



AI Development Carrier Board

Y-C26

Datasheet



Version V1

Date 2026-09-17

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Y-C26 Document History

Version	Date	Description of Change	Hardware Version
V 1.0	2026-9-17	Create a document	V 1.0

Hardware Update History

Version	Date	Description of Change
V 1.0	2026-9-17	Initial version

Electronic components and circuits are very sensitive to electrostatic discharge, although the company will design the main interface on the board card to do anti-static protection design, but it is difficult to do anti-static safety protection for all components and circuits. Therefore, it is recommended that you take ESD safety measures when handling any circuit board component.

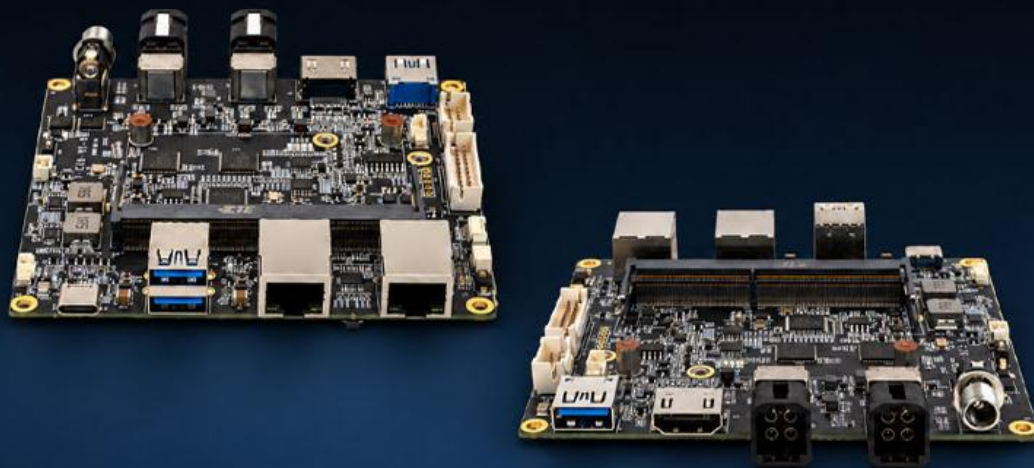


ESD safety measures include but are not limited to the following:

1. Put the card in an ESD bag during transportation or storage. Do not take out the card until installation and deployment.
2. Before touching the board, release the static electricity stored in the body: Wear a grounding wrist strap.
3. Operate circuit boards only in electrostatic discharge safe areas.
4. Avoid moving circuit boards in carpeted areas.
5. Avoid direct contact with electronic components on the board through edge contact.

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About Y-C26

The Y-C26 is an interface carrier board designed for NVIDIA Jetson Orin NX/ORIN NANO series core modules. All components on the board are industrial-grade wide-temperature parts, with major interfaces featuring electrostatic protection design and a highly reliable power supply solution. The input power includes overvoltage and reverse polarity protection. It offers a rich set of external interfaces.

The Y-C26 carrier board features an M.2 Key M slot for expanding with 2280-sized SSDs, as well as an M.2 Key E slot for adding WiFi modules.

Specifications

	Specific
Carrier Board	Y-C26
Module	NVIDIA Jetson ORIN NX/ORIN NANOSeries Modules
Temperature	-25 ~ +60°C
Dimensions (L×W×H)	110*100*23.6mm (L/W Not Including I/O ports and mounting holes)
Weight	117g

Power Supply	Spec
Input Type	DC
Input Voltage	+9V ~ +16V

I/O Ports

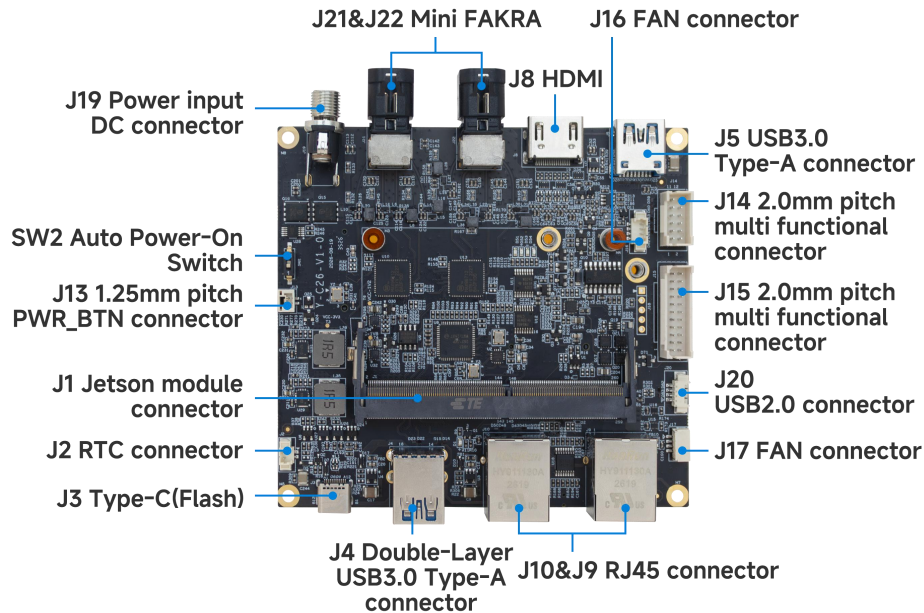
Interface	Quantity	Interface	Quantity
USB3.0 Type-A	3	Type-C(only flash)	1
RJ45	2	HDMI	1
M.2 Key M Slot (2280)	1	M.2 Key E Slot(2230)	1
Mini-Fakra	2	Power Jack	1
Fan Header	2	USB2.0	1
RTC	1		
22pin Expansion Header	2*GPIO/2*RS232/1*CAN		
12pin Expansion Header	1*I2C/1*SPI		

