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# **Smart Mining Solution**

August 2024

# 1-300-192-308

Melbourne, Sydney, Brisbane, Perth, Auckland **26** YEARS OF EXCELLENCE

# About Us

DiGiCOR was founded in 1997 with the goal of becoming a major player in the Australian and New Zealand niche ICT Infrastructure market.

Our focus is on providing server, data storage, workstation, networking, edge computing, and IoT solutions.

From designing IT infrastructure to deployment of the final solution, we manage the entire journey for our customers. Traditionally, we were best known for Supermicro solutions, but in recent years we have expanded our partnership to include servers, storage, and workstations from Intel, Seagate, DDN, Western Digital, Chenbro, iXSystems and ASUS, all of which can be configured and priced on our website.

# Portfolio

#### IoT and Embedded

DiGiCOR supplies and supports high-quality embedded and IoT solutions. These systems are deployed at the "edge" of a network when compute resources are needed to derive maximum value from remote data, boosting overall productivity and network performance.

#### Workstation

DiGiCOR workstations are optimised for businesses that work in graphic design, video editing, VFX, or the creative arts. We design and build powerful workstations that produce superior quality results in the least possible time.

#### Networking

DiGiCOR partners with the leaders in wired and wireless networking to provide you with networking solutions

#### Server

In today's complex, data-driven world, servers are the backbone of a modern business. Digicor has your server needs covered whether you are a start-up or a large enterprise with multiple data centres in Australia and New Zealand.

#### Storage

DiGiCOR offers a comprehensive, reliable, and highly scalable range of data storage and backup solutions, designed for the highest levels of performance for your business.

#### Licensing

From basic Microsoft office licenses to complex hypervisor licensing, you can rely on DiGiCOR to provide you based on your needs.





ADLINK Partner https://digicor.com.au/partner/adlink



#### Enduring Performance, Endurance, and Longevity

As one of the world's leading edge-computing companies, ADLINK aspires to be a responsible corporation in terms of labor standards, human rights, and environmental protection. Our Corporate Social Responsibility Policies are in accordance with the UN Global Compact Principles.

ADLINK helps build and deploy Edge AI solutions to connect people, places, and things faster. Adlink provide their leading-edge software, hardware, and services of cutting-edge embedded computing and innovative technology to help you stay competitive.

With ADLINK Technology, we are able to enable The Internet of Things (IoT) with cutting-edge embedded computing solutions for edge devices, cloud solutions, and intelligent gateways.



- Data Acquisition, GPIB, PXI/PXIe
- Computer-on-Modules
- GPU & Edge AI
- Industrial PCs and Fanless PCs
- · Network Appliances and Edge Servers
- Industrial Display Systems and Panel PCs
- ROS2 Solutions
- Rugged SFF Platforms and Servers

# **Enabling an Al-Powered Edg**

Cutting-edge NVIDIA® Jetson™ AI platforms that accelerate your time-to-value



#### **Edge AI Platforms**



#### Industrial Display Systems and Panel PCs



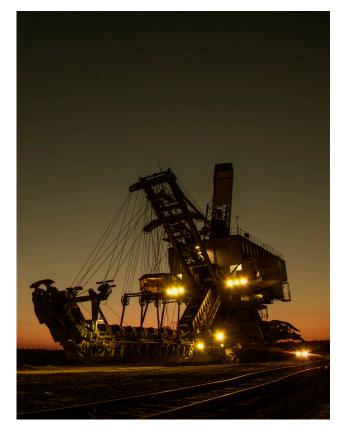
#### **ROS2** Controller



# **Edge-Al Computers for Autonomous Vehicle**

ADLINK's autonomous driving computing vehicle offers powerful processing power and AI acceleration needed to process data from multiple sensors, including LIDARs, radars, and cameras. This provide AI-accelerated computing system that allows real-time data processing in commercial autonomous vehicles, even heavy-duty vehicles like mining trucks. ADLINK's autonomous driving computing platform enables the autonomous vehicle in multiple stages:





#### **ROS2-enabled Robotic Controller (Perception)**

Perception enables sensors to not only detect but also acquire, identify, and track objects in their environment. During the perception stage, the image processing controller, **RQX-59G**, will collect data from camera sensors and send it to the computing platform for sensor fusion and AI planning.

