



LAND



SEA



AIR

# TV300

## 2U Half Nvidia Orin Military Computer



- Ultra Short Depth 2U Half Rugged Computer
- NVIDIA Jetson AGX Orin 32G/64G LPDDR5 DRAM
- 2x LAN+1x CAN+1x RS232/422/485+5x DIO
- 1x 10G SFP+
- 8x GMSL2 (Options)
- 8x 3G-HDI (Options)
- IP65 Classified
- MIL-STD-461 EMI Filter DC 12V~32V(Options)
- Size : 250x325x84mm



# Specifications

## System

High performance Processor	Ampere GPU + Arm Cortex-A78AE CPU + 64GB LPDDR5 + 64GB eMMC 5.1 Ampere GPU + Arm Cortex-A78AE CPU + 32GB LPDDR5 + 64GB eMMC 5.1
GPU	64GB: Two graphics processing cluster (GPC)   eight texture processing clusters (TPC)   2048 NVIDIA® CUDA® cores   64 Tensor cores Ray-Tracing cores   170 Sparse TOPS   Maximum Operating Frequency: 1.3 GHz 32GB: Two graphics processing cluster (GPC)   seven texture processing clusters (TPC)   1792 NVIDIA® CUDA® cores   56 Tensor cores Ray-Tracing cores   108 Sparse TOPS   Maximum Operating Frequency: 939 MHz
AI Performance	64GB: Up to 275 Sparse TOPS (INT8) 32GB: Up to 200 Sparse TOPs (INT8)
Memory Type	Jetson AGX Orin 64GB: 64GB 128-bit LPDDR5 DRAM Jetson AGX Orin 32GB: 32GB 128-bit LPDDR5 DRAM

## Expansion Slot

Expansion Slot	1x M.2 Key-B, 1x SIM, 1x MicroSD, 1x 5V Fan 1x I2C, 2x UART, 1x I2S, 2x SPI, 1x CAN 1x Camera Connector (6 CSI camera support)
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## Display

Graphics Interfaces	1x HDMI 2.0 (max resolution 3840x2160)
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## Storage

M.2	64 GB eMMC 5.1 Flash 2x M.2 Key-M SSD Slot
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## Ethernet

Controller	2x GLAN 1x 10G (SFP+Based)
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## Front I/O

DC-IN	DC 12-32 VDC
X1	2x LAN+1x CAN+1x RS232/422/485+5x DIO
X2	1x 10G MPO
X3	1x HDMI
X4	1x USB3.0
Button	1x Water Resistive Power Button with dual-color LED Backlight

## Rear I/O (Options)

Antenna	2x Antenna holes for Wi-Fi 5/6 modules (PR-SMA ant.) 2x Antenna holes for LTE/5G module (SMA ant.) 1x Antenna hole for GNSS (RP-SMA ant.)
GMSL2	2x 2X2 Mini FAKRA SMB Plug Z-code – 8x GMSL(2) connectors
3D-HDI	8x 3G-HDI

## Rear I/O

Ground Screw	1
Debug Access Panel	1x Reset Button 1x Recover Button 1x USB Type-C for Debug 1x USB Type-C for Recovery 1x Reboot LED 1x Nano SIM Slot

## Power Requirement

Power Input	DC-12-32VDC
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## Operating System

Operating System	Ubuntu 20.04 with JetPack5.1
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## Physical

Dimension (W x D x H)	250x325x84mm
Weight	TBD
Chassis	Aluminum AL6061
Heatsink	Aluminum Alloy, Corrosion Resistant.
Finish	Anodic aluminum oxide (Color).
Cooling	Natural Passive Convection/Conduction. No Moving Parts
Ingress Protection	IP65

## Environmental

MIL-STD-461 (Options)	
EMC	CE102 basic curve, 10kHz - 30 MHz RE102-4, (1.5 MHz) -30 MHz - 5 GHz RS103, 1.5 MHz - 5 GHz, 50 V/m equal for all frequencies

Reliability	No Moving Parts; Passive Cooling. Designed & Manufactured using ISO 9001/2000 Certified Quality Program.
Operating Temp.	-20 to 50°C (ambient with air flow)
Storage Temp.	-40 to 85°C
Relative Humidity	5% to 95%, non-condensing.

