NJP411**■ **Circuit Diagram Version**

Part No.	Function	Version
NJP411	PS4 Game Controller	V1.0

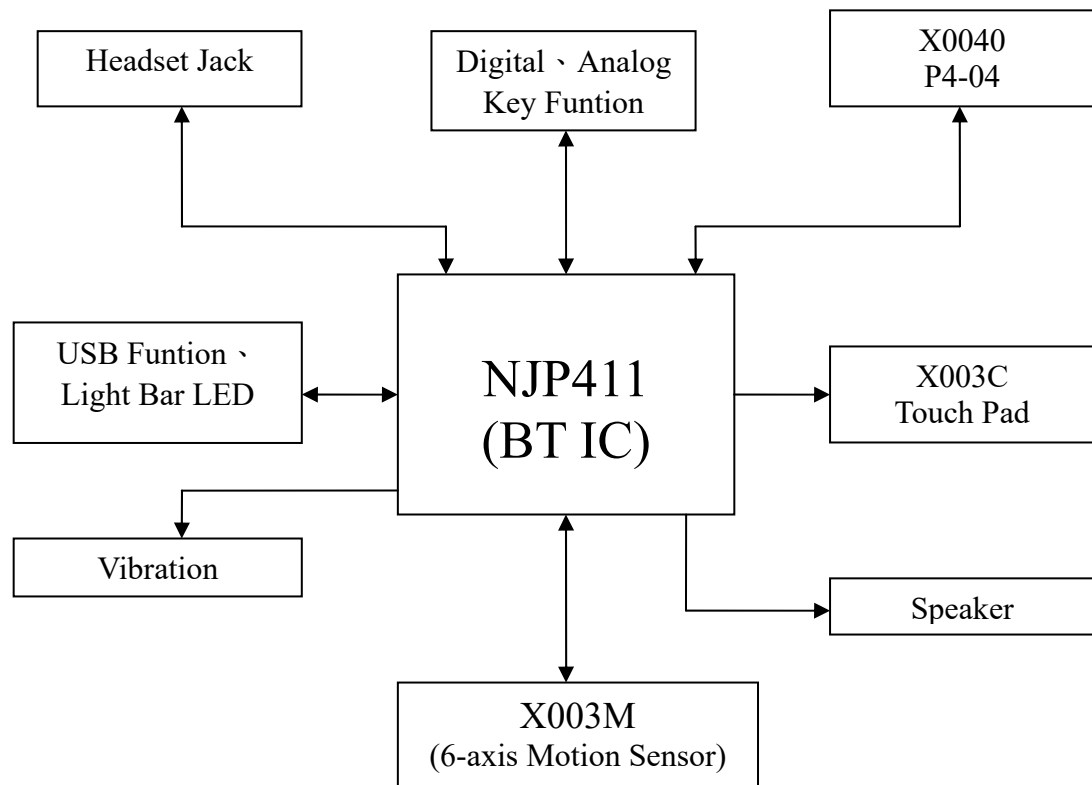
■ **Revision History**

Revision No.	History	Page NO.	Author	Date
V1.0	Issue	7	Joy	2022/3/14

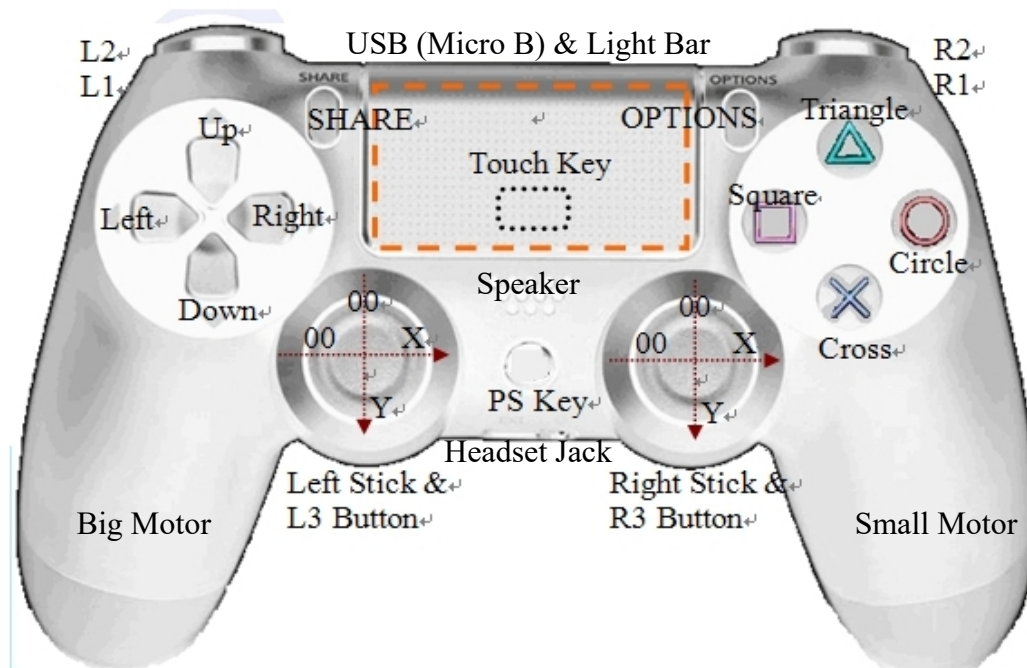
1. Product Features:

This product is based on PS4 Game Controller , It is suitable for PS4 console and compatible with PS4 Bluetooth controller. Equipping with 4 Analog Axes, 2 Analog Buttons and 16 Digital Buttons, as well as 2-Points Touchpad, RGB Light Bar, Big and Small Vibration, Headset Jack and 6-axis Motion Sensor, it also supports the wired connection to PC and the wireless pairing function.

2. Product block diagram :



3. Function configuration diagram :



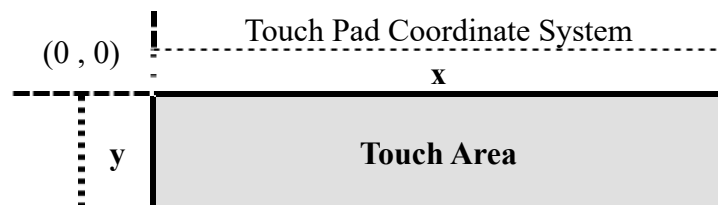
4. Product Specifications :

- 4.1. Bluetooth Connection (Bluetooth 2.1+EDR specification) Support.
- 4.2. USB Wired Connection/Pairing (USB 1.1/USB 2.0 and Micro USB) Support.
- 4.3. Button & Stick

Button	Digital/Analog	Button	Digital/Analog
PS	D	Up	D
OPTION	D	Down	D
SHARE	D	L1	D
L3	D	L2	D/A(0 to 255)
R3	D	R1	D
Circle	D	R2	D/A(0 to 255)
Cross	D	Touch Key	D
Triangle	D	Left Stick (x-axis)	A(0 to 255 , center:128)
Square	D	Left Stick (y-axis)	A(0 to 255 , center:128)
Right	D	Right Stick (x-axis)	A(0 to 255 , center:128)
Left	D	Right Stick (y-axis)	A(0 to 255 , center:128)

4.4. Touchpad (supports the capacitive touchpad with 2-point touch)

SPEC.	Value Range
Number of Detectable Touch Points	2
Pressure-sensitive Format	Capacitance
X-axis Touch Coordinate Range	0 to 1919
Y-axis Touch Coordinate Range	0 to 941



4.5. Light Bar (consists of RGB LED for indicating the status, with 256 shades per color channel brightness)

LED	Value Range
Red	0:off , 1 to 255 : On
Green	
Blue	

On the main menu for PS4 console, each player's color is indicated:

Player 1: Blue (64), Player 2: Red (64),

Player 3: Green (64), Player 4: Purple (Red=64, Blue=64).

4.6. Vibration(built in 2 vibration motors. The larger one is at left hand side of the controller, and smaller one is at right hand side of the controller, with 256 levels per motor's vibration strength)

Motor	Value Range
Small (Right Side)	0:stop , 1 to 255 : rotate
Large (Left Side)	

4.7. Motion Sensor(divides into the acceleration sensor and angular velocity sensor. Each has 3-axis direction with a resolution of 65536 per axis)

Sensor		Value Range
Acceleration ± 4 G	X-axis	-32768↔0000↔32767
	Y-axis	0G : 0 、 ±1G : ±8192
	Z-axis	
Angular Velocity (Gyro) ± 2000 dps	X-axis	-32768↔0000↔32767
	Y-axis	(When still : 0)
	Z-axis	

4.8. Audio Feature(built in a mono speaker and stereo headset jack)

Audio	Spec.
Speaker	Built-in , Mono ◦
Headset Jack	Support Stereo Headset 、 Microphone ◦