#### AI Computing Platform (Sensor Fusion + Planning)

During the planning stage, the computing platform, **AVA-3510** utilizes perception data to calculate the path. This involves route planning, behavior planning, and trajectory generation modules. Route planning establishes the desired waypoints, behavior planning selects actions to maintain the path, and trajectory generation creates the precise path. These planning processes enable autonomous vehicles to navigate and make informed decisions.

#### Action

After the computing platform has finished planning, it will send the information to the vehicle's control systems, instructing it to function as the AI had intended. The functions include accelerating, braking, and turning the steering wheel.

#### **Recommended Solutions**



AI Computing Platform ADM & AVA



Edge Al Platform RQX Series



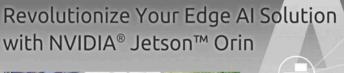
**AVA Developer Platform** 

# **ROS2** Controller

Introducing the revolutionary ROScube-X RQX-59 Series, a state-of-the-art ROS 2 robotic controller powered by the incomparable NVIDIA® Jetson AGX Orin<sup>™</sup> module. The RQX-59 Series ensures seamless integration into robotic and autonomous driving applications, thanks to its integrated powerhouse NVIDIA CUDA® GPU and dual deep learning accelerators. Additionally, it offers a wide range of interfaces, including GMSL1/2 or FPD-Link III cameras. Get ready to redefine the boundaries of robotic possibilities with the RQX-59 Series, the epitome of efficiency and innovation.



RQX - 59 series





Processor	NVIDIA® Jetson AGX Orin™	
СРИ	8-core Arm® Cortex®-A78AE v8.2 64-bit CPU	
GPU	with 1792 NVIDIA CUDA® cores and 56 tensor cores	
Memory	32GB 256-bit LPDDR5	
I/O Interface	<ul> <li>32GB 256-bit LPDDR5</li> <li>Display: 1x HDMI 2.1</li> <li>Ethernet: 2x GbE</li> <li>USB: 3.0 4x USB Type A, 2x USB Type A with lockable connector</li> <li>Serial Port: COM1: RS-232/485; COM2: RS-232</li> <li>OTG: 1x OTG port for changing environment image</li> <li>DB-50 connector: UART, I2C, PWM, SPI, CAN FD non-isolation x1, CAN FD isolation 1.5KVac x1, GPIO, I/O for PPS / GPS Signals, and LIDAR synchronization</li> <li>Audio IN/OUT: 1x audio input/output</li> <li>M.2 Extension: 1x Socket 2, Key M 2280/3042 for Storage (Need NVMe SSD)</li> <li>1x Key B 3042/3052 socket for 5G LTE module</li> <li>USIM: 1x USIM socket</li> <li>RTC: 3V 550mAh</li> </ul>	
Sensor	GMSL or FPD-Link camera	
External Storage	1x MicroSD card slot	

LED indicator	6x User-defined LEDs: Green: U1, U2, U3, U6; Yellow: U4; Amber: U5	
Expansion Box	<ul> <li>1x PCIe Gen4 x16 Slot, support up to 75W</li> <li>1x PCIe Gen3 x4 Slot, support up to 25W</li> </ul>	
Power Requirements	9-36V (±5% tolerance, reverse polarity protection)	
Software	<ul> <li>SDK: ADLINK Neuron SDK, NVIDIA Jetson SDK, Jetpack 5.0.2 or above</li> <li>Environment Ubuntu: 20.04 L4T</li> </ul>	
Environmental	<ul> <li>Operating Temperature: 0 to 50°C at full CPU frequency with 0.6m/s airflow -20 to 70°C (-4°F to 158°F with 1.4GHz CPU) with 0.6m/s airflow</li> <li>Operating Humidity: Approx. 95% @40°C (non-condensing)</li> <li>Storage Temperature: -40 to 85°C</li> </ul>	

