



RAIBOX-AGX

RAILWAY GRADE AGX ORIN COMPUTER



HIGHLIGHTS

- › Powered by NVIDIA Jetson AGX Orin SOM
- › Equipped with 8x GMSL-2 (FAKRA) connectors
- › High-speed connectivity options
- › Robust industrial interfaces
- › Railway-grade ruggedization
- › Wide operating temperature
- › Optimized power efficiency

TECHNICAL SPECIFICATIONS

Supported Modules	Jetson AGX Orin Industrial Jetson AGX Orin 32GB/64GB
Memory	32 GB 256-bit LPDDR5x 64 GB 256-bit LPDDR5x
Graphics Interfaces	1x HDMI 2.0(max resolution 3840x2160)
Interfaces	1x Type-C USB3.0 3x Type-A USB3.0 1x Gigabit Ethernet 1x 10G Ethernet 2x CANBUS (Isolated) 2x RS232/RS422/RS485 (Isolated) 4x Digital In, 4x Digital Out (Isolated) 8x GMSL-2 (FAKRA Connector)
Wireless Communication	WiFi/Bluetooth/LTE/5G Connectivity by extension sockets
Power Supply	10V-36 VDC
Extension Sockets	2x M.2 Key-B 1x M.2 Key-E 2x SIM
Mass Storage	2x M.2 Key-M
Ambient Conditions	-25°C ... +70°C (-40°C for Industrial Module)
Form Factor / Dimensions	322mm x 222mm x 101 mm
Operating Systems	Ubuntu Linux 20.04 / 22.04
Designed to meet	EN50155, EN45545-2 HL3, EN61373, EN60068, IP67
JetPack Support	JetPack 5.x / 6.x

The RAIBOX-AGX Railway Grade AGX Orin Computer is a high-performance, ruggedized computing solution designed for railway, transportation, and industrial applications that demand real-time AI processing and edge computing. Powered by NVIDIA Jetson AGX Orin, it delivers exceptional AI inference capabilities for predictive maintenance, video analytics, and autonomous railway operations. Its compact yet durable design ensures reliable performance in environments with high shock, vibration, and temperature fluctuations. Operating within a wide temperature range of -40°C to +70°C, the RAIBOX-AGX thrives in extreme conditions, making it an ideal solution for mission-critical railway applications.

Equipped with high-speed connectivity options, including Gigabit Ethernet, 10G Ethernet, USB 3.0, CANBUS, RS232/RS422/RS485, and GMSL-2, the system enables seamless data exchange between train control systems, sensors, and cloud-based analytics. Its modular expansion capabilities allow for wireless communication via WiFi, Bluetooth, LTE, and 5G, while multiple M.2 slots for SSDs, SIM cards, and communication modules enhance flexibility. With its efficient 10-36V DC power input, the RAIBOX-AGX ensures stable power management across various railway infrastructures.



Railway



Security and Surveillance



Agriculture



Industrial Automation



Energy

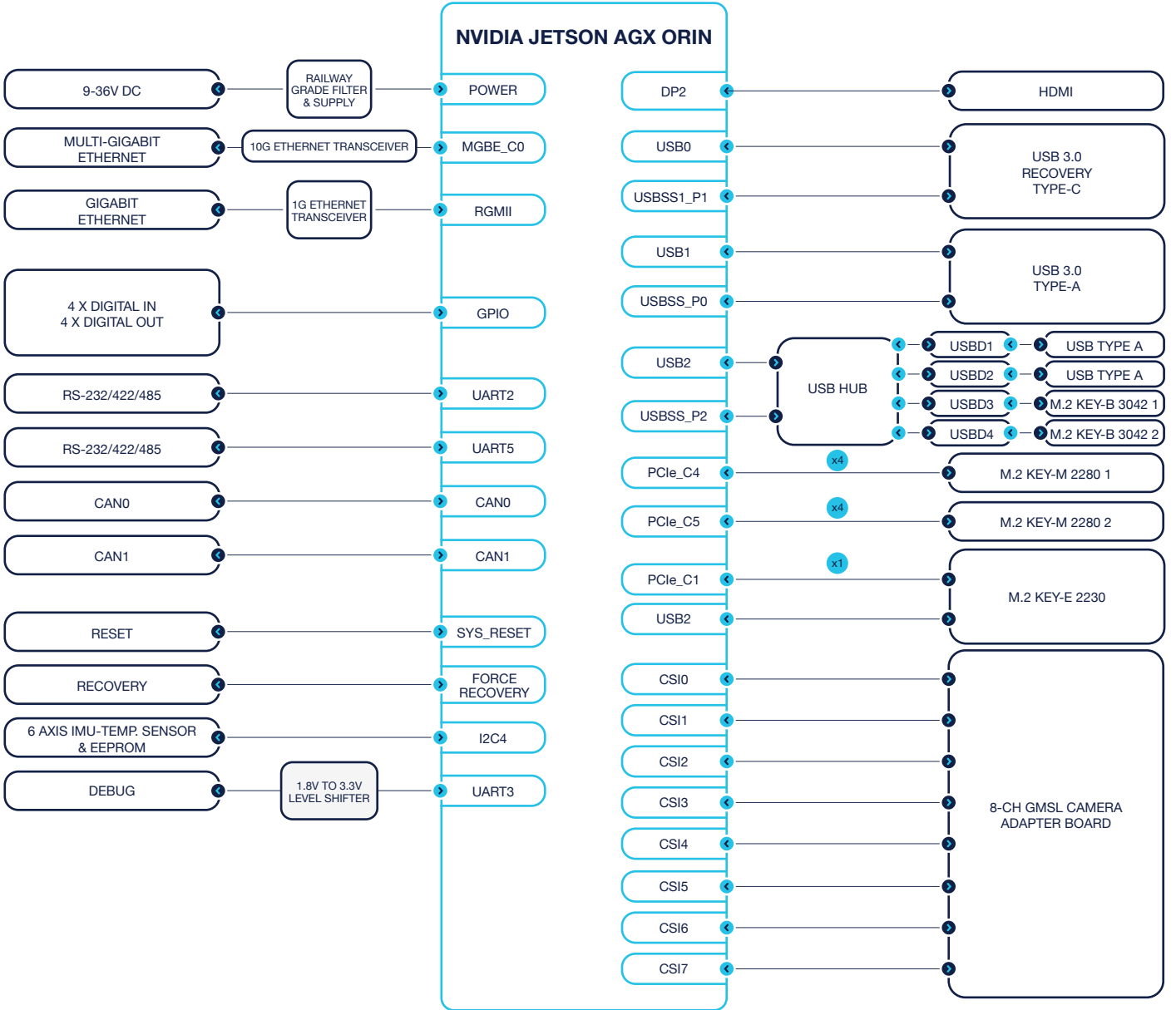


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BLOCK DIAGRAM



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