D331 Box PC



Feature

- Embedded NVIDIA Jetson T5000 / Jetson T4000
- 2x GbE RJ-45
- 1x QSFP (4x 10 GbE for T5000, 3x 10 GbE for T4000)
- 1x M.2 Key E 2230 for WIFI 6
- 1x M.2 Key B 3042/3052 for 4G/5G
- 2x M.2. key M 2280 for SSD
- 1x mPCIe for GNSS, 4x CAN BUS & 4 x PWM
- 2x HDMI 2.0 (3840x2160 at 60Hz)
- 4x USB 3.2 Type-A
- 1x 120pin for GMSL camera board

Specifications

Model	D331
NVIDIA Module Compatibility	NVIDIA Jetson T5000 & Jetson T4000
Networking	2x GbE RJ-45 (1 × port supports OOB NCSI for optional OOB module) 1x QSFP (4 x 10 GbE for T5000, 3 x 10 GbE for T4000) 1 x M.2. key E 2230 for Wi-Fi 6 1x M.2 Key B 3042/3052 for 4G/5G
SIM Slot	2 × SIM slots for 4G/5G module; dual SIM capability depends on the installed cellular module
Display Output	2 x HDMI output (3840 x 2160 at 60Hz)
Temperature	Operating temperature: -25 to 60°C (BOX PC) Operating temperature: -25 to 50°C (BOX PC with 8x POE board) Storage temperature: -40°C ~ 85°C Relative humidity 40 °C @ 95%, Non-Condensing
Camera Inputs	1x 120pin for GMSL camera board
USB	1x USB 2.0 Type-C for BSP install 1x USB 3.2 Type-C (usage limitations apply; refer to User Manual for details) 4x USB 3.2 Type-A (5Gbps x2 ; 10Gbps x2)
Audio	2x 3.5mm phone jack for Mic in & line out.
Storage	2x NVMe M.2 Key M 2280 1x NVMe M.2 Key M 2280 PCIe Gen4 x2 1x NVMe M.2 Key M 2280 PCIe Gen4 x4
TPM	Infineon SLB9672XU2.0 on board
Expansion	2x10 Euro Terminal Block 1x CAN-FD (Isolated 3KV), 3x CAN-FD with Transceiver, +5V output 1A , +3.3V output 1A,UART, I2C (Isolation, Support for T5000 only) 20pin expansion header-1:1x5V(Maximum 1A), 1x3.3V(Maximum 1A) power Output, UARTH1, I2C, GPO(4), GPI(5), PWM(2) 20pin expansion header-2:1x5V(Maximum 1A), 1x3.3V(Maximum 1A) power Output, UARTH2, I2C, GPO(4), GPI(5), PWM(2) 2x 5-pin JTAG connector 1x 40pin coaxial connector for PCIe expansion (daughter board 8xPSE/8xUSB)
GPS	1x mPCIe for Optional Dual-RTK GNSS support (via daughter board)
Sensor	Temperature sensor for PCB top/bot Temperature measure

All specifications are subject to change without prior notice.

