NV300-E (S32E)

IP65 NVIDIA® AGX Orin Military Computer

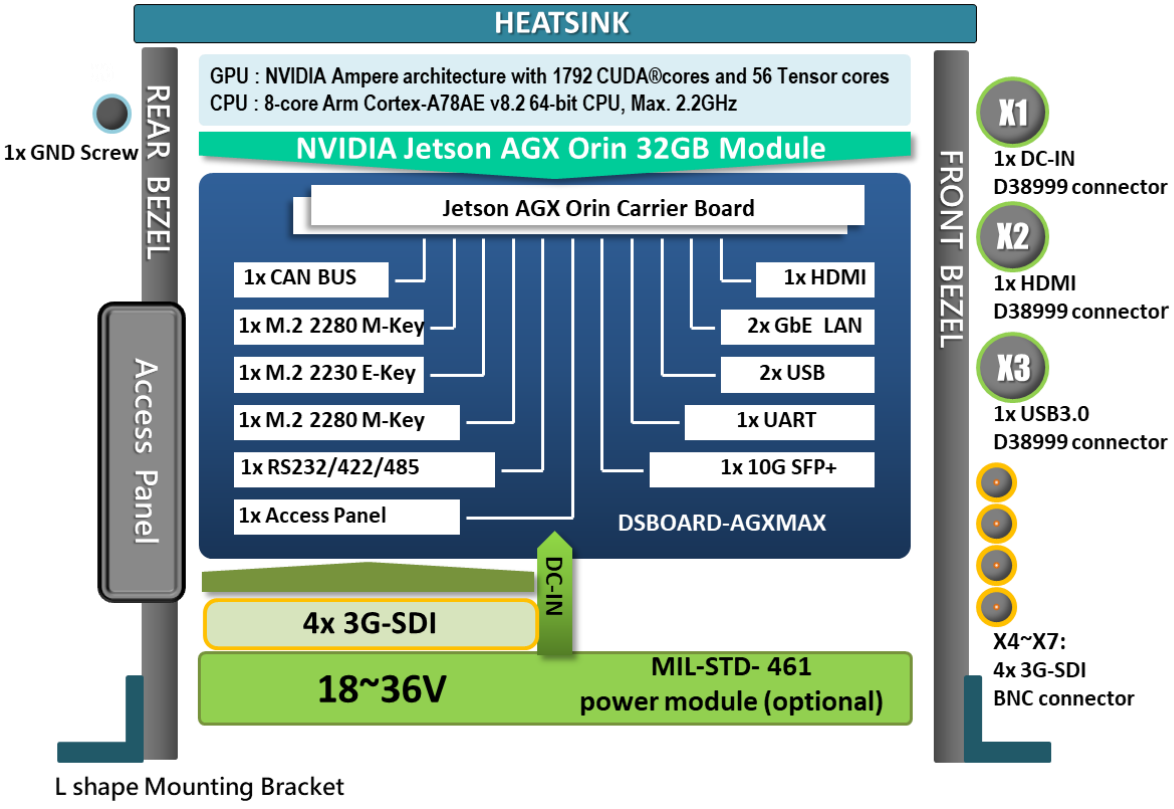
- NVIDIA Jetson AGX Orin 32G LPDDR5 DRAM
- 1 x HDMI + 1 x USB 3.0 + 4 x 3G-SDI
- IP65 Sealed with DTL-38999 Connectors
- Vehicle Grade DC Input 18-36V
- Operating Temperature: -20°C to +50°C
- MIL-STD-810 Vibration Method 514.6: ◎Acceleration:5.0 Grms
- MIL-STD-810 Vibration Method 514.6: ◎PSD: 0.01257 g2/Hz
- MIL-STD-810 Shock Method 516.6: ◎Wave Form: Half Shine Wave
- MIL-STD-810 Shock Method 516.6: ◎Acceleration: 75G

Introduction

The NV300-E (S32E) IP65 AGX Orin Military Computer is a compact 2U half, ultra-short-depth rugged edge AI computer engineered for mission-critical defense and surveillance applications. Powered by the NVIDIA Jetson AGX Orin 32GB, it integrates an Ampere architecture with 1,792 CUDA cores, 56 Tensor Cores, and LPDDR5 memory, delivering up to 241 TOPS of AI performance while supporting configurable power consumption from 15W to 60W. Its small-form-factor design enables deployment in space-constrained environments without compromising computing capability, making it an ideal platform for advanced edge AI workloads.

