

NCB00 manual

ver:1.2

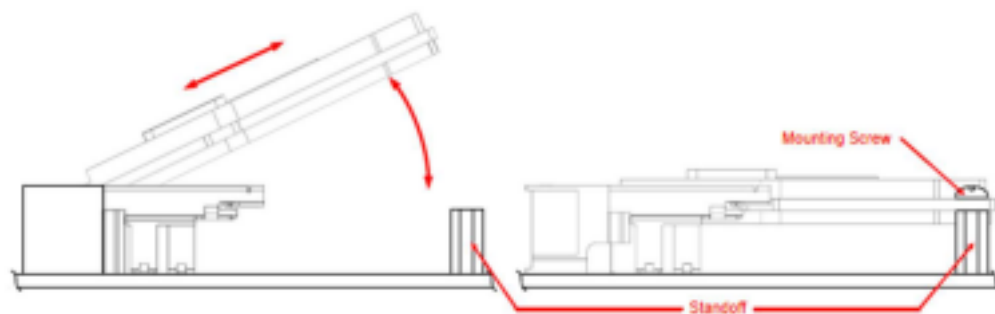
NCB00 manual	
1 ver:1.2	1 1.
.....	3
2. Mounting	3
3. How to connect accessories	3
4. How to enter recovery mode	4
5. Overview	4
6. Connector spec	5
6.1. Battery connector.....	6
6.2. LED	6
6.3. MicroHDMI	7
6.4. UART0,UART1,UART2	7
6.4.1. UART0	8
6.4.2. UART1	8
6.4.3. UART2	8
6.5. IMU.....	8
6.6. RTC backup battery interface	8
6.7. Fan	8
6.8. Key	9
6.9. Micro USB	9
6.10. USB type C	9
6.11. Gbe ethernet	10
6.12. GPIO	10
6.13. Micro SD	11
6.14. EEPROM	11

6.15. PCIe expansion connector	11
6.16. SPI 接口	12
6.17. CSI-XX:	12
6.18. CAN bus(NX):	14 7.
Dimention	14 8.
Accessories list	16

1.

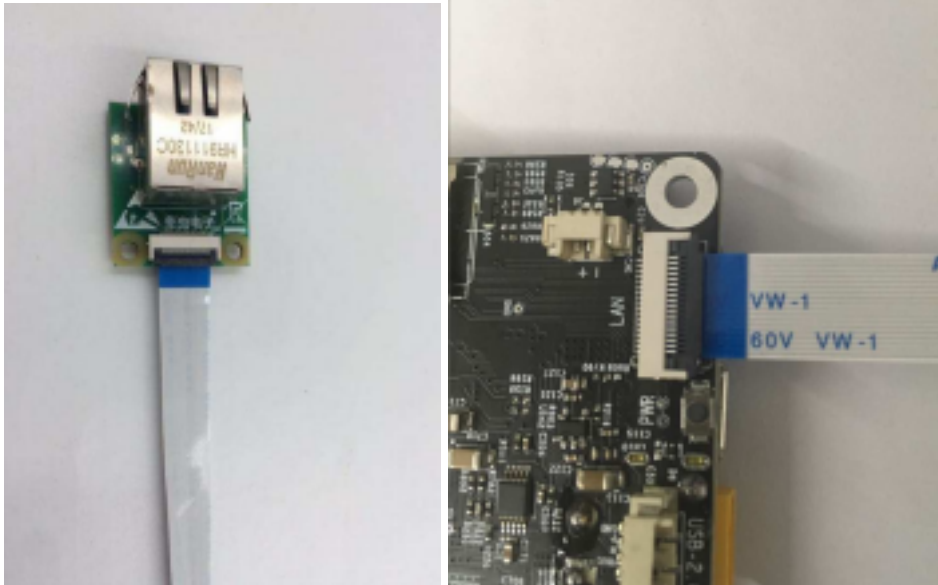
Version	Description	Author	Remark
1.1	Add B03A	zjj	
1.0	new	Zjj	

2. Mounting



3. How to connect accessories

If no special explanations, to connect FFC cable as follow image.