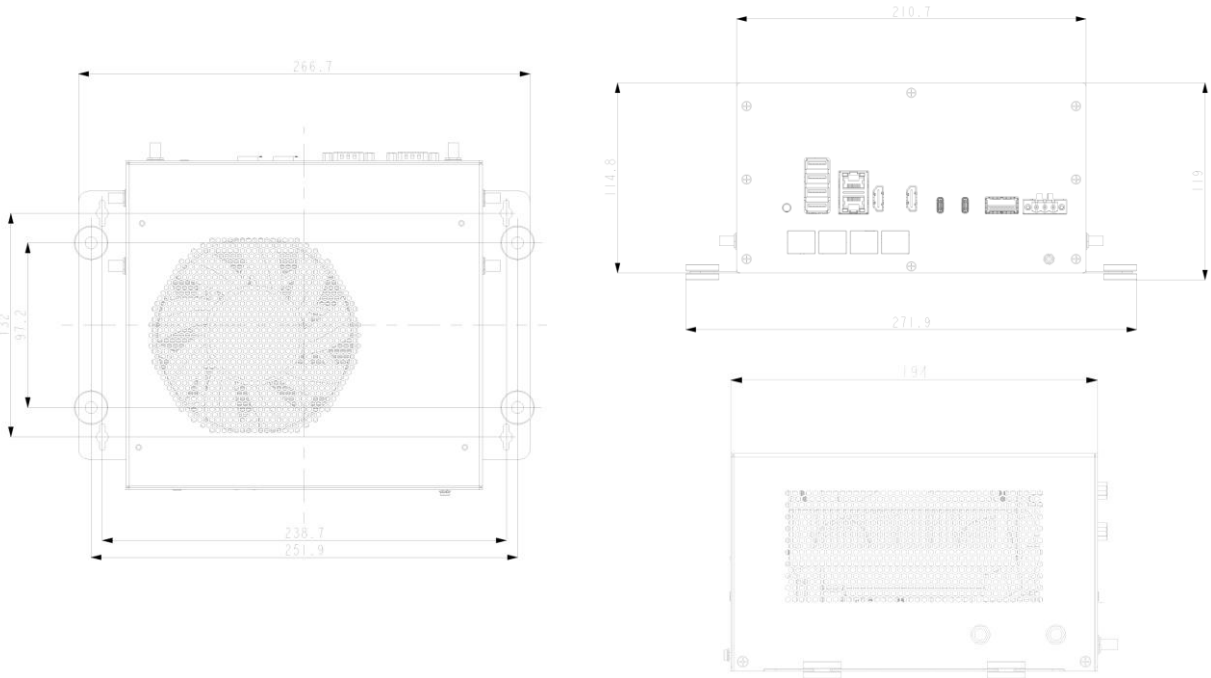
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Specifications

Power requirement	Terminal block 3Pin & Mini-fit 6pin (Internal) 9~36V DC Input, 90~180W (36V absolute maximum), DC IN terminal block: 10A Max, ATX 6pin: 10A MaxACC IN / IGN Control (ACC optional, via switch) USB-C 9V~28V 40W-130W Note: If there is more than one power supply (e.g., Terminal block or USB Type-C) connected, then the USB PD Controller (CYPD8225) will let the first power supply through, also known as First come first serve.
Thermal Solution	1x SOM FAN (Box PC or Devkit) 2x Chassis Fan (Box PC, 12V fan wafer)
Buttons	Power and Recovery
LED	1x System Power 1x Input Power
MISC	1x Mini-fit 4Pin DC output for PSE expansion (Pass-through 10A) 1x DC output wafer (9~12V) for GMSL 1x USB-C for Debug_UART (Share with OOB) DIP Switch for function controlAT/ATX Mode selectACC Enable / Ignore ACC for Development (default)
RTC Battery	Support RTC battery and Battery Life Monitoring by MCU
PCB/Electronics Mechanical Info	W: 211mm x L: 194mm x H: 115mm Weight: 3KG
Certifications	CE, FCC,VCCI, KC
Package	1x Box PC 1x 240W Adapter (360W with 8x POE board) 1x Power Cord (By region) 2x Terminal Block

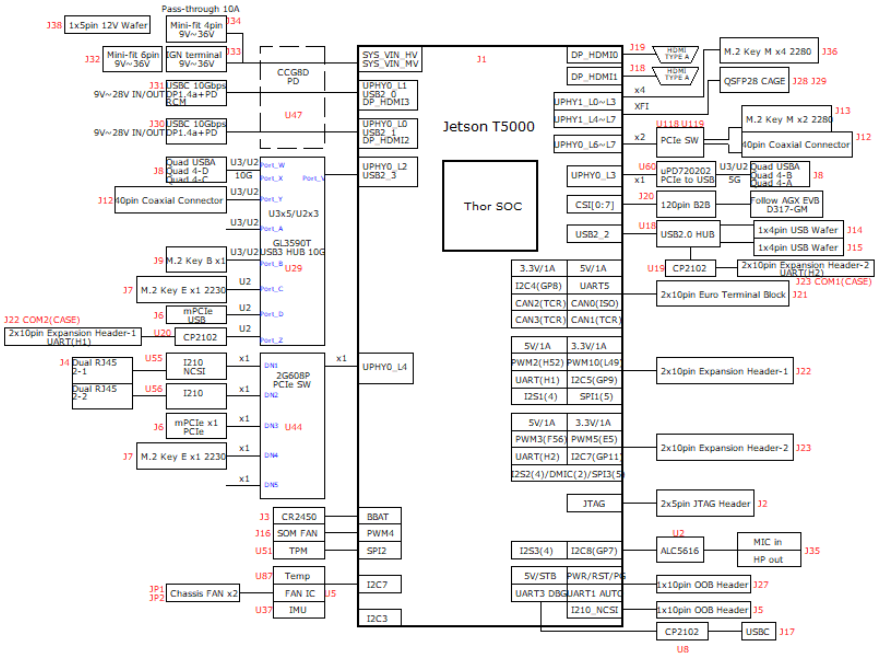
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Dimensions (211mm x 194mm x 115mm)