4.9. Power (Rechargeable Lithium Battery)

Type	Voltage (± 0.1 V)
Fully Charged	DC3.93to DC 4.20V
2 Bars Left	DC3.71 to DC 3.92V
1 Bars Left	DC3.57 to DC 3.70V
No Bar Left	Under DC3.41V
In Hibernate	Under DC3.40V

5. Pairing:

- 5.1 Wired Pairing Method: Use Micro-USB cable to connect PS4 console to finish pairing.
After that, press PS Key to connect wirelessly.
- 5.2 Wireless Pairing Method: Press SHARE key first when the controller is in Hibernate.
Then, press PS Key for 3 seconds, and LED Bar starts to flash twice periodically to enter the wireless pairing mode. Now, the devices support PS4 controller can be searched and paired by Bluetooth.

6. Offline calibration function :

- 6.1. Please remove the USB cable and disconnect the wireless connection first, let the handle go to sleep (the channel light is off), and place it on the desktop
- 6.2. First press the SQUARE and CROSS keys, and then press the PS key, when the channel light starts to flash red slowly, it will enter the offline calibration function. At this time, please remove your fingers and avoid vibration to the desktop and handle, which will cause calibration failure.
- 6.3. When the channel light flashes slowly for 2 seconds, the calibration is successful, and when the channel light flashes slowly for 4 seconds, the calibration fails. After the calibration fails, please perform the offline calibration again.

7. Electrical Specifications:

(Ta=0 °C ~ 70 °C 、 Power Input = DC 3.7V)

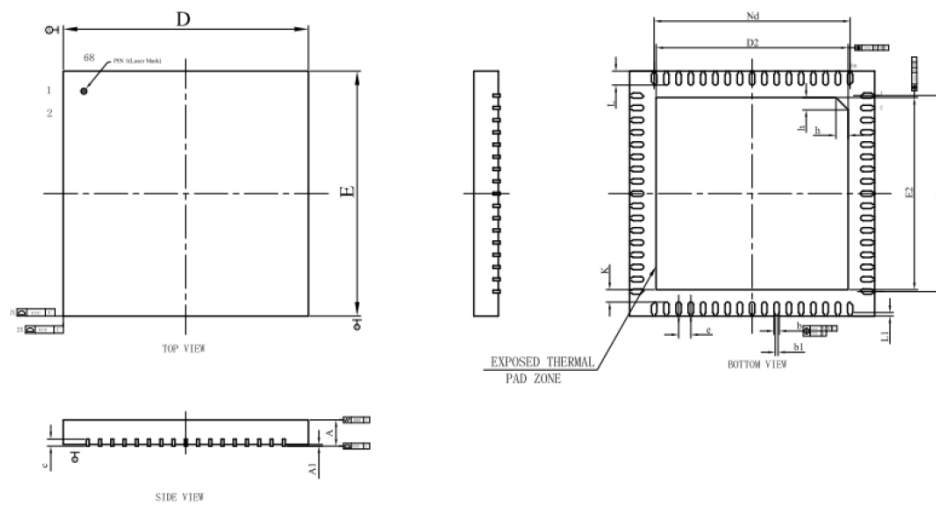
7.1. Operation Voltage: DC 3.4V to DC 4.2V (± 0.1V)

7.2. Operation Current:

Min	50mA ± 10mA (@ DC 3.7V)
Max	Under 200mA (@ DC 3.7V)