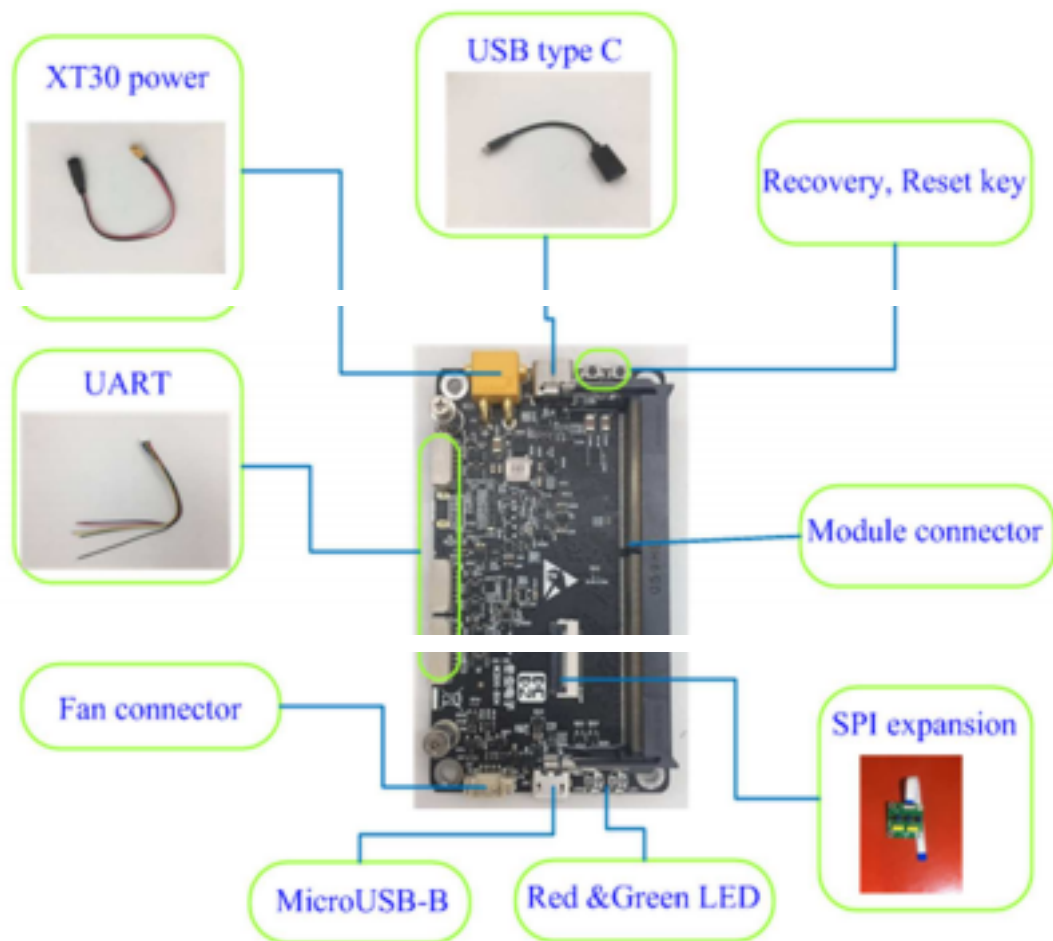
4. How to enter recovery mode

press down REC(recovery) key, then press RST(reset)key down and up, wait 2s, the escape REC key, the NANO/NX will be in recovery mode.