Specifications

NVIDIA Jetson Orin Series

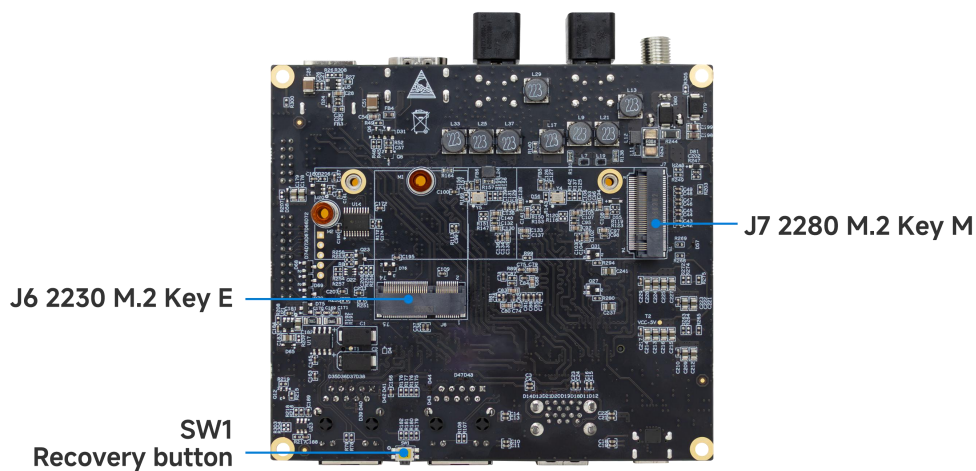
Module	Jetson ORIN NX 16GB	Jetson ORIN NX 8GB	Jetson Orin Nano 8GB	Jetson Orin Nano 4GB
AI Performance	157 TOPS	117 TOPS	67 TOPS	34 TOPS
GPU	1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores		1024-core NVIDIA Ampere architecture GPU with 32 Tensor Cores	512-core NVIDIA Ampere architecture GPU with 16 Tensor Cores
CPU	8-core Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3	6-core Arm® Cortex®-A78AE v8.2 64-bit CPU 1.5MB L2 + 4MB L3	
Memory	16GB 128-bit LPDDR5 102.4GB/s	8GB 128-bit LPDDR5 102.4GB/s	8GB 128-bit LPDDR5 68 GB/s	4GB 64-bit LPDDR5 34 GB/s
Storage	Support external NVME			
Video Encode	1x 4K60 (H.265) 3x 4K30 (H.265) 6x 1080p60 (H.265) 12x 1080p30 (H.265)		1080p30 supported by 1-2 CPU cores	
Video Decode	1x 8K30 (H.265) 2x 4K60 (H.265) 4x 4K30 (H.265) 9x 1080p60 (H.265) 26x 1080p30 (H.265)		1x 4K60 (H.265) 2x 4K30 (H.265) 5x 1080p60 (H.265) 11x 1080p30 (H.265)	
Power	10W - 40W		15W - 25W	10W - 25W

I/O Overview



Front I/O

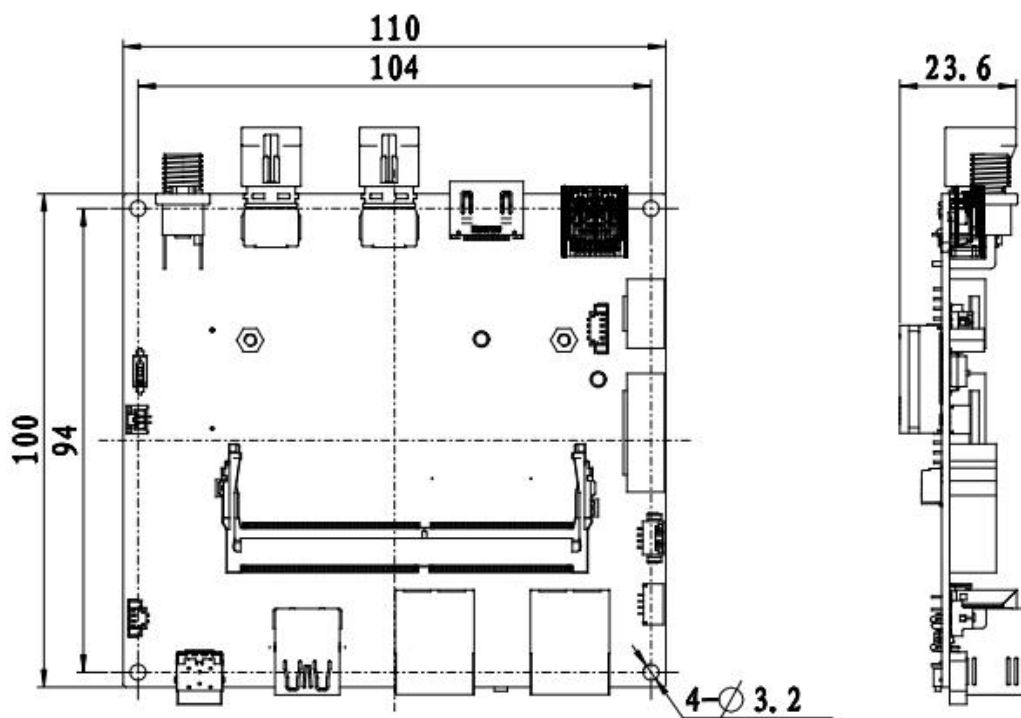
Sign	Function	Sign	Function
J1	Jetson Module Connector	J4/J5	Double-Layer USB3.0 Type-A connector/USB3.0 Type-A connector
J16/J17	FAN connector	J10&J9	RJ45 connector
J8	Type-A HDMI connector	J19	Power input DC connector
J3	Type-C connector (flash)	J14/J15	2.00mm pitch multi-function pin connector (see interface definition description for details)
J21/J22	Mini FAKRA	J20	USB2.0 connector
J2	RTC connector	J13	1.25mm spacing power switch connector
SW2	toggle switch (Auto Power-On Switch)		