7.3. Current in Hibernate: : Under 35uA

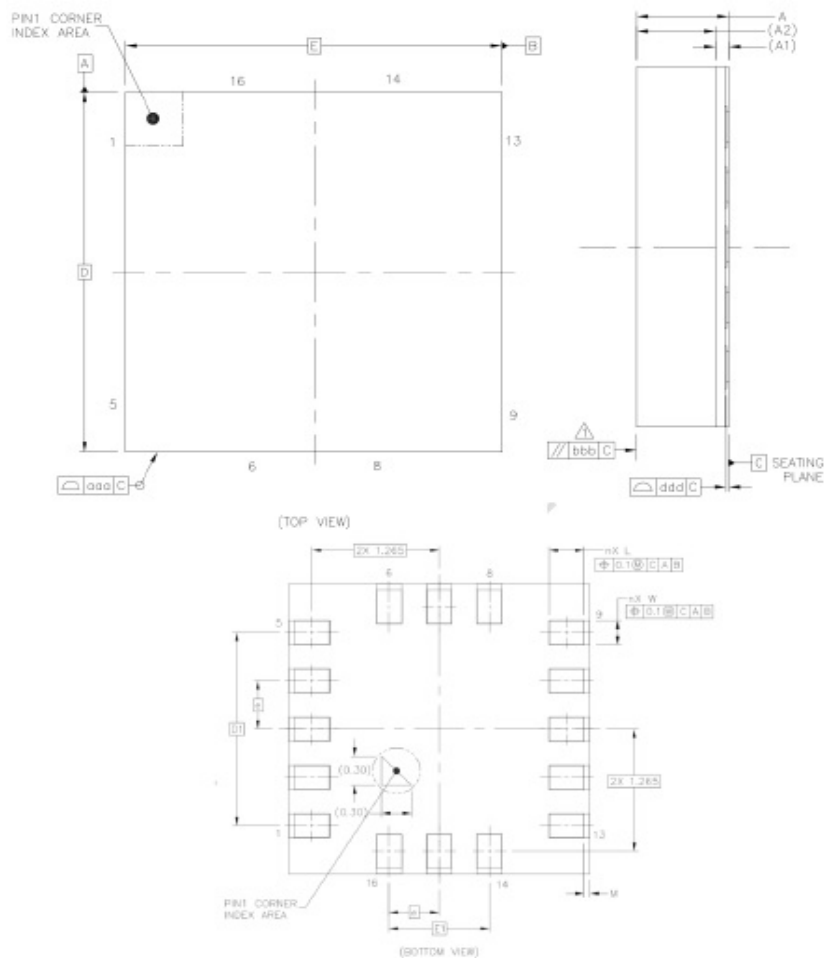
■ NJP411 Package Dimensions :



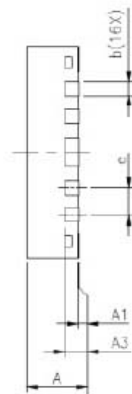
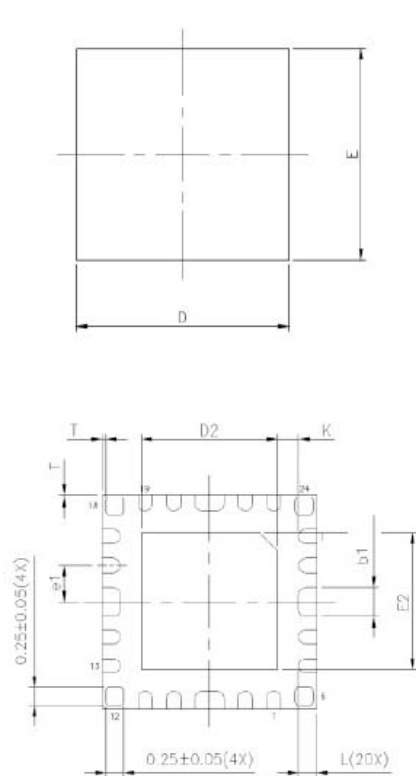
SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.70	0.75	0.80
A1	—	0.02	0.05
b	0.10	0.15	0.20
b1	0.08REF		
c	0.18	0.20	0.25
D	6.90	7.00	7.10
D2	5.39	5.49	5.59
e	0.35BSC		
Nd	5.60BSC		
E	6.90	7.00	7.10
E2	5.39	5.49	5.59
Ne	5.60BSC		
L	0.35	0.40	0.45
L1	0.10REF		
K	0.20	—	—
h	0.30	0.35	0.40
aaa	0.07		
bbb	0.08		
ccc	0.10		
ddd	0.10		
eee	0.10		
fff	0.05		
L/PK(16/23) (mil)	232*232		

■ X003M Package Dimensions :

16 Lead LGA (3x3x0.75) mm NiAu pad finish



■ X003C Package Dimensions :



SYMBOL	MIN.	MAX.
A	0.70	0.80
A1	0.00	0.05
A3	0.203 REF.	
b	0.15	0.25
b1	0.35	0.45
D	3.00 BSC.	
F	3.00 BSC.	
D2	1.85	1.95
E2	1.85	1.95
L	0.15	0.35
e	0.40 BSC.	
e1	0.50 BSC.	
T	0.00	0.10
K	0.20	-

UNIT : mm

FCC Caution :

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.

Any 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.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.