# Ordering Information

## NV300-2L32

Ultra-Slim Rugged SFF 2U Military Computer with Jetson AGX Orin 32GB, 12V to 32V DC-IN, Extended Temp. -20 to 50°C

## NV300-2L64

Ultra-Slim Rugged SFF 2U Military Computer with Jetson AGX Orin 64GB, 12V to 32V DC-IN, Extended Temp. -20 to 50°C

## NV300-2LS32

Ultra-Slim Rugged SFF 2U Military Computer with Jetson AGX Orin 32GB, 12V to 32V DC-IN, Extended Temp. -20 to 50°C

## NV300-2LS64

Ultra-Slim Rugged SFF 2U Military Computer with Jetson AGX Orin 64GB, 12V to 32V DC-IN, Extended Temp. -20 to 50°C

## NV300-2LG32

Ultra-Slim Rugged SFF 2U Military Computer with Jetson AGX Orin 32GB, 12V to 32V DC-IN, Extended Temp. -20 to 50°C

## NV300-2LG64

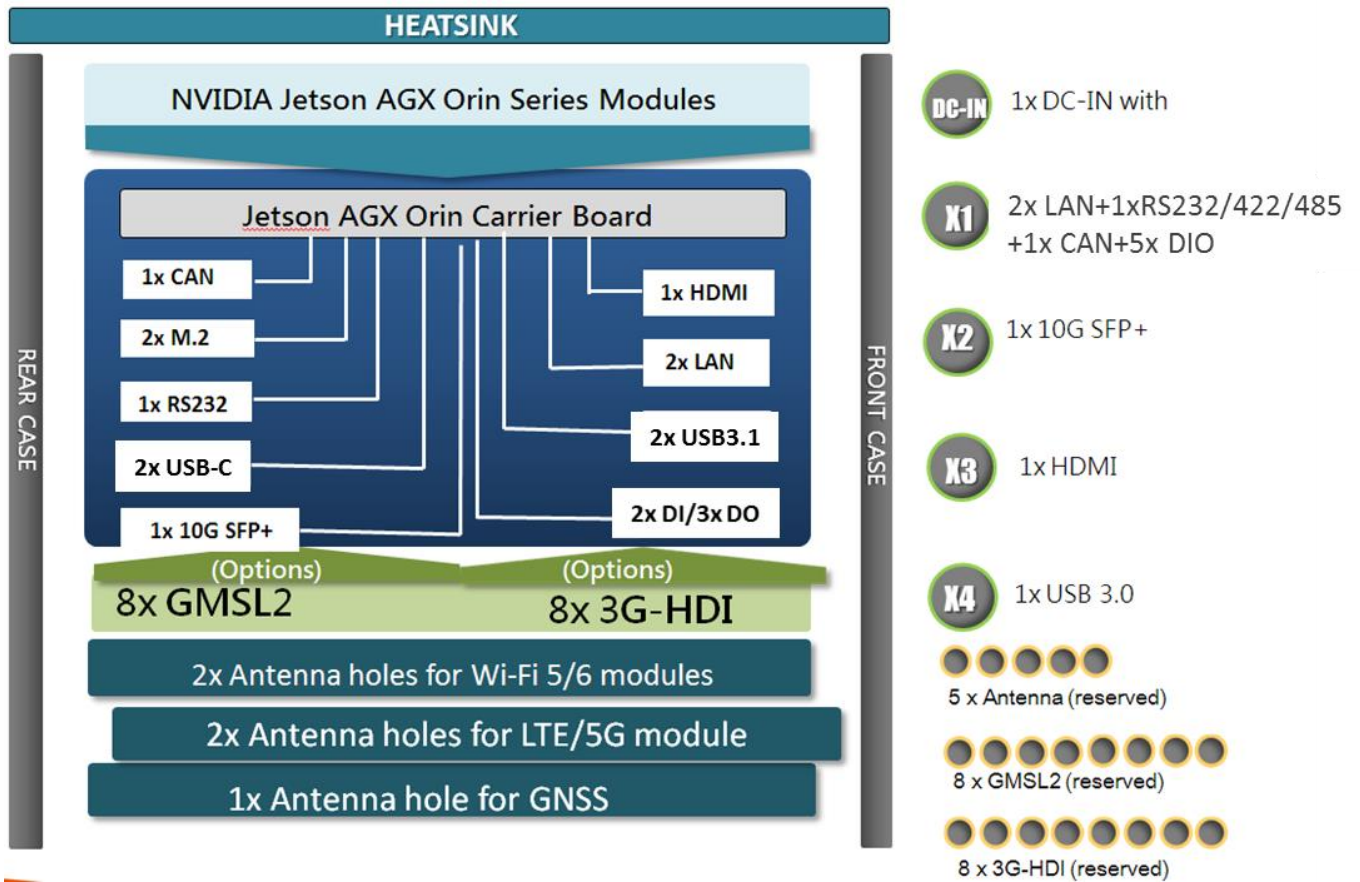
Ultra-Slim Rugged SFF 2U Military Computer with Jetson AGX Orin 64GB, 12V to 32V DC-IN, Extended Temp. -20 to 50°C

