VBOX-105-2L6C

TP-IPC®
TO BE YOUR PARTNER OF INDUSTRIAL PC

- Software Ignition Control with 6V to 42VDC wide range DC Power Input with 80V Surge Protection
- Intel® Celeron® J6412 low-power processor bring greater computing power with cost advantages.
- Support up to triple independent displays with 2* HDIM and 1* Display port
- Full aluminum alloy anti-interference structure and fully enclosed with fanless cooling design offers stronger system stability;
- Multiple built-in expansion ports for 4G, 5G, Wi-Fi or AI accelerator;
- Multiple mounting options available, DIN-Rail, Wall-Mount, Embedded.

The actual appearance is subject to the final configuration.

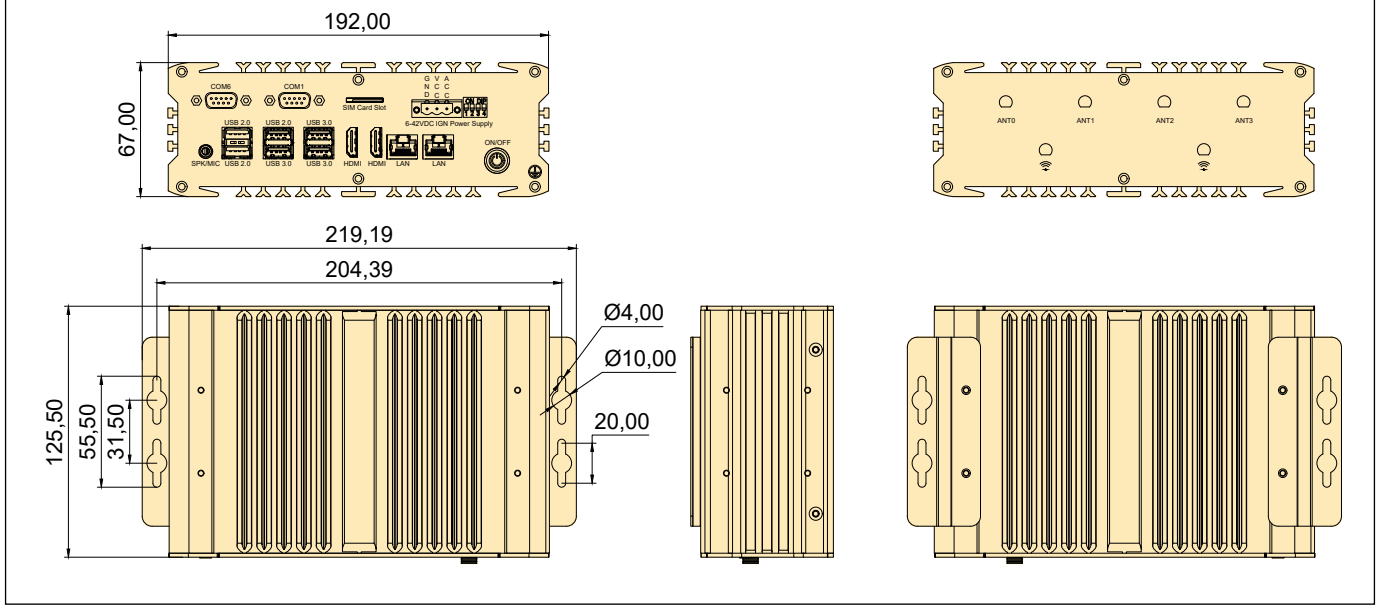
Specifications

Model	VBOX-105-2L6C	
Supported OS	Win 10, Win11, Linux (Ubuntu, Debian, Kali, CentOS, etc.)	
CPU	Specification	Intel® Celeron® J6412, Quad-core, 4 Threads, base Fre. 2.00 GHz, Burst Fre. 2.60GHz, TDP 10W
	Graphics	Intel® UHD Graphics for 10th Gen Intel® Processors, 16Eus.
RAM	SO-DIMM	1 * Non-ECC SO-DIMM Slot, support DDR4-2666/2933/3200MHz, Up to 32GB
Storage Device & Extended Capabilities	SATA	1 * SATA3.0 7P Connector with 1 * SATA Power Header [1]
	Mini PCIe	1 * Mini PCIe Slot (USB2.0+PCIE/mSATA,support 4G, default mSATA, connected to SIM wafer) [2]
	M.2 M-key	1* M.2 (NGFF) 2280 M-key slot, support PCIex2 Gen.3 NVMe/ SATA3.0 SSD [1] [3]
	M.2 B-key	1 * M.2 Key-B Slot (PCIE/USB3.0+ USB2.0,3052, default USB3.0, Support 4G/5G, connected to SIM wafer); [2] [4]
I/O Interface	COM	3 * RS232 (COM1/2/3, Header, Full Wires) 2 * RS232/TTL (COM4/5, Header, 2 Wires) 1 * RS232/RS485/TTL (COM6, Header, 2 Wires) [5]
	Ethernet	2 * RJ45 connector, Intel I225-V GBE LAN Chip (10/100/1000 Mbps)
