TAURO TECHNOLOGIES

TT315 AGX Thor Controller

For Industrial and Robotics Applications

Key Features

- AGX Thor AI Performance
- zQSFP+ 4x 25G Ethernet
- RJ-45 1G Ethernet
- M.2 Expansion Interfaces
- SE050 TPM

Applications

- Autonomous Transportation
- Robotics
- Agriculture
- Mining
- UAV

Overview

The TT315 AGX Thor Controller is an industrial, IP20 compute platform based on NVIDIA® Jetson AGX Thor™ module, which integrates a 14-core ARM Poseidon-AE 64-bit CPU, an NVIDIA Blackwell Architecture GPU with 2560 CUDA® cores, 96 4th Gen Tensor Cores, and 128GB LPDDR5x DRAM running at 4266 MHz with 273 GB/s bandwidth. Designed for industrial and commercial deployment.

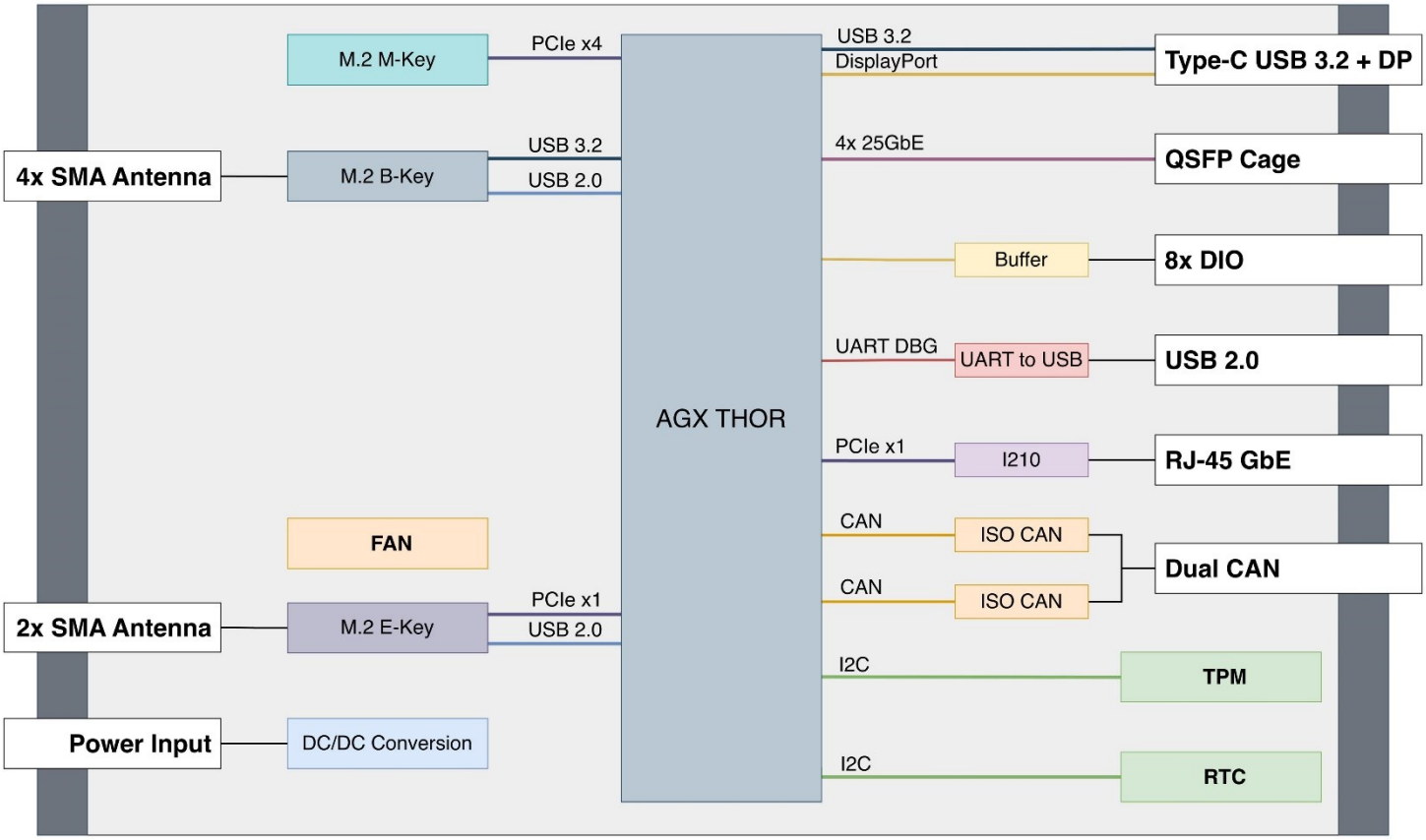
The TT315 delivers up to 1050 FP8 TFLOPs / 2100 FP4 TFLOPs of AI compute, providing the performance needed for edge inference and real-time video analytics. It offers a comprehensive set of latest-generation interfaces on the Jetson AGX Thor, including a zQSFP+ interface, RJ-45 GbE interface, USB Type-C for KVM Interface, 8x protected Discrete I/Os, 2x isolated CANBus ports, M.2 M-Key Slot (PCIe x4), M.2 B-Key Slot (USB 2.0 and USB 3.2), M.2 E-Key Slot (PCIe x1 and USB 2.0), and USB 2.0. The zQSFP+ interface delivers high-performance, high-speed data transmission at up to 100 Gb/s, enabling the transfer of large amount of data with minimal latency.