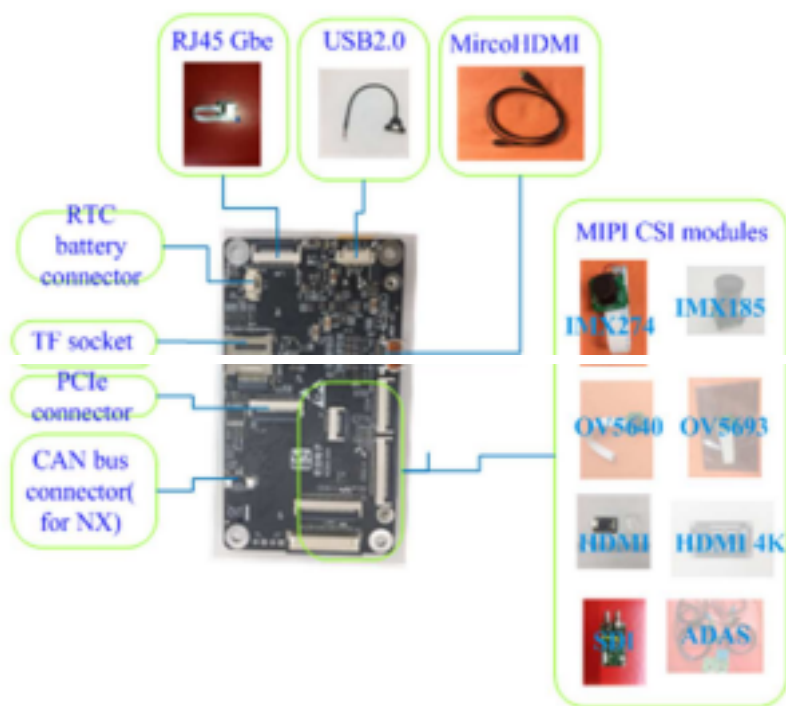
5. Overview

NCB00 is designed for Jetson NANO/NX, a compact and more functions carrier.

6. Connector spec



Top view

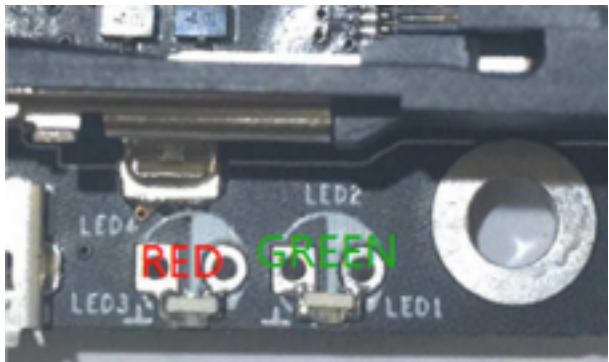


Bottom view

6.1. Battery connector

A XT30 Battery connector. Power input DC: 7-26V, support 2S to 6S Li-ion Battery.

6.2. LED



Two side edge LED, red and green, and also can add two 3mm DIP LED. The red is power LED as Devkit, green is GPIO controlled.

The green use GPIO12(reference the Devkit schematic B01 version), low active. The GPIO number is 194 in NANO, 228 in NX

6 | 16

未经同意，请勿转载全部或部分内容！

6.3. MicroHDMI

HDMI type D connector

6.4. UART0, UART1, UART2

UART0~1 is 4-wire UAR, UART2 is 2-wire. The level is 5V or 3.3V, default is 3.3V.

Use 6pin 1.00mm SH10 connector. The device node of UART0~UART2 is listed here.

UARTx	NANO	NX	Remark
UART0	/dev/ ttyTHS2	/dev/ ttyTHS1	
UART1	/dev/ ttyTHS1	/dev/ ttyTHS0	System console
UART2	/dev/ttyS0	/dev/ttyTCU0	System console

NOTE: to disable the system console on uart as follow

UART1:

```
$ systemctl stop nvgetty
```

```
$ systemctl disable nvgetty
```

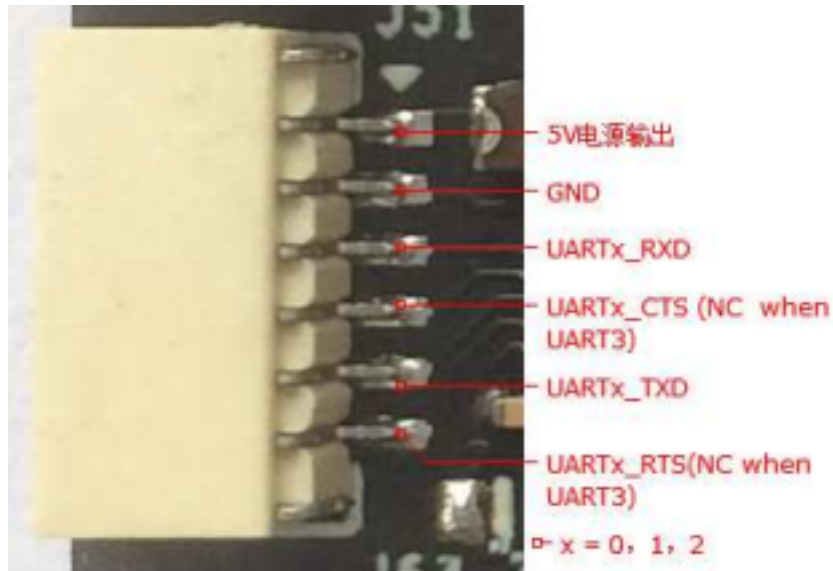
```
$ udevadm trigger
```

```
$ sudo reboot
```

UART2:

Remove ttyS0 of cbootargs and extlinux.conf

Pin definitions as follow.