	USB	3 * USB3.0, 3 * USB2.0 (TYPE-A, Rear IO); 4 * USB2.0 (Header, Internal) [2] [4]
	Video	1 * HDMI(TYPE-A): max resolution up to 4096*2304@60Hz; 1 * HDMI (Header): max resolution up to 4096*2304@60Hz; 1 * DP (TYPE-A): max resolution up to 4096*2304@60Hz;
	Audio	Realtek Audio HDA Codec; 1 * Line-Out + MIC 2in1 ΦΦ3.5mm Jack; 1 * Amplifier Header, 3W into an 4Ω Loads
	Power Supply	6-42V DC; 1* Terminal Block (3-Pin, 5.08mm, the Pin3 should be connected to the ACC Signal from the vehicle)
	Others	1* 8-bit GPIO header (4-Inputs/4-Outputs, 0-5V Input Range, on motherboard); 1 * SIM Card Header connected to M.2 B-key slot
Environment	Operating Temperature	-20 ~ 65 °C w/ 0.7m/s Airflow
	Storage Temperature	-20 ~ 85 °C (-40~185 °F)
	Relative Humidity	40 °C @ 95%, Non-Condensing
Physical Characteristics	Dimensions	290.35* 79.6* 234 mm (W* H* D)
	Net Weight	2 KG
Regulation	EMC	CE/FCC Class B, CCC
	Safety	CE-LVD, RoHS, CCC

[1]: M.2 key-M slot supports PCIe x2 NVMe /SATA SSD, sel by res. Colay SATA signal with SATA3.0 7P connector.
[2]: Mini PCI-E Slot supports SATA/PCIE+USB2.0, sel by res. Colay SATA signal with M.2 key-B slot. Colay USB2.0 signal with F_USB3 Header.
[3]: PCIe x2 Gen3/Gen4 determined by the CPU.
[4]: M.2 key-B slot supports PCIE/USB3.0/mSATA+ USB2.0, sel by res. Colay SATA signal with Mini PCI-E slot. Colay USB2.0 signal with F_USB2 Header. Colay PCIE/USB3.0 signal with R_USB2_UP Connector.
[5]: If J_COM6 is used, COM6 is RS232. If J_COM6_1 is used, COM6 is RS485. J_COM6 and J_COM6_1 can't be used at the same time. It also supports TTL, but the circuit needs to be changed. It also supports 422, but the circuit needs to be changed