The platform incorporates the NXP SE050 Secure Element, offering hardware root of trust, secure credential storage, and cryptographic acceleration. With EAL 6+ certification, it ensures strong protection for security-critical AI and IoT applications. The TT315 supports 12V DC input and includes two built-in control pins for reset and force-recovery. The enclosure featuring a built-in heatsink with an integrated PWM-controlled fan, ensures dependable operation under heavy loads. This thermal design streamlines integration while safeguarding the platform from environmental impacts.

Key Advantages

- Powered by NVIDIA Jetson AGX Thor
- NVIDIA Blackwell GPU with 2560 CUDA® cores and 96 4th Gen Tensor Cores
- 14-core Arm® Poseidon-AE CPU with 4MB shared L3 Cache
- 3x M.2 Expansion Slots for LTE/5G, Wi-Fi/BT and Storage
- SE050 Secure Element for Secure AI & IoT Operations

Block Diagram



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Specifications

SOM	NVIDIA® Jetson AGX Thor up to 1050 FP8 TOPS/2100 FP4 TOPS
SYSTEM MEMORY	128GB LPDDR5x 4266MHz 256-bit, 273GB/s
DISPLAY INTERFACE	USB Type-C Display Port
ETHERNET	4x 25GbE LAN zQSFP+ Interface
	RJ-45 GbE Port
I/O	USB 3.2 Type-C + DP
	8x Protected Discrete I/O
	2x isolated CAN 2.0
EXPANSION	1x M.2 PCIe Slot M-Key PCIe x4 (for NVMe SSD)
	1x M.2 PCIe Slot E-Key PCIe x1 (for Wi-Fi/BT)
	1x M.2 PCIe Slot B-Key (for LTE/5G)
ADDITIONAL FEATURES	SE050 TPM
	RTC
	microUSB Serial Console Output
OS SUPPORT	Ubuntu 24.04
POWER	12V DC input
	Maximum 180W total power budget
DIMENSION	163 mm (W) x 155 mm (D) x 70 mm (H)

Environmental

OPERATING TEMPERATURE	-20°C to 60°C
STORAGE TEMPERATURE	-40°C to 85°C
HUMIDITY	10% to 90%, non-condensing
VIBRATION	Operating, MIL-STD-810H, Method 514.8, Category 4
SHOCK	Operating, MIL-STD-810H, Method 516.8, Procedure I
EMC	Designed to meet FCC, CE, and UL certifications, where applicable

Ordering Options

Part Number	Description
TT315-100-000-000	TT315 with NVIDIA Jetson AGX Thor T5000 128GB
TT315-200-000-000	TT315 with NVIDIA Jetson AGX Thor T4000 64GB

The system can be customized for specific customer requirements, contact Tauro Technologies sales for details.

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