Rear I/O

Sign	Function	Sign	Function
J7	2280 M.2 M key Slot	J6	2230 M.2 E key Slot
SW1	REC button		

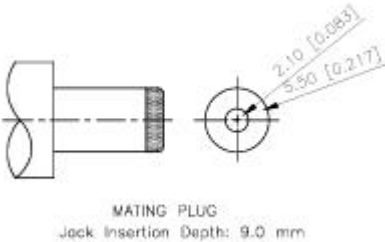
Dimensions (mm)



Y-C26 Connector Description

Jetson Module Connector (J1)		
Function	Connect the NVIDIA Jetson Orin NX / Orin Nano series modules	
Sign	J1	
Type/Model	2309413-1	
Explain	The pin definitions of this connector can be found in the pin definition description section of the NVIDIA Jetson series Orin NX core module data manual.	

USB Type-C (J3)		
Function	USB Type-C OTG Function Connector	
Sign	J3	
Type/Model	Type-C standard interface (used for burning the operating system)	
Explain	Refer to the standard definition	

Power input DC connector (J19)		
Function	Power input DC connector	
Sign	J19	
Type/Model	DC-026LBM-5A-2.5	
Explain	Supported input voltage range: DC 9V-16V 	

FAN Connector (J16)						
Function		Connect to external cooling system				
Sign		J16				
Type/Model		533980471				
Explain						
		Pin	Signal	Pin	Signal	
		1	GND	2	POWER (5V)	
		3	TACH	4	PWM	
		Pin 1 position: The area marked by the red frame in the right image				

Double-Layer USB3.0 Type-A connector (J4A)

Function	Double-Layer USB3.0 Type-A connector																											
Sign	J4A(BOTTOM)																											
Type/Model	HC-USB3.0-L175-2X1-P																											
Explain	<table><tr><th>Pin</th><th>Signal</th><th>Pin</th><th>Signal</th></tr><tr><td>1</td><td>VBUS 1</td><td>2</td><td>USB1_CH344P_D1_N</td></tr><tr><td>3</td><td>USB1_CH344P_D1_P</td><td>4</td><td>GND</td></tr><tr><td>5</td><td>USBSS0_RX_N</td><td>6</td><td>USBSS0_RX_P</td></tr><tr><td>7</td><td>GND</td><td>8</td><td>USBSS0_TX_N</td></tr><tr><td>9</td><td>USBSS0_TX_P</td><td></td><td></td></tr></table>		Pin	Signal	Pin	Signal	1	VBUS 1	2	USB1_CH344P_D1_N	3	USB1_CH344P_D1_P	4	GND	5	USBSS0_RX_N	6	USBSS0_RX_P	7	GND	8	USBSS0_TX_N	9	USBSS0_TX_P				
	Pin	Signal	Pin	Signal																								
	1	VBUS 1	2	USB1_CH344P_D1_N																								
	3	USB1_CH344P_D1_P	4	GND																								
	5	USBSS0_RX_N	6	USBSS0_RX_P																								
	7	GND	8	USBSS0_TX_N																								
	9	USBSS0_TX_P																										
The rated current of J4A is approximately 1.12A (with independent current limiting)																												

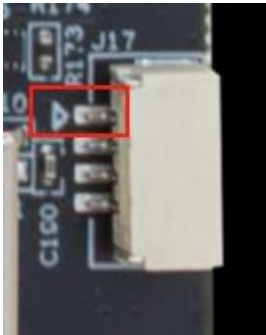
Double-Layer USB3.0 Type-A connector (J4B)