7 | 16

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6.4.1. UART0

Level selected by R679 and R678. R679 for 5V, R678 for 3.3V

6.4.2. UART1

Level selected by R681 and R680. R681 for 5V, R680 for 3.3V.

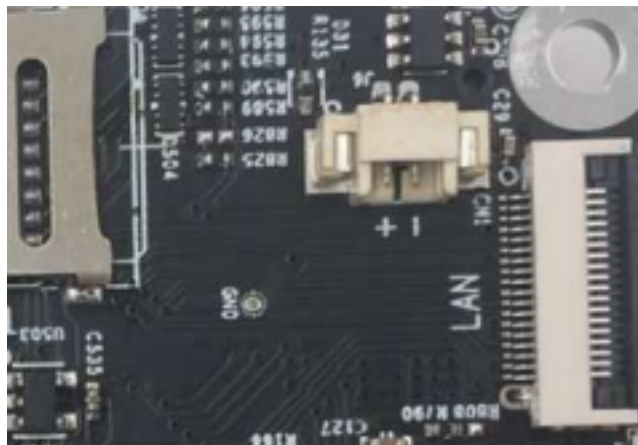
6.4.3. UART2

Level selected by R683 and R682. R683 for 5V, R682 for 3.3V

6.5. IMU

(option)

6.6. RTC backup battery interface

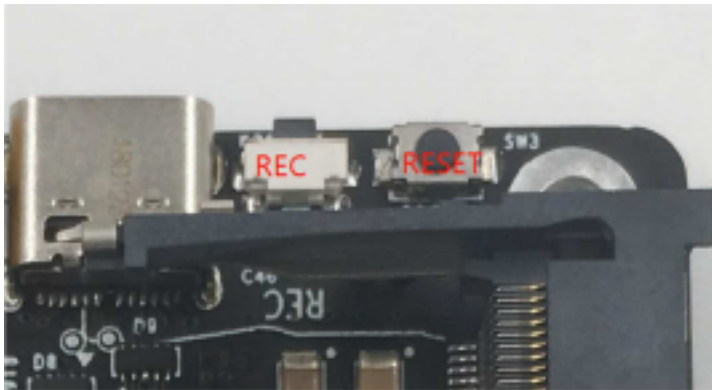


As picture, there is a 2pin 1.25mm pitch connector for RTC backup battery

6.7. Fan

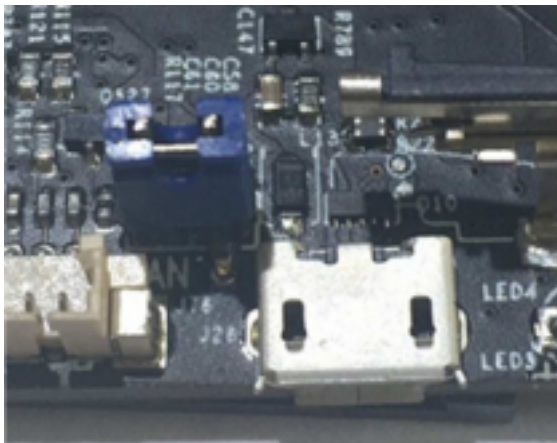
4pin 1.25mm connector

6.8. Key



Power key is at the bottom of USB type C. Recovery key is side edge, RESET and POWER key is vertical.

6.9. Micro USB



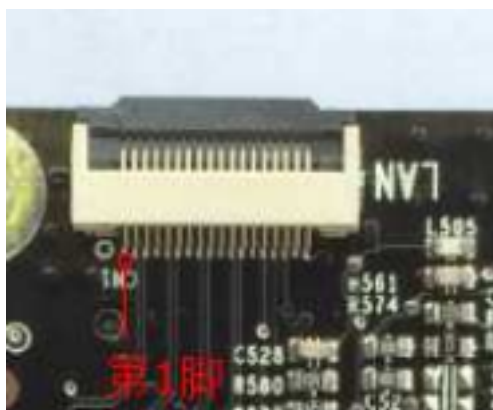
When power the NCB00 via MicroUSB, pls mount the BLUE shorter as picture. **NOTICE:**
DO NOT power the NCB00 via MicroUSB and XT30 at the same time.