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Block Diagram



Packing List

Part Number	Description	Quantity	Notes
065AMC421ACG	PLUG_TERMINAL BLOCK_1*10PIN	2	-
041318GOYAN3	@ADAPT_AC/DC_100~240 V_24V_10.41A_TB3P/F	1	-
041318GOZAN4	@ADAPT_AC/DC_100~240 V_24V_12.75A_ATX6P/F	1	If use 8x POE board, please choose this.

Optional Accessory

Item	Part Number	Product Name	Type	Description
1	61D1350001AK	RTK GNSS module	Board	U-blox ZED-F9P+F9H
2	61D115S5G1EK	5G Daughter Board	Board	40pin, Support 1xM.2. M key for SSD and 1xM.2 B key for 4G/5G
3	0700WLAN0AWX	Wi-Fi 6E AX210 Set	Board	Wi-Fi 6E-intel AX210 (Included 2x I-PEX cable and 2x Antennas)
4	60D3150000AE	4G set	Board	Quectel EM05_LTE Cat 4 M.2 Module+2xCable+2xAntenna
5	60D3150001AD	5G set	Board	Quectel RM520N Series_5G Sub-6 GHz M.2 Module+4xCable+4xAntenna

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Ordering Information

Model	SKU Number	NVIDIA SOM	ERMI board	PoE Board	GMSL Board
D331ATB	D331ATB-64G-001	T4000			
D331ATB	D331ATB-64G-002	T4000	RMII Function (Eth)		
D331ATB	D331ATB-64G-003	T4000	NCSI Function (Eth)		
D331ATB	D331ATB-64G-004	T4000		8 port PoE	
D331ATB	D331ATB-64G-005	T4000			8 port GMSL
D331ATB	D331ATB-64G-006	T4000	RMII Function (Eth)	8 port PoE	
D331ATB	D331ATB-64G-007	T4000	NCSI Function (Eth)	8 port PoE	
D331ATB	D331ATB-64G-008	T4000	RMII Function (Eth)		8 port GMSL
D331ATB	D331ATB-64G-009	T4000	NCSI Function (Eth)		8 port GMSL
D331ATB	D331ATB-64G-010	T4000		8 port PoE	8 port GMSL
D331ATB	D331ATB-64G-011	T4000	RMII Function (Eth)	8 port PoE	8 port GMSL
D331ATB	D331ATB-64G-012	T4000	NCSI Function (Eth)	8 port PoE	8 port GMSL
D331ATB	D331ATB-128G-001	T5000			
D331ATB	D331ATB-128G-002	T5000	RMII Function (Eth)		
D331ATB	D331ATB-128G-003	T5000	NCSI Function (Eth)		
D331ATB	D331ATB-128G-004	T5000		8 port PoE	
D331ATB	D331ATB-128G-005	T5000			8 port GMSL
D331ATB	D331ATB-128G-006	T5000	RMII Function (Eth)	8 port PoE	
D331ATB	D331ATB-128G-007	T5000	NCSI Function (Eth)	8 port PoE	
D331ATB	D331ATB-128G-008	T5000	RMII Function (Eth)		8 port GMSL
D331ATB	D331ATB-128G-009	T5000	NCSI Function (Eth)		8 port GMSL
D331ATB	D331ATB-128G-010	T5000		8 port PoE	8 port GMSL
D331ATB	D331ATB-128G-011	T5000	RMII Function (Eth)	8 port PoE	8 port GMSL
D331ATB	D331ATB-128G-012	T5000	NCSI Function (Eth)	8 port PoE	8 port GMSL

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