## NV300-2LGS64

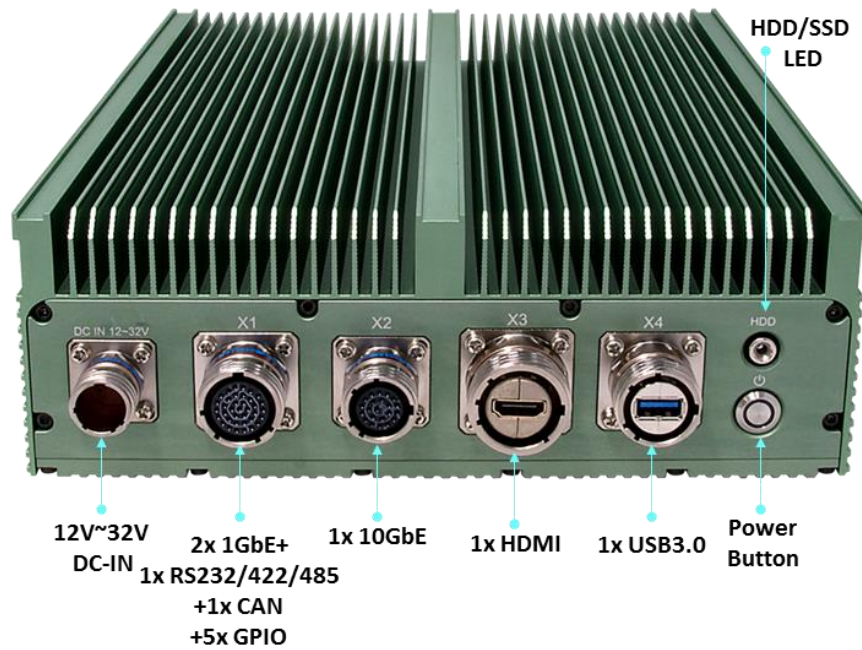
Ultra-Slim Rugged SFF 2U Military Computer with Jetson AGX Orin 64GB, 12V to 32V DC-IN, Extended Temp. -20 to 50°C

Model	NV300-2L32	NV300-2L64	NV300-2LG32	NV300-2LG64	NV300-2LGS64	NV300-2LS32	NV300-2LS64
<b>GPU</b>	1792-core NVIDIA Ampere with 56 Tensor Cores (AGX Orin 32GB)	2048-core NVIDIA Ampere with 64 Tensor Cores (AGX Orin 64GB)	1792-core NVIDIA Ampere with 56 Tensor Cores (AGX Orin 32GB)	2048-core NVIDIA Ampere with 64 Tensor Cores (AGX Orin 64GB)	2048-core NVIDIA Ampere with 64 Tensor Cores (AGX Orin 64GB)	1792-core NVIDIA Ampere with 56 Tensor Cores (AGX Orin 32GB)	2048-core NVIDIA Ampere with 64 Tensor Cores (AGX Orin 64GB)
<b>Memory</b>	32GB	64GB	32GB	64GB	64GB	32GB	64GB
<b>AI Performance</b>	200 TOPs	275 TOPs	200 TOPs	275 TOPs	275 TOPs	200 TOPs	275 TOPs
<b>CPU</b>	8-core Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3	12-core Arm® Cortex®-A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3	8-core Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3	12-core Arm® Cortex®-A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3	12-core Arm® Cortex®-A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3	8-core Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L3	12-core Arm® Cortex®-A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3
<b>Module total module power</b>	15W   30W   40W	15W   35W   60W, and up to 75W	15W   30W   40W	15W   35W   60W, and up to 75W	15W   35W   60W, and up to 75W	15W   30W   40W	15W   35W   60W, and up to 75W
<b>Storage</b>	2x M.2 (up to 16TB) 64GB eMMC 5.1 Flash	2x M.2 (up to 16TB) 64GB eMMC 5.1 Flash	2x M.2 (up to 16TB) 64GB eMMC 5.1 Flash	2x M.2 (up to 16TB) 64GB eMMC 5.1 Flash	N/A 64GB eMMC 5.1 Flash	N/A 64GB eMMC 5.1 Flash	N/A 64GB eMMC 5.1 Flash
<b>Front I/O</b>							
<b>Power In</b>	12-32 VDC with D38999	12-32 VDC with D38999	12-32 VDC with D38999	12-32 VDC with D38999	12-32 VDC with D38999	12-32 VDC with D38999	12-32 VDC with D38999
<b>X1</b>	2x GbE+1x RS232/422/485 +1x CAN+2x DI+3x DO	2x GbE+1x RS232/422/485 +1x CAN+2x DI+3x DO	2x GbE+1x RS232/422/485 +1x CAN+2x DI+3x DO	2x GbE+1x RS232/422/485 +1x CAN+2x DI+3x DO	2x GbE+1x RS232/422/485 +1x CAN+2x DI+3x DO	2x GbE+1x RS232/422/485 +1x CAN+2x DI+3x DO	2x GbE+1x RS232/422/485 +1x CAN+2x DI+3x DO
<b>X2</b>	1x 10GB MPO	1x 10GB MPO	1x 10GB MPO	1x 10GB MPO	1x 10GB MPO	1x 10GB MPO	1x 10GB MPO
<b>X3</b>	1x HDMI	1x HDMI	1x HDMI	1x HDMI	1x HDMI	1x HDMI	1x HDMI
<b>X4</b>	1x USB3.0	1x USB3.0	1x USB3.0	1x USB3.0	1x USB3.0	1x USB3.0	1x USB3.0
<b>Power Button</b>	1x	1x	1x	1x	1x	1x	1x
<b>LED</b>	1x HDD/SSD Indicator light	1x HDD/SSD Indicator light	1x HDD/SSD Indicator light	1x HDD/SSD Indicator light	1x HDD/SSD Indicator light	1x HDD/SSD Indicator light	1x HDD/SSD Indicator light
<b>Rear I/O</b>							
<b>GMSL</b>	N/A	N/A	8x	8x	8x	N/A	N/A
<b>3G-SDI</b>	N/A	N/A	N/A	N/A	8x	8x	8x
<b>Dimensions</b>	250 x 325 x 84mm(WxDxH)	250 x 325 x 84mm(WxDxH)	250 x 325 x 84mm(WxDxH)	250 x 325 x 84mm(WxDxH)	250 x 325 x 84mm(WxDxH)	250 x 325 x 84mm(WxDxH)	250 x 325 x 84mm(WxDxH)