6.10. USB type C

The standard USB 3.0 is a combine of USB2.0 and USB3.0. Because NANO is not really support USB type C, the USB2.0 device can plug-free and the USB3.0 device must plug by right way.

6.11. Gbe ethernet

A 18pin 0.5mm FFC connector. Pin definitions list here



PIN index	Name	Remark
1	GND	
2	GBE_MDIO_N	
3	GPE_MDIO_P	
4	GND	
5	GBE_MDIO1_N	
6	GBE_MDIO1_P	
7	GND	
8	GBE_MDIO2_N	
9	GBE_MDIO2_P	
10	GND	
11	GBE_MDIO3_N	
12	GBE_MDIO3_P	
13	GND	
14	GBE_LED1	

15	GBE_LED0	
16	GBE_LED2	
17	GND	
18	3V3_SLP	3.3V power

6.12. GPIO

There are 3 output and 3 input IOs, share with UART's connector。3.3V or 5V level, default level is 3.3V

10 | 16

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UART	pin	Jetson.GPIO lib	NANO IO number	NX IO number	Remark
UART0	4	--	28	191	input
	6	--	27	190	output
UART1	4	36	51	141	input
	6	11	50	140	output
UART2	4	31	200	134	input
	6	32	168	136	output

Notice: expect this GPIOs, the LED pin can also use as GPIO.

6.13. Micro SD

A flip Micro SD socket

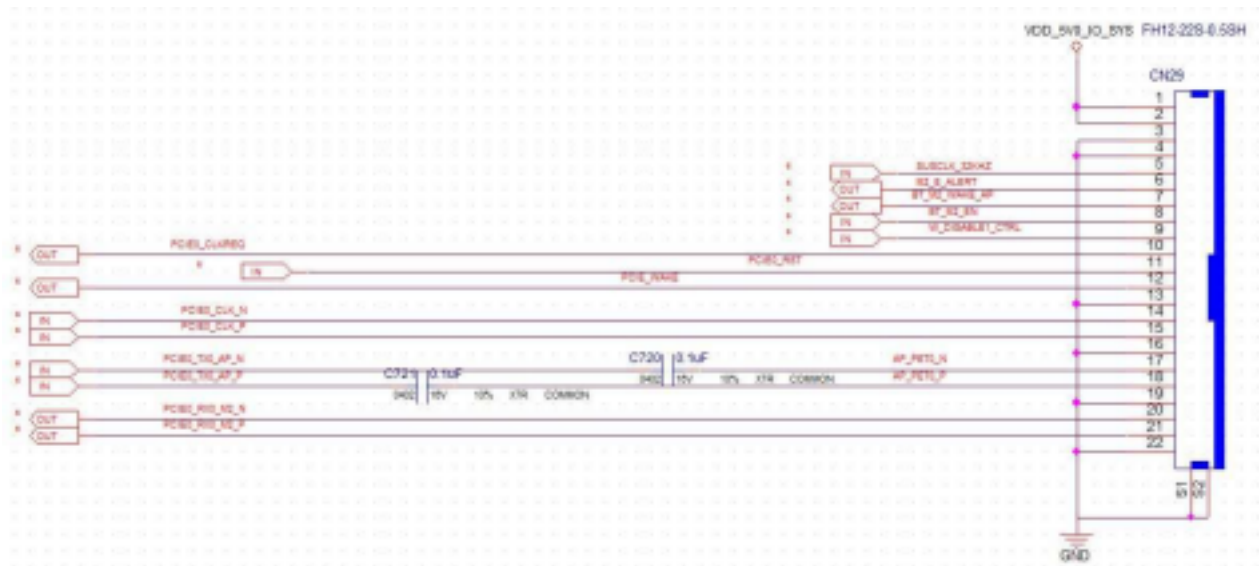
6.14. EEPROM

2k bit EEPROM on board, connect with I2C2 bus, address is 7h57.