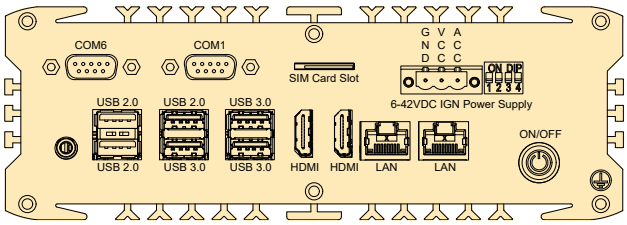
Dimension

Unit:mm

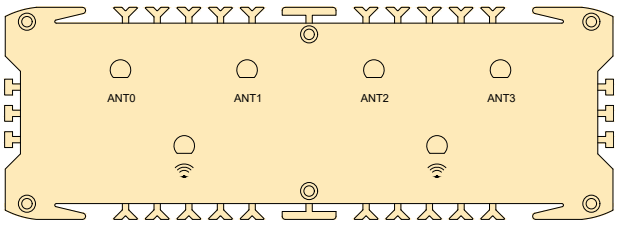


The actual appearance and dimensions are subject to the final configuration

Front Panel External I/O Mechanical Layout/Drawing



Rear Panel External I/O Mechanical Layout/Drawing



Ordering Information

SO-DIMM Socket	SATA3.0 Connector	Mini PCIe Slot	M.2 2280 M-key slot	M.2 3052 B-key slot	COM Header	GbE LAN	USB3.0	USB2.0	USB2.0 Header
1	1	1	1	1	6	2	3	3	4

HDMI	HDMI Header	Display Port	Micin+LineOut 2 In 1 Jack	SIM Card Slot	8-bit GPIO Header	Power Supply
1	1	1	1	1	1	6-42VDC

Processors Info & Available List

CPU	Code Name	Total Cores	Total Threads	Max Turbo Frequency	Base Frequency	Cache	TDP	Memory Types	Integrated Graphics
Intel® Celeron® J6412	Elkhart Lake	4	4	2.60 GHz	2.00 GHz	1.5 MB L2 Cache	10 W	DDR4	Intel® UHD Graphics for 10th Gen Intel® CPU

Packing list

Deafult Items	Qty
VBOX-105-2L6C Unit	1
AC-to-DC Adapter	1
Wall mounting bracket	2
Power cable 3-pin 150cm	1

Options for default items

Optional Items	Qty
Power cable 3-pin 150cm, USA type	-
Power cable 3-pin 150cm, EU type	-
Power cable 3-pin 150cm, UK type	-
VESA mount kits	-
DIN Rail mount kits	-

Optional accessories or internal modules for unit

Optional Items	Max Qty	Description
4G Module	1	Connected by M.2 interface
5G Module	1	Connected by M.2 interface
WiFi Module without AP mode	1	Connected by Mini PCIe interface
WiFi Module with AP mode	1	Connected by Mini PCIe interface
Dual channel CAN-Bus Module	1	Connected by M.2 or MiniPCIe interface

‼ Note: As this product has expansion slots, please consult sales for the specific maximum number of expandable interfaces.

IGN PWR function details

- When the ACC SWITCH (switch1) is turned on

The IGN module will start to detect the ACC signal, the module will delay the output of 12V (optional 24V) for 3 seconds, and when the ACC signal disappears, the computer's shutdown command will be sent according to the delay time of the pull switch, and after the countdown is completed, the program will enter the 3-minute countdown again, and the 12V/24V power output will be disconnected when the time is up (if the ACC signal is received again within the delayed countdown, it will wait for the next ACC signal to disappear and re-timer). signal will wait for the next ACC signal to disappear and re-timer)

- When the ACC SWITCH (switch1) is turned off

The module won't detect the ACC signal, the output delay function is off, when the power supply has input voltage, the module directly output power supply, the delay shutdown switch is not-actived (Notice: if access to ACC, when the ACC signal disappears, the delay shutdown function will take effect)

- Please see the following list for detailed DIP switch combinations as below:

Switch No.	Switch 1 (ACC)	Switch 2	Switch 3	Switch 4	Delayed shutdown time
Switching Status	OFF	OFF	OFF	OFF	Not actived
	ON	ON	ON	ON	5 s
	ON	ON	ON	OFF	60 s
	ON	ON	OFF	ON	5 mins
	ON	ON	OFF	OFF	10 mins
	ON	OFF	ON	ON	30 mins
	ON	OFF	ON	OFF	60 mins
	ON	OFF	OFF	ON	120 mins