Function	Double-Layer USB3.0 Type-A connector																										
Sign	J4B(TOP)																										
Type/Model	HC-USB3.0-L175-2X1-P																										
Explain	<table><thead><tr><th>Pin</th><th>Signal</th><th>Pin</th><th>Signal</th></tr></thead><tbody><tr><td>10</td><td>VBUS2</td><td>11</td><td>USB1_CH344P_D3_N</td></tr><tr><td>12</td><td>USB1_CH344P_D3_P</td><td>13</td><td>GND</td></tr><tr><td>14</td><td>USBSS1_RX_N</td><td>15</td><td>USBSS1_RX_P</td></tr><tr><td>16</td><td>GND</td><td>17</td><td>USBSS1_TX_N</td></tr><tr><td>18</td><td>USBSS1_TX_P</td><td></td><td></td></tr></tbody></table>		Pin	Signal	Pin	Signal	10	VBUS2	11	USB1_CH344P_D3_N	12	USB1_CH344P_D3_P	13	GND	14	USBSS1_RX_N	15	USBSS1_RX_P	16	GND	17	USBSS1_TX_N	18	USBSS1_TX_P			
	Pin	Signal	Pin	Signal																							
	10	VBUS2	11	USB1_CH344P_D3_N																							
	12	USB1_CH344P_D3_P	13	GND																							
	14	USBSS1_RX_N	15	USBSS1_RX_P																							
	16	GND	17	USBSS1_TX_N																							
	18	USBSS1_TX_P																									
	The rated current of J4B is approximately 1.12A (with independent current limiting)																										

USB3.0 Type-A connector (J5)

Function	USB3.0 Type-A connector			
Sign	J5			
Type/Model	HC-USB3.0-L142-ZP			
Explain	Pin	Signal	Pin	Signal
	1	VBUS	2	USB2_D_N
	3	USB2_D_P	4	GND
	5	USBSS2_RX_N	6	USBSS2_RX_P
	7	GND	8	USBSS2_TX_N
	9	USBSS2_TX_P		
The rated current is approximately 1.12A.				
				

FAN Connector (J17)

Function	FAN Connector																	
Sign	J17																	
Type/Model	WAFER-GH1.25-4PWB																	
Explain	<table><tr><th>Pin</th><th>Signal</th><th>Pin</th><th>Signal</th></tr><tr><td>1</td><td>GND</td><td>2</td><td>VCC_5V</td></tr><tr><td>3</td><td>TACH(GPIO06_1V8)</td><td>4</td><td>PWM(GPIO07)</td></tr></table>				Pin	Signal	Pin	Signal	1	GND	2	VCC_5V	3	TACH(GPIO06_1V8)	4	PWM(GPIO07)		
	Pin	Signal	Pin	Signal														
	1	GND	2	VCC_5V														
	3	TACH(GPIO06_1V8)	4	PWM(GPIO07)														
	Pin 1 position: The area marked by the red frame in the right image																	

HDMI connector (J8)

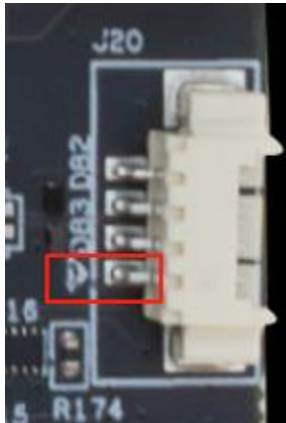
Function	Type A HDMI connector			
Sign	J8			
Type/Model	Type-A standard HDMI connector			
Explain	Pin	Signal	Pin	Signal
	1	TXD2_P	2	GND
	3	TXD2_N	4	TXD1_P
	5	GND	6	TXD1_N
	7	TXD0_P	8	GND
	9	TXD0_N	10	HDMI_TXC_P
	11	GND	12	HDMI_TXC_N
	13	CEC_3V3	14	NC
	15	DDC_SCL	16	DDC_SDA
	17	GND	18	VCC_HDMI
	19	HPD_1V8	20/21/ 22/23	GND_EARTH



USB2.0 connector (J20)

Function	USB2.0 connector			
Sign	J20			
Type/Model	53261-0471			
Explain	Pin	Signal	Pin	Signal
	1	VCC_5V	2	USB1_CH344 P_D4_N
	3	CH344P_D4_P	4	GND

Pin 1 position: The area marked by the red frame in the right image

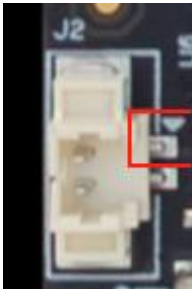


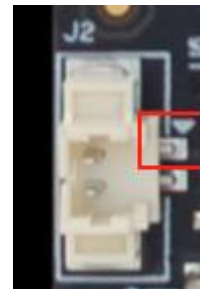
RJ45 connector (J10&J9)