#### **Key Features**

- · Powerful AI computing for intelligent robotics development
- Excellent performance per watt with power consumption as low as 30 W
- Ruggedized, secure connectivity with locking USB ports
- Comprehensive I/O for connecting a wide range of devices
- Time synchronization with GMSL2 camera



ROScube-X, a ROS 2 enabled robotic controller powered by the NVIDIA® Jetson AGX Xavier module, features an integrated NVIDIA Volta GPU and dual deep learning accelerators and a wide variety of interfaces including GMSL2 camera connectors for advanced robotic system integration. ROScube-X supports the full complement of resources developed with the NVIDIA JetPack SDK and ADLINK's Neuron SDK, and is specifically suited for robotic applications demanding high-AI computing with minimal power consumption.

Processor	NVIDIA® Jetson AGX Xavier™	
CPU	Carmel ARMv8.2 2.26GHz	
GPU	512-core 1.37GHz	
Memory	32GB on module	
I/O Interface	<ul> <li>Display: 1x HDMI 2.0a</li> <li>Ethernet: 2x GbE</li> <li>USB 3.0: 4x USB Type A, 2x USB Type A with lockable connector</li> <li>Serial Port: COM1: RS-232/485; COM2: RS-232</li> <li>OTG: 1x OTG port for change environment image</li> <li>DB-50 connector: UART, SPI, CANbus x1, I2C, PWM, 20-bit GPIO</li> <li>Audio IN/OUT: 1x audio input/output</li> <li>M.2 Extension: 1x Socket 2, Key B+M 2280 for Storage (Need NVMe SSD), 1x Socket 1, Key A+E 1630/2230 for Wifi</li> <li>Mini PCIe: 1x Mini PCIe socket for LTE, GPS</li> <li>USIM: 1x USIM socket</li> <li>RTC: 3V 550mAh</li> </ul>	
Sensor	9-axis sensor: Time sync with GMSL2 camera	
External Storage	1x MicroSD card slot	

LED indicator	5x user defined LEDs Green: U1,U2,U3 Amber: U5 Yellow: U4	
Expansion Box	<ul> <li>1x PCIe Gen3 x8 Slot, support up to 75W</li> <li>1x PCIe Gen3 x4 Slot, support up to 25W</li> </ul>	
Power Requirements	9-36V (±5% tolerance, reverse polarity protection)	
Software	<ul> <li>SDK: ADLINK Neuron SDK, NVIDIA Jetson SDK</li> <li>Environment Ubuntu 18.04 L4T</li> </ul>	
Environmental	<ul> <li>Operating Temperature: 0 to 50°C at full CPU frequency with 0.6m/s airflow</li> <li>-20 to 70°C (-4°F to 158°F with 1.4GHz CPU) with 0.6m/s airflow</li> <li>Operating Humidity: Approx. 95% @40°C (non-condensing)</li> <li>Storage Temperature: -40 to 85°C</li> </ul>	

# **AI Computing Platform**

#### **Key Features**

- Intel® 12th Gen Core i9/i7 CPU
- NVIDIA RTX 4000 SFF
- Automotive ethernet: 2x 10G Base-T and 8x 1G Base-T1
- 4x CAN 2.0; 8x CAN FD (optional with M.2 CAN module)
- Automotive Connectors
- ISO 16750-2, ISO 7637-2 Design Compliance



ADM-AL30 is dedicated to Autonomous Driving Applications. Powered by Intel® 12th Gen Core i9/i7 CPU and the NVIDIA RTX 4000 SFF GPU, this AI computing platform can process huge amounts of data and make crucial decisions for autonomous vehicles. Equipped with 2 x 10G Base-T and 8 x 1G Base-T1 automotive ethernet ports, as well as 8 x CAN FD and 4 x CAN 2.0 interfaces, it seamlessly integrates into any automotive ecosystem. Plus, its ISO 16750-2 and ISO 7637-2 ensure reliability and safety under the most demanding conditions.