To test on NANO: `sudo i2cdetect -y -r 2`

6.15. PCIe expansion connector

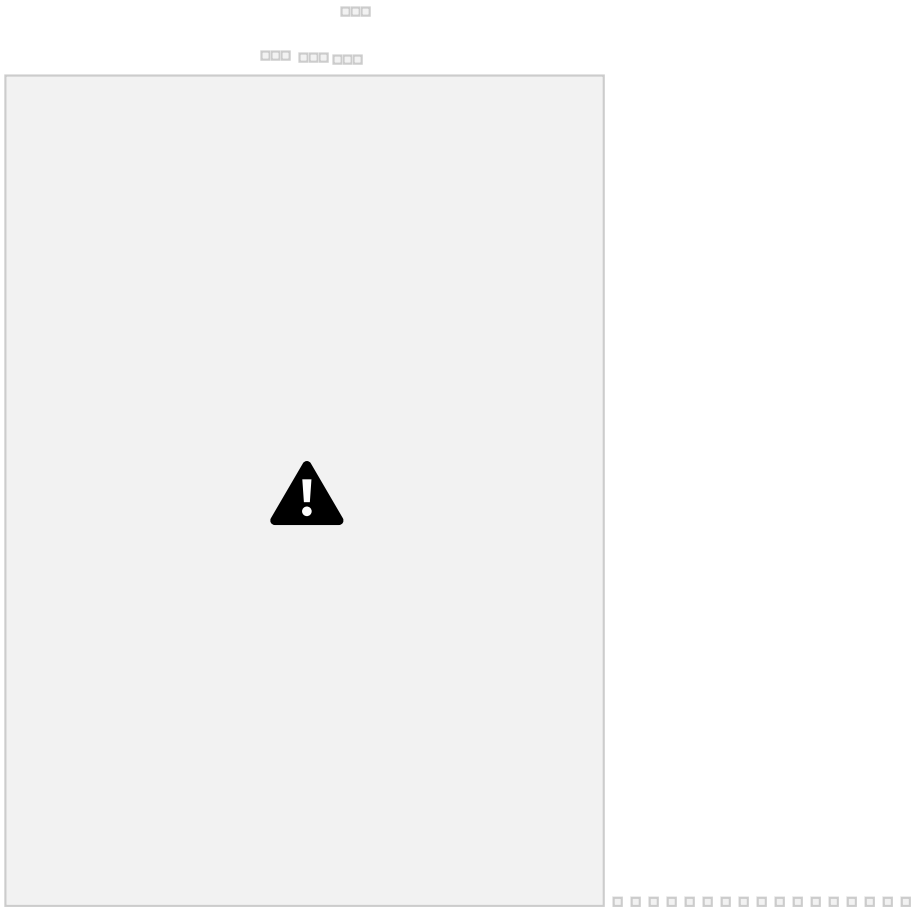
Work in PCIe x 1, a 22pin 0.5mm FFC connector, for miniPCle and M.2 etc,



6.16. SPI 接口

For SPI1 接口, a 18pin 0.5mm FFC connector





6.17. CSI-XX :

CSI0 CSI1

CSI0 CSI1

NANO/NX module's CSI are divided into 3 groups, two 30pin 0.5mm FFC connector and one 24pin 0.5mm FFC connector

I2C source of CSI connector

CSI connector	I2C bus address	I2C device node
CAM0	0x0546C0000	/dev/i2c-6
CSI0-1	0x0546C0000	/dev/i2c-6
CSI2-3	TBD	TBD
CSI4	TBD	TBD

PIN definitions as follows

12 | 16

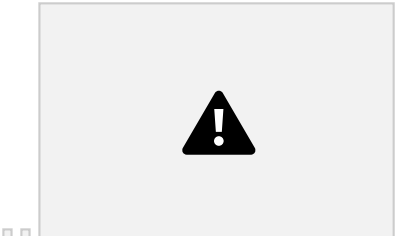
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6.18. CAN bus(NX)

[illegible]

One CAN bus port for Jetson NX, use 2pin 1.25mm

connector 7. Dimention

Length x width x height : 87x50x15 (mm),
Weight : 30g



8. Accessories list

<https://item.taobao.com/item.htm?spm=a2oq0.12575281.0.0.50111deb8W6Qks&ft=t&id=613984388047>



