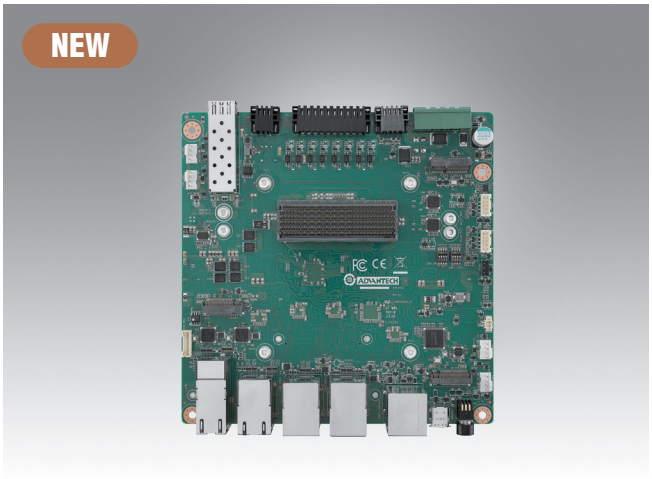
ASR-A702

AMR Control Board Powered by NVIDIA® Jetson Thor™



Features

- Powered by NVIDIA Jetson T5000™ and Jetson T4000™, delivering up to 2070 TFLOPS FP4 inference performance
- Dedicated I/Os for Robotics: 6x2.5 GbE, 6xUSB, 2xCOM, DIO, CANFD
- Supports SFP28 1x 10GbE
- Sensor connection for camera, LiDAR, IMU...etc.
- Supports NVIDIA JetPack™ 7.2
- IEC 61000-6-4 Heavy Industry Certificate