СРИ	1x Intel® Alder Lake-S 12th CPU i9/i7	Mechanical	<ul> <li>Dimensions: 325mm x 258mm x 145mm</li> <li>IP: IP30</li> </ul>
GPU	1x NVIDIA RTX 4000 SFF		• 17.11/50
Memory	4x 32G DDR5 SO-DIMM, up to 128G, with 2 channel ECC	Software	OS: Ubuntu 22.04 supported     TPM: TPM 2.0
Storage	<ul> <li>1x 256G M.2 2280 NVME SSD</li> <li>2x 256G 2.5" SATA SSD</li> </ul>		<ul> <li>Operating Temperature:         <ul> <li>-20°C to 60°C (35W CPU)</li> <li>-20°C to 50°C (65W CPU)</li> <li>0°C to 45°C with GPU card</li> </ul> </li> </ul>
I/O Interface	<ul> <li>Display: 1x HDMI, 1x DP</li> <li>Ethernet: 2x 10G BASE-T (M12 connector), 8x 1G Base T1 (MATEnet Connector)</li> <li>CAN: 4x CAN 2.0 (Molex CMC connctor), 8x CAN FD (optional, Molex CMC connector)</li> <li>USB 3.0: 4x USB 3.2 Gen2, type A</li> <li>Serial Port: 2x RS-232</li> </ul>	Environmental	<ul> <li>Operating Humidity: ~95% @ 40°C (non-condensing)</li> <li>Storage Temperature: -40°C to 85°C</li> <li>Vibration: <ul> <li>3Grms, random, 5-500 Hz, 3 axes / 1hr (w/SSD)</li> <li>5Grms, random, 5-500Hz, 3 axes / 30 mins (w/SSD)</li> </ul> </li> <li>Shock: 50 G, half sine 11ms duration (w/SSD)</li> </ul>
Extension Slot	<ul> <li>1x M Key 2280 for M.2 NVME SSD</li> <li>1x M.2 Key A+E, 2230</li> <li>2x M.2 Key B+M, 2260/2280 for CAN FD module</li> </ul>		<ul> <li>ESD: Contact +/- 4KV, Air +/- 8KV</li> <li>EMC: CE/FCC, class A, EN 55032/35 ; ISO 7637-2: 2011, Level 3 ; E-Mark (12/24V)</li> <li>Design Compliance: ISO 16750-2</li> </ul>
Power Requirements	<ul> <li>DC Power Input: 9-36 VDC with</li> <li>Ignition Control: Built-in ignition power control</li> <li>AC/DC Power Adapter: 450W adapter (optional)</li> <li>Power Button: 1x Power On/Off button</li> <li>Fail Reset: 1x Hardware reset button</li> </ul>		

#### **Key Features**

- Support liquid cooling product for Autonomous Vehicle
- Provide real-time image processing and transmission integration platform for self-driving
- Infineon TC397 ASIL-D (ISO 26262) safety MCU designed with 8x CAN-FD support
- Time synchronization support via IEEE 1588v2 PTP
- ISO 16750-2, ISO 7637-2 Design Compliance



ADM-SR70 is powered by Intel® Sapphire Rapids CPU, delivering unparalleled processing capabilities for autonomous driving applications. Paired with Nvidia Jetson AGX Orin and two RTX 4080 GPUs, it ensures optimal AI performance and efficiency. Safety is paramount, and the ADM-SR70 is equipped with Infineon TC397 Safety MCU to guarantee reliability and security in every drive. With a robust connectivity suite, including 2x 10G BASE-T, 10x 1G BASE-T1, and 6x 100 BASE-T1 automotive ethernet ports, along with 13x CAN FD and 12x GMSL2 interfaces, this system fits in any automotive ecosystem. ISO 16750-2 and ISO 7637-2 design compliance further solidify its position as the go-to solution for safe and efficient autonomous driving.