Designed for demanding applications such as anti-drone systems, the NV300-E (S32E) provides unparalleled sensor fusion and multi-video data processing with support for four 3G-SDI inputs and a 10G SFP+ interface for high-bandwidth, low-latency video transmission. Built to operate reliably in harsh environments, the system features an IP65-rated rugged aluminum enclosure that offers outstanding protection against dust, water and other environmental hazards, while maintaining stable performance across an operating temperature range of -20°C to 50°C. The NV300-E (S32E) delivers the reliability, connectivity, and AI computing power required for next-generation defense and intelligent edge computing deployments.

Block Diagram



Specifications

System	
High Performance Processor	Ampere GPU + Arm Cortex-A78AE CPU + 32GB LPDDR5 + 64GB eMMC 5.1
GPU	Jetson AGX Orin 32GB: two graphics processing cluster (GPC) | seven texture processing clusters (TPC) | 1,792 CUDA cores | 56 Tensor cores Ray-Tracing cores | 108 Sparse TOPS | Maximum Operating Frequency: 939 MHz
AI Performance	32GB: Up to 241 TOPS (INT8)
Memory Type	Jetson AGX Orin 32GB 256-bit LPDDR5 DRAM
Expansion Slot	
Expansion Slot	1 x M.2 M-Key, 1 x M.2 Key-B, 1 x SIM, 1 x 5V Fan 1 x I2C, 2 x UART, 1 x I2S, 2x SPI, 1 x CAN 1 x Camera Connector (6 CSI camera support) 2 x GLAN, 1 x 10G (SFP+ Based)
Display	
Graphics Interfaces	1 x HDMI 2.0 (max resolution 3840 x 2160)
Storage	
Storage	64 GB eMMC 5.1 Flash
Front I/O	
X1	18-36 V DC-IN
X2	1 x HDMI with D38999
X3	1 x USB 3.0 with D38999
X4~7	4 x 3G-SDI with BNC connector
Rear I/O	
Ground Screw	1
Debug Access Panel	1 x Reset Button
	1 x Recover Button
	1 x USB Type-C for Debug
	1 x USB Type-C for Recovery
Power Requirement	
Power Input	18-36V DC-IN
Operating System	

Operating System	Ubuntu 22.04 with JetPack 6.2
Physical	
Dimensions	250 x 325 x 100 mm (W x D x H)
Weight	8.65 kg
Chassis	Aluminum AL6061
Heatsink	Aluminum Alloy, Corrosion Resistant.
Finish	Anodic aluminum oxide, Color: PANTONE 7743C (Nato Green), Black (optional)
Cooling	Natural Passive Convection/Conduction. No Moving Parts
Ingress Protection	IP65
Environmental (Designed to Meet)	
MIL-STD-461 (optional)	
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°C to 50°C (ambient with air flow)
Storage Temp.	-40°C to 85°C
Relative Humidity	5% to 95%, non-condensing

Ordering Information

NV300-A (1LS64)
IP65 NVIDIA® AGX Orin Military Computer, Jetson AGX Orin 64GB, 12V to 30V DC-IN, Extended Temp. -20°C to 50°C, 1x M.2 256GB SSD, 2x 3G-SDI, Color: PANTONE 7743C

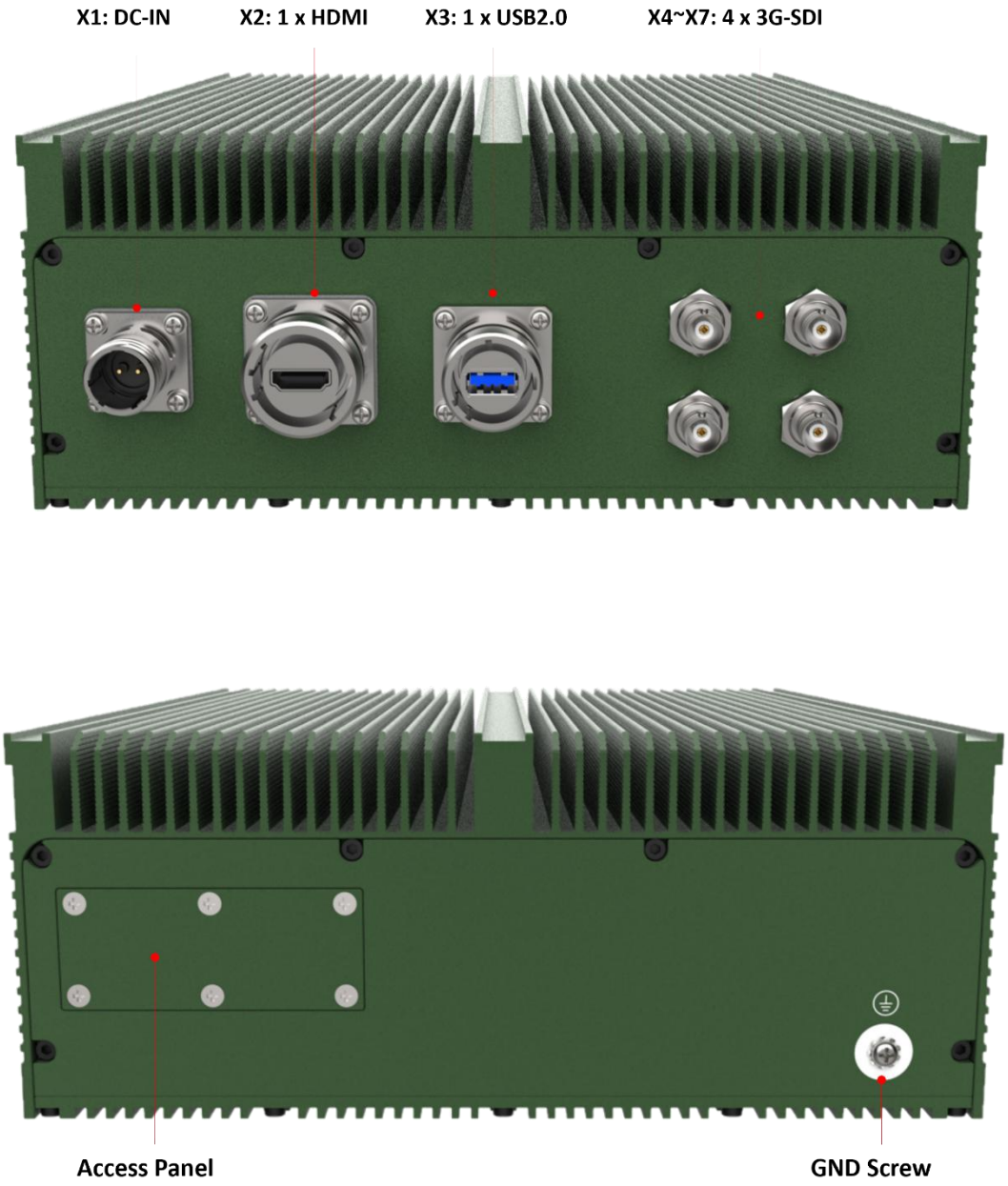
NV300-B
To Be Updated

NV300-C (AMB)
IP65 NVIDIA® AGX Orin Military Computer, Jetson AGX Orin 64GB, 12V to 30V DC-IN, Extended Temp. -20°C to 50°C, 1x M.2 256GB SSD, Color: PANTONE 7743C

NV300-D (1LS64B)
IP65 NVIDIA® AGX Orin Military Computer, Jetson AGX Orin 64GB, 12V to 30V DC-IN, Extended Temp. -20°C to 50°C, 1x M.2 256GB SSD, 2x 3G-SDI, Color: RAL8025

NV300-E (S32E)
IP65 NVIDIA® AGX Orin Military Computer Jetson AGX Orin 32GB, 18V to 36V DC-IN, Extended Temp. -20°C to 50°C, 4x 3G-SDI, Color: PANTONE 7743C /Black (optional)

Appearance


X1: DC-IN
X2: 1 x HDMI
X3: 1 x USB2.0
X4~X7: 4 x 3G-SDI
Access Panel
GND Screw

Dimensions