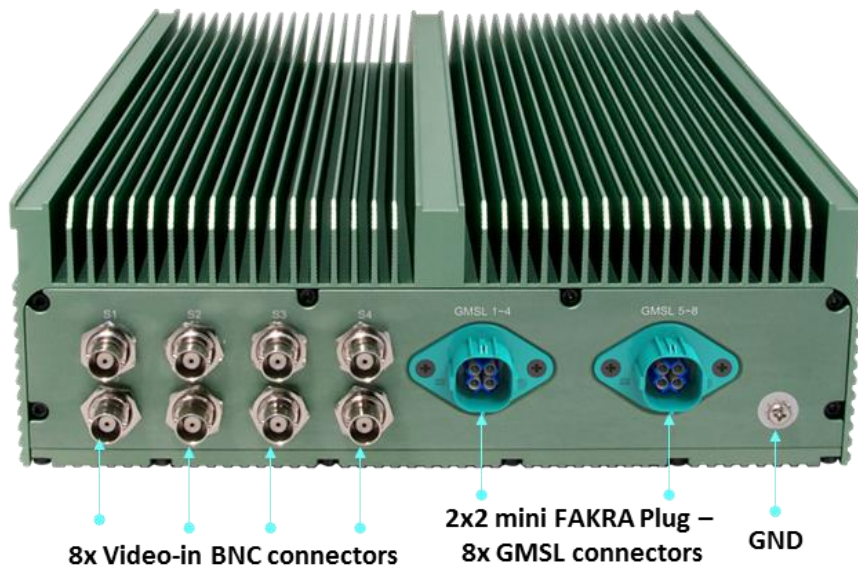
# Block Diagram



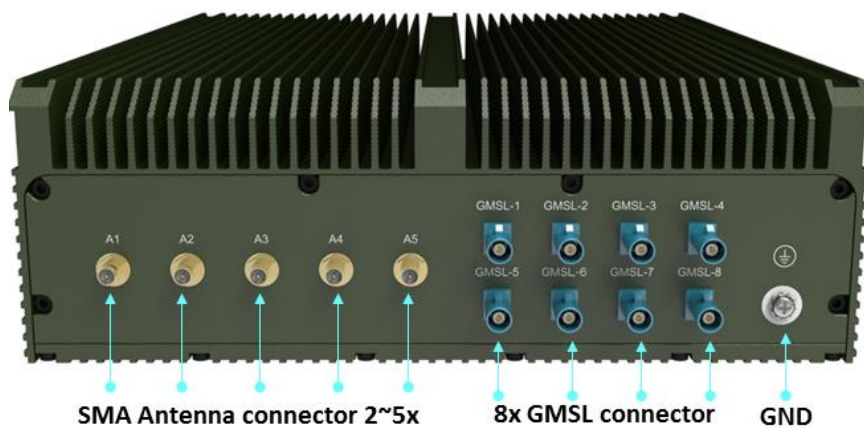
# Appearance



Option 1



Option 2



# Dimension