#### **CPU module Specifications**

System Core	<ul> <li>CPU: Intel Sapphire Rapids 8462Y (available for other 32 Cores MCC CPUs)</li> <li>CPU: GPU RTX 4080x 2</li> <li>Memory: 128G DDR5 ECC</li> <li>Display: <ul> <li>1x VGA</li> <li>1x DP</li> </ul> </li> </ul>	System
Wireless Devices	<ul> <li>1x Wifi/BT M.2 Card</li> <li>2x SMA type</li> </ul>	Wireless
Storage Devices	<ul> <li>1x 1T NVME SSD</li> <li>2x 2.5" 4T SATA SSD, hot swappable</li> </ul>	Storage
External I/O Interface (CONN)	<ul> <li>Ethernet: 2x 10G Base-T (M12 X-Code Connector)</li> <li>USB 3.0: <ul> <li>1x USB 3.2 Gen 1x1</li> <li>1x USB 2.0</li> </ul> </li> <li>Serial Port: <ul> <li>2x RS-232 from PCH for debug (3 Pin header)</li> <li>1x RS-232 from BMC for BMC debug</li> </ul> </li> <li>Multiple Function: 1x CMC Header, Right-Angle, 36 Circuits, Audio (mic in and line out), DIx 8/DOx 8, PWM in/out (reserve for water pump</li> </ul>	External Interface
Service Window I/O Interface	<ul> <li>1x BMC VGA (DB15 connector)</li> <li>1x DP, up to 1080p</li> <li>AST2600 BMC with remote KVM over Ethernet (RJ45 connector)</li> <li>2x DB9 (Console port for PCH and IPMI)</li> <li>1x USB 3.2 Gen 1x 1 (Type A connector)</li> <li>7-segment display; System status display</li> </ul>	Service Interface

#### **Sensor module Specifications**

System Core	<ul> <li>Core: 1x Jetson AGX Orin</li> <li>MCU: 1x Infineon's AURIX™-TC3xx</li> <li>eMMC: 1x eMMC 32GB</li> <li>Display: 1x GMSL2 output (DP to GMSL2)</li> </ul>
Wireless Devices	<ul> <li>2x FAKRA for 4G Cable</li> <li>4x FAKRA for 5G Cable</li> </ul>
Storage Devices	<ul> <li>1x 1T NVME SSD</li> <li>2x 4T 2.5" SATA SSD</li> </ul>
External I/O Interface (CONN)	<ul> <li>Support up to 16 GMSL2 cameras (mini Fakra connector)</li> <li>Ethernet: <ul> <li>2x 1000 Base-T (M12 X-Code connector)</li> <li>6x 1000 Base-T1 (MATENET 2x 3 port connector)</li> <li>2x 1000 Base-T1 (MATENET 1 port connector)</li> <li>6x 100Base-T1 (MATENET 2x 3 port connector)</li> <li>6x 100Base-T1 (MATENET 2x 3 port connector)</li> <li>CAN Bus: 8x CAN-FD</li> <li>USB 3.0: 1x USB 3.2 Gen 1x 1</li> <li>Serial Port: 1x RS232 for debug (3 Pin header), 1x JTAG for FW program (10 Pin header)</li> </ul> </li> </ul>
Service Window I/O Interface	<ul> <li>1x SIM support 4G module (Quectel AG35 series)</li> <li>1x SIM support 5G module (Quectel RM500U-CN)</li> <li>2x DIP switch for ignition control modes</li> <li>1x JTAG for MCU (2x 5-pin)</li> <li>1x JTAG for Orin SoC (2x 5-pin)</li> </ul>

#### **Key Features**

- Intel® Xeon® E processor
- NVIDIA Turing™ (NVIDIA Quadro RTX 5000) GPU module
- Customizable ignition setting
- 2x 10GbE, 5x GbE
- 2x USB 3.0 lockable, 2x USB 2.0
- 1x 2.5" SSD 256G
- 2x Mini PCIe for LTE or Wi-Fi module
- 9-36 VDC input



The AVA-3510 Series is powered by an Intel® Xeon® E processor coupled with workstation-grade Intel®C246 chipset to support up to 64 GB ECC DDR4 memory. The system incorporates one 2.5" SSD 256G for easy installation as optional accessories for fast read/write performance.