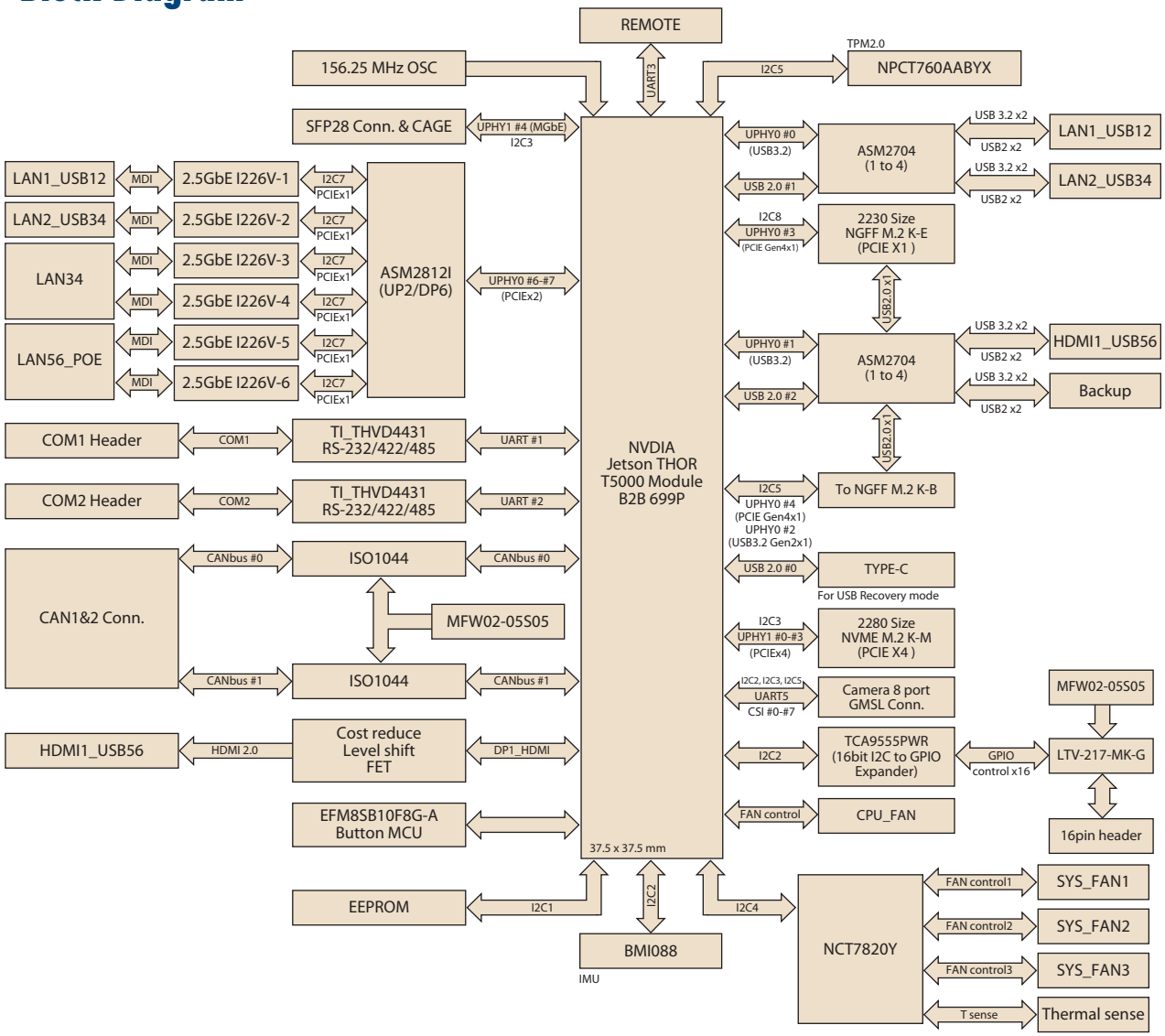
Specifications

Processor System	NVIDIA Jetson Thor Module	NVIDIA Jetson T5000	NVIDIA Jetson T4000
	CPU	14-core Arm® Neoverse®-V3AE 64-bit CPU	12-core Arm® Neoverse®-V3AE 64-bit CPU
	GPU	2560-core NVIDIA Blackwell architecture GPU with 96 fifth-gen Tensor Cores	1536-core NVIDIA Blackwell architecture GPU with 64 fifth-gen Tensor Cores
	AI Performance Reference	2070 TFLOPS (FP4—Sparse)	1200 TFLOPS (FP4—Sparse)
	TDP	40-130W	40–70 W
	Memory	128GB LPDDR5X, 273 GB/s	64 GB 256-bit LPDDR5X, 273 GB/s
Ethernet	Interface	RJ-45	
	Controller	Intel® i226	
	Speed	6 x 2.5GbE	
SFP28	Speed	1 x 10GbE	
Display	HDMI	1 x HDMI 2.0 (Max. resolution 3840 x 2160 @ 60Hz)	
IO Ports	USB	6 x USB 3.2 Type A	
	OTG USB	1 x Type C USB (for system recovery only)	
	CANBus	2 x isolated CANFD	N/A (optional via external module)
	DI/DO	16bit isolated DIO	
	COM	2 x RS232/422/485	
	Remote switch	LED/WDT/PWS/GND/RESET/Debug	
Expansion	M.2 E key	1 x 2230	
	M.2 B key	1 x 3042/3052 (PCIex1, USB, SIM)	
	GMSL	8 x FAKRA (Optional)	
	IMU	BOSCH BMI088 6-axis (Optional)	
Others	TPM	TPM2.0	
	Time Sync	Supports GPS PPS signal (optional)	
Storage	M.2 M key	1 x M.2 2280	
Power	Power Supply voltage	20~28V	
	Power Type	ATX/AT mode, ATX default	
Environment	Operational Temperature	-10 ~ 55°C with 0.7 m/s air flow	
	Operating Humidity	95% @ 40 °C (non-condensing)	
	Vibration	3.5 Grms @ 5 ~ 500 Hz, random, 1 hr/axis	
Mechanical	Dimensions (W x D x H)	170 x 170 mm	
	Weight	305g	
Operating System		Ubuntu 24.04 LTS with NVIDIA JetPack 7.2	
Software Support	ROS2	Ready by Advantech Robotic Suite	
Certifications	EMC/Safety	CE/FCC Class B	

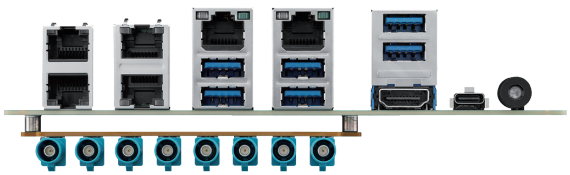
All product specifications are subject to change without notice.

Last updated: 16-Nov-2026

Block Diagram



Front I/O View



Rear I/O View



Ordering Information

Part No.	Description
968DD00531	NVIDIA Jetson Thor T5000

Part No.	Description	Module	Memory	NVME	HDMI	2.5 GbE	10 GbE	USB	CANBus	COM	DIO	Power input	Made in
ASR-A702-X1A1U	built in AGX Thor	T5000	128GB	512GB	1	6	1	6 x Type A 1 x Type C (for system recovery only)	2	2	16bit	20~28V	Taiwan
ASR-A702-X2A1U	built in AGX Thor	T4000	64GB	512GB	1	6	1	6 x Type A 1 x Type C (for system recovery only)	0	2	16bit	20-28V	Taiwan
ASR-A702-X0A1U	Carrier Board for AGX Thor	Optional	Optional	Optional	1	6	1	6 x Type A 1 x Type C (for system recovery only)	2	2	16bit	20~28V	Taiwan

Packing List

Part Number	Description
968DD00531	NVIDIA Jetson Thor T5000
1970006342T001	Cooler
1970006335T001	Heatsink
SQF-C8BV2-512GDEDM	NVME SSD
-	BSP
1931000590	Screw
1920001677-01	Washer
1652008233-01	CANBUS terminal plug
1652008720-01	DIO terminal plug
1652008721-01	LED&remote terminal plug

Optional Item for Default SKU

Part Number	Description
AFE-RM04-8PA1	8ports GMSL board
MIOE-PSE-DPA1	PoE Module, A1 dual 15.4W w/ Heatsink
96PSA-A330W24P4-3	AC to DC Adapter, DC 24V 330W
1700035844-01	COM cable, 9P(M)/2x5P-2.0 25cm
1751000759-01	FAKRA Cable 1M, Z Type
1702002600	Power cable 3-pin 183cm, USA type
1702002605	Power cable 3-pin 183cm, EU type
1702031801	Power cable 3-pin 183cm, UK type
1700000237	Power cable, 3-Pin 183cm, PSE type
1700036551-01	Cable for SFP28

Compatible Sensors List

For comprehensive hardware integration details, please visit the Sensor Selector