Function	RJ45 connector																																				
Sign	J10&J9																																				
Type/Model	HY911130A																																				
Explain	<table><tr><th>Pin</th><th>Signal</th><th>Pin</th><th>Signal</th></tr><tr><td>1</td><td>GND</td><td>2</td><td>MDI0_P</td></tr><tr><td>3</td><td>MDI0_N</td><td>4</td><td>MDI1_P</td></tr><tr><td>5</td><td>MDI2_P</td><td>6</td><td>MDI2_N</td></tr><tr><td>7</td><td>MDI1_N</td><td>8</td><td>MDI3_P</td></tr><tr><td>9</td><td>MDI3_N</td><td>10/15 /16</td><td>GND_EA RTH</td></tr><tr><td>11</td><td>VCC_3V</td><td>12</td><td>LED1_3 V3</td></tr><tr><td>13</td><td>LED2_3V 3</td><td>14</td><td>VCC_3V</td></tr></table>				Pin	Signal	Pin	Signal	1	GND	2	MDI0_P	3	MDI0_N	4	MDI1_P	5	MDI2_P	6	MDI2_N	7	MDI1_N	8	MDI3_P	9	MDI3_N	10/15 /16	GND_EA RTH	11	VCC_3V	12	LED1_3 V3	13	LED2_3V 3	14	VCC_3V	
	Pin	Signal	Pin	Signal																																	
	1	GND	2	MDI0_P																																	
	3	MDI0_N	4	MDI1_P																																	
	5	MDI2_P	6	MDI2_N																																	
	7	MDI1_N	8	MDI3_P																																	
	9	MDI3_N	10/15 /16	GND_EA RTH																																	
	11	VCC_3V	12	LED1_3 V3																																	
13	LED2_3V 3	14	VCC_3V																																		

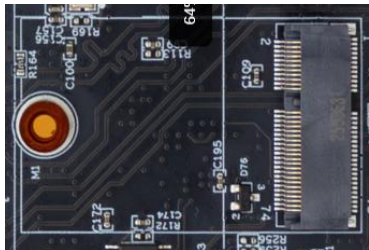


RTC connector (J2)

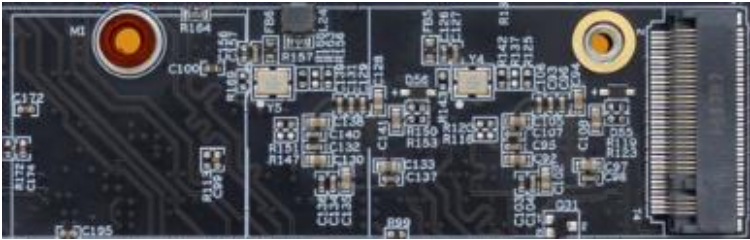
Function	RTC connector															
Sign	J2															
Type/Model	533980271															
Explain	<table><tr><th>Pin</th><th>Signal</th><th>Pin</th><th>Signal</th></tr><tr><td>1</td><td>PMIC_BATT</td><td>2</td><td>GND</td></tr><tr><td>3</td><td>GND</td><td>4</td><td>GND</td></tr></table>		Pin	Signal	Pin	Signal	1	PMIC_BATT	2	GND	3	GND	4	GND		
	Pin	Signal	Pin	Signal												
1	PMIC_BATT	2	GND													
3	GND	4	GND													
Pin 1 position: The area marked by the red frame in the right image																

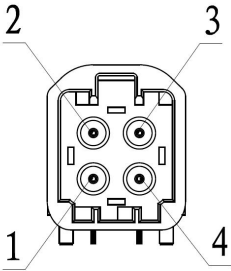
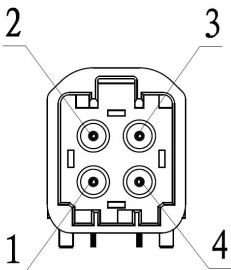


M.2 Key E Slot(J6)

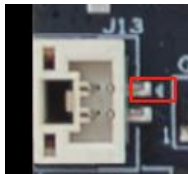
Function	M.2 Key E Slot					
Sign	J6					
Type/Model	E Key , 2230 / APCI0108-P001A					
Explain						
	Pin	Signal	Pin	Signal	Pin	Signal
	1	GND	2	3P3V	3	USB1_D_P
	4	3P3V	5	USB1_N	6	NC
	7	GND	8	NC	9	NC
	10	NC	11	NC	12	NC
	13	NC	14	NC	15	NC
	16	NC	17	NC	18	GND
	19	NC	20	NC	21	NC
	22	NC	23	NC	24	NC
	25	NC	26	NC	27	NC
	28	NC	29	NC	30	NC
	31	NC	32	NC	33	GND
	34	NC	35	TX0_P	36	NC
	37	TX0_N	38	NC	39	GND
	40	NC	41	RX0_P	42	NC
	43	RX0_N	44	NC	45	GND
	46	NC	47	CLK_P	48	NC
	49	CLK_N	50	CLK_32K_OUT_3V3	51	GND
	52	PCIE1_RST_N_3V3	53	CLKREQ_N_3V3	54	NC
	55	WAKE_N_3V3	56	M2_KEY_E_W_DISABLE1_3V3	57	GND
	58	NC	59	NC	60	NC
	61	NC	62	M2_KEY_E_ALERT_N_1V8	63	GND
	64	NC	65	NC	66	NC
	67	NC	68	NC	69	GND
	70	NC	71	NC	72	3P3V
	73	NC	74	3P3V	75	GND
77	GND					

M.2 Key M Slot (J7)

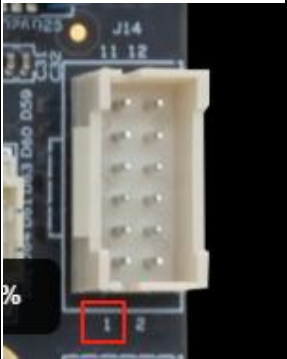
Function	M.2 Key M 槽位					
Sign	J7					
Type/Model	M Key , 2280 / APCI0164-P001A					
Explain	Pin	Signal	Pin	Signal	Pin	Signal
	1	GND	2	VCC_3V3	3	GND
	4	VCC_3V3	5	PCIE0_RX3_N	6	NC
	7	PCIE0_RX3_P	8	NC	9	GND
	10	NC	11	PCIE0_TX3_N	12	VCC_3V3
	13	PCIE0_TX3_P	14	VCC_3V3	15	GND
	16	VCC_3V3	17	PCIE0_RX2_N	18	VCC_3V3
	19	PCIE0_RX2_P	20	NC	21	GND
	22	NC	23	PCIE0_TX2_N	24	NC
	25	PCIE0_TX2_P	26	NC	27	GND
	28	NC	29	PCIE0_RX1_N	30	NC
	31	PCIE0_RX1_P	32	NC	33	GND
	34	NC	35	PCIE0_TX1_N	36	NC
	37	PCIE0_TX1_P	38	NC	39	GND
	40	I2C2_SCL_1V8	41	PCIE0_RX0_N	42	I2C2_SDA_1V8
	43	PCIE0_RX0_P	44	M2_KEYM_M0_ALERT_N_1V8	45	GND
	46	NC	47	PCIE0_TX0_N	48	NC
	49	PCIE0_TX0_P	50	PCIE0_RST_N_3V3	51	GND
	52	PCIE0_CLKREQ_N_3V3	53	PCIE0_CLK_N	54	PCIE_WAKE_N_3V3
	55	PCIE0_CLK_P	56	NC	57	GND
	58	NC	59	NC	60	NC
	61	NC	62	NC	63	NC
	64	NC	65	NC	66	NC
	67	NC	68	SUSCLK(32KHz)	69	NC
	70	VCC_3V3	71	GND	72	VCC_3V3
	73	GND	74	VCC_3V3	75	GND

Mini FAKRA(J21&J22)		
Function	GMSL Serial Camera Interface	
Sign	J21&J22	
Type/Model	2-2304168-1	
Explain	 J21Device name 1: /dev/video0 2: /dev/video1 3: /dev/video2 4: /dev/video3  J22 Device name 1: /dev/video4 2: /dev/video5 3: /dev/video6 4: /dev/video7 Pin 1 position: The area marked by the red frame in the right image 	

Power Button (J13)												
Function	Configure whether the power-on operation of SW2 automatically starts											
Sign	J13											
Type/Model	GH1.25-2PLT											
Explain	<table><tr><th>Pin</th><th>Signal</th><th>Pin</th><th>Signal</th></tr><tr><td>1</td><td>PWR_BTN_N_5V</td><td>2</td><td>GND</td></tr></table>				Pin	Signal	Pin	Signal	1	PWR_BTN_N_5V	2	GND
	Pin	Signal	Pin	Signal								
	1	PWR_BTN_N_5V	2	GND								
When SW2 is set to the “ON” position, power on by short-circuiting J13. Conversely, it will default to automatic startup upon power-on. Pin 1 position: The area marked by the red frame in the right image												



Multifunctional expansion connector（J14）																																
Function	Multifunctional expansion connector																															
Sign	J14																															
Type/Model	2.00mm PHB-2*6A																															
Explain	<table><tr><th>Pin</th><th>Signal</th><th>Pin</th><th>Signal</th></tr><tr><td>1</td><td>VCC_5V</td><td>2</td><td>VCC_3V3</td></tr><tr><td>3</td><td>SPI0_MOSI_3V3</td><td>4</td><td>GND</td></tr><tr><td>5</td><td>GND</td><td>6</td><td>VCC_5V</td></tr><tr><td>7</td><td>SPI0_MISO_3V3</td><td>8</td><td>I2C1_SDA_3V3</td></tr><tr><td>9</td><td>SPI0_SCK_3V3</td><td>10</td><td>I2C1_SCL_3V3</td></tr><tr><td>11</td><td>SPI0_CS0_N_3V3</td><td>12</td><td>GND</td></tr></table>				Pin	Signal	Pin	Signal	1	VCC_5V	2	VCC_3V3	3	SPI0_MOSI_3V3	4	GND	5	GND	6	VCC_5V	7	SPI0_MISO_3V3	8	I2C1_SDA_3V3	9	SPI0_SCK_3V3	10	I2C1_SCL_3V3	11	SPI0_CS0_N_3V3	12	GND
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	<table><tr><th></th><th>I2C</th><th>SPI</th></tr><tr><td>ORIN NX</td><td>/dev/i2c-7</td><td>/dev/spidev0.0</td></tr><tr><td>ORIN NANO</td><td>/dev/i2c-7</td><td>/dev/spidev0.0</td></tr></table>					I2C	SPI	ORIN NX	/dev/i2c-7	/dev/spidev0.0	ORIN NANO	/dev/i2c-7	/dev/spidev0.0																			
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Pin 1 position: The area marked by the red frame in the right image.																																



Multifunctional expansion connector (J15)																																																				
Function	Multifunctional expansion connector																																																			
Sign	J15																																																			
Type/Model	2.0mm 2*11pin Double-row straight-pin connector																																																			
Explain	<table><tr><th>Pin</th><th>Signal</th><th>Pin</th><th>Signal</th></tr><tr><td>1</td><td>UART0_TX_RS232</td><td>2</td><td>CAN_H</td></tr><tr><td>3</td><td>UART0_RX_RS232</td><td>4</td><td>CAN_L</td></tr><tr><td>5</td><td>GND</td><td>6</td><td>NC</td></tr><tr><td>7</td><td>UART1_TX_RS232</td><td>8</td><td>NC</td></tr><tr><td>9</td><td>UART1_RX_RS232</td><td>10</td><td>GND</td></tr><tr><td>11</td><td>GND</td><td>12</td><td>GPIO12_3V3</td></tr><tr><td>13</td><td>UART2_TX_3V3</td><td>14</td><td>GPIO13_3V3</td></tr><tr><td>15</td><td>UART2_RX_3V3</td><td>16</td><td>NC</td></tr><tr><td>17</td><td>GND</td><td>18</td><td>NC</td></tr><tr><td>19</td><td>GND</td><td>20</td><td>SYNC_SIG</td></tr><tr><td>21</td><td>5V</td><td>22</td><td>GND</td></tr></table>				Pin	Signal	Pin	Signal	1	UART0_TX_RS232	2	CAN_H	3	UART0_RX_RS232	4	CAN_L	5	GND	6	NC	7	UART1_TX_RS232	8	NC	9	UART1_RX_RS232	10	GND	11	GND	12	GPIO12_3V3	13	UART2_TX_3V3	14	GPIO13_3V3	15	UART2_RX_3V3	16	NC	17	GND	18	NC	19	GND	20	SYNC_SIG	21	5V	22	GND
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UART0/1 serial ports are 232 serial ports. The device file names mapped in the Linux system are shown in the following table: <table><tr><th></th><th>UART0</th><th>UART1</th></tr><tr><td>ORIN NX</td><td>/dev/ttyTHS1</td><td>/dev/ttyTHS0</td></tr><tr><td>ORIN NANO</td><td>/dev/ttyTHS1</td><td>/dev/ttyTHS0</td></tr></table>					UART0	UART1	ORIN NX	/dev/ttyTHS1	/dev/ttyTHS0	ORIN NANO	/dev/ttyTHS1	/dev/ttyTHS0																																								
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UART2 is the default serial port for kernel debugging, used to output C-BOOT, U-BOOT and Linux kernel information. After the Linux kernel starts, it is used as the display control terminal serial port. The default serial port settings are: 115200, 8N1. <table><tr><th></th><th>GPIO12</th><th>GPIO13</th></tr><tr><td>ORIN NANO/NX</td><td>PN.01 (gpiochip0,85)</td><td>PH.00 (gpiochip0,43)</td></tr></table>					GPIO12	GPIO13	ORIN NANO/NX	PN.01 (gpiochip0,85)	PH.00 (gpiochip0,43)																																											
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Explanation of GPIO device numbers: Take GPIO12 as an example: gpiochip0,85 is the number obtained through gpiofind query, and will be used later for testing GPIO with the gpiod tool. Pin 1 position: The area marked by the red frame in the right image.																																																				



Ordering Information

Order Type	Function
Y-C26	The interface expansion carrier board for the core modules of NVIDIA® Jetson™ ORIN NX/ORIN NANO series.

Recovery Mode

The Jetson core module can operate in normal mode and Recovery mode. In Recovery mode, operations such as file system update, kernel update, Bootloader/UEFI update, BCT update, etc. can be performed.

The steps to enter Recovery mode are as follows:

Turn off the power supply of the system.

Connect the Type-C cable to the Type-C port (J3) of Y-C26 and the USB port of the Jetson development host.

Press and hold SW1, then supply power to the system.

The system enters Recovery mode, and at this point, subsequent operations can be carried out.

Method of Application

- Make sure that the voltages of all external systems have been turned off.
- Install the Jetson core module onto the J2 high-speed connector. During the installation process, pay attention to the alignment between the connectors and apply even force. After the module is installed in place, install the core module fixing screws.
- Install the necessary external cables. (Such as the display cable connected to the HDMI display, the power input cable for powering the system, the USB cable linking the keyboard and mouse, the camera, the MiniPCle function expansion module...)
- Connect the power cable to the power source. Before powering on, be sure to ensure that the cooling device on the core module has been installed.
- For systems without a protective casing, after powering on the system, avoid moving the hardware system and strictly prohibit touching the circuit board and any electronic components on it with your body.

GPIO Test

The Y-C26 model, when paired with the Jetson module, comes with 2 GPIO ports. It can output 3.3V voltage programmatically. Please note that the input voltage should not exceed 3.3V.

When using the Orin Nano module, with L4T 36.5.0, for example, GPIO 012:

The content after the "#" symbol in the following commands is a comment. It is not necessary to add when executing the commands.

```
sudo apt update
```

```
sudo apt install gpiod
```

```
sudo gpiofind "PN.01" # This will return its group and number
```

```
# Here are the steps for measuring the output mode
```

```
sudo gpioset --mode=wait /dev/gpiochip0 85=1
```

```
# Use a multimeter to measure the voltage between this pin and GND, it should be 3.3V
```

```
# Here are the steps for measuring the input mode
```

```
sudo gpioget gpiochip0 85
```

```
# After connecting this GPIO pin to 3.3V, the return value becomes 1.
```

```
# After connecting this GPIO pin to GND, the return value becomes 0, which indicates it is correct.
```

CAN Test

When the Y-C26 is equipped with the Jetson Orin Nano module, it comes with a standard one CAN signal. Connect CANH to the CAN_H of the external device, and short-circuit CAN_L to the CANL of the external device. The test commands are as follows:

```
sudo apt-get install busybox can-utils
```

Write the specified value into the register

The addresses where different modules need to write into the register, as well as the values to be written, are different. For details, please refer to the relevant links at the end of this section.

```
sudo busybox devmem 0x0c303018 w 0xc458
```

```
sudo busybox devmem 0x0c303010 w 0xc400
```

```
sudo modprobe can # Load the CAN bus subsystem support module
```

```
sudo modprobe can_raw # Load the raw CAN protocol module
```

```
sudo modprobe mttcan # Load the CAN interface support
```

```
sudo ip link set can0 type can bitrate 500000 # Set the bitrate of CAN0 to 500 kbps
```

```
sudo ip link set up can0 # Enable CAN0
```

```
candump can0 &# Set CAN0 to receive mode
```

```
cansend can0 123#abcdabcd
```

Please refer to the link for the values of different module registers:

Controller Area Network (CAN) — Jetson Linux Developer Guide documentation ([nvidia.com](https://developer.nvidia.com/jetson-linux-developer-guide))

Serial port test

When Y-C26 is paired with the Jetson module, it comes with 2 RS232 serial ports as standard. It can perform single-port self-receiving and self-transmitting tests, as well as two-port serial port connection tests. The commands are as follows:

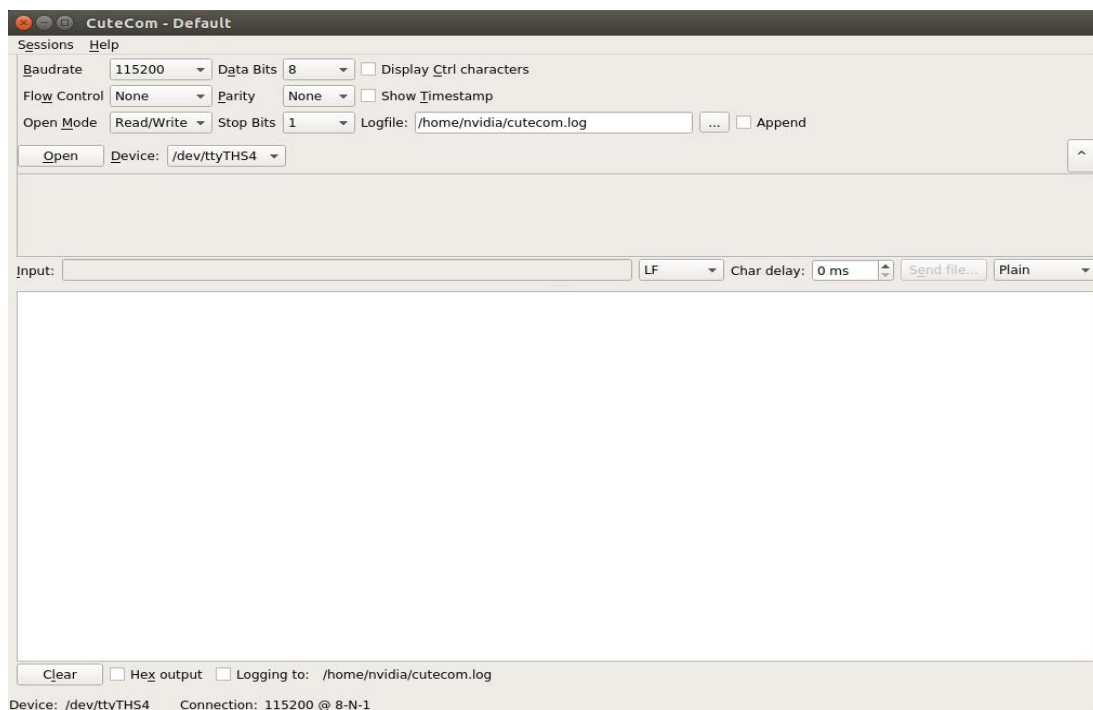
```
sudo apt-get install cutecom # Install the serial port testing tool
```

`sudo cutecom` # For single-port testing, only one terminal needs to be opened in one session. For two-port serial port connection testing, please use two terminals and open two cutecom interfaces respectively.

For single-port testing, connect the RX of the single serial port to the TX. For two-port serial port connection testing, connect the RX of COM1 to the TX pin of COM2, and the TX of COM1 to the RX pin of COM2.

During the test, set the serial port parameters in the cutecom interface and open the serial port. Output the data in the input box and send it. Afterward, the single-port test will have data echo displayed at the bottom of the cutecom interface.

The interface of the serial port testing tool cutecom is as follows:



Special Instructions

- Initial system username: **nvidia** , password: **nvidia** , no password su. If root permissions are required, use sudo to grant permissions, or use sudo su to access the root user.
- The pre-installed system is pure by default and does not contain Jetpack software. You can use the following command to install the software. Do not replace or modify the default software source before installation:
 - `sudo apt-get update`
 - `sudo apt-get install nvidia-jetpack`
- It can also be installed over the network using SDKmanager software.
- For more information please refer to :Jetson wiki (plink-ai.com)