The AVA-3510 is equipped with two 10GbE and five 1GbE ports for automotive Ethernet applications and MXM NVIDIA® Quadro® Embedded RTX5000 for AI computing. Two CAN bus ports and two Mini PCIe x16 slots support in-vehicle communication and telematics. Built-in ignition control allows the system to be deployed on a vehicle and directly powered via the vehicle's power system with 9V to 36V DC.

			-
System Core	<ul> <li>CPU: Intel® Xeon® Processor 2278GE Coffee Lake Refresh</li> <li>Chipset: Intel® PCH C246</li> <li>Graphic: NVIDIA® Quadro® Embedded RTX5000, MXM 3.1 type B+, 82 x 110mm,</li> </ul>	Mechanical	<ul> <li>Dimensions: 335(W)mm x 225.1(D)mm x 95(H)mm</li> <li>Mounting: Wall Mount</li> <li>Color: Black</li> </ul>
	<ul> <li>PCle x16 Gen3</li> <li>Memory: Dual channel 32G DDR4-2666 SODIMM socket, up to 64G</li> <li>Display: 2 x DP and 1 x DP++</li> </ul>		<ul> <li>DC Input: 9~36V DC IN on MB with Ignition</li> <li>AC/DC Power Adapter: Optional: 330W, AC/DC adapter, 24V/13.75A</li> </ul>
Storage Devices	• Default: 1x 2.5" SSD 256G; up to 2x 2.5" SATA	Power requirements	<ul> <li>Fail reset: Hardware reset button</li> <li>Power Button: 1x power On/Off button</li> <li>Extendable PWR switch: Power boxheader</li> </ul>
Storage Devices	<ul> <li>1x 1T NVME SSD</li> <li>2x 2.5" 4T SATA SSD, hot swappable</li> </ul>		Battery: CMOS Battery Holder     BR2032
External I/O Interface (CONN)	<ul> <li>Ethernet: 2x 10 GbE (X550, no support WOL), 4x 1G GbE (i210T), 1x 1G GbE (i219 PHY), 5x RJ45, support wake on LAN</li> <li>USB 2.0: 2 port / support 1A, type-A connector x2</li> <li>USB 3.1: 2 port / 2x GEN1, type -A connector x2</li> <li>Serial Port: 2x DB9: COM1/2: RS-232/422/485</li> <li>DIO: 2x DB9 con: 4 DI + 4 DO</li> </ul>	Environmental	<ul> <li>Operating Temperature: <ul> <li>Standard: -10°C to 55°C</li> </ul> </li> <li>Operating Humidity: EN 50125-1, compliance EN 60068-2-78</li> <li>Storage Temperature: -40°C to +70°C</li> <li>Vibration: <ul> <li>MIL-STD-810H METHOD 514.8, Procedure I, Category 4, Table 514.8C-I,</li> <li>Figure 514.8C-2 Common carrier (US highway truck vibration exposure).</li> </ul> </li> </ul>
Internal I/O Interface	<ul> <li>Mini PCIe: <ul> <li>Default: 1xCAN BUS Module,</li> <li>Option: 1x LTE Module or Wifi Module</li> </ul> </li> <li>µSIM: 1 x µSIM Slot (4G/LTE)</li> <li>MXM Slot: PCIe x16 (For EGX-MXM-RTX5000)</li> <li>CAN: Optional with CAN module</li> </ul>		<ul> <li>Shock: Operating MIL-STD-810H, Method 516.8, Procedure I</li> <li>ESD: Contact +/- 4KV, Air +/- 8KV</li> <li>EMC: <ul> <li>CE/ FCC Class A, according to EN 55024 &amp; EN 55032</li> <li>ISO 7637-2 &amp; SAE J1113-11 (Nice to have)</li> </ul> </li> <li>Safety: CE-LVD</li> </ul>
		Operating System	Linux: Ubantu 20.04

# **Ampere Altra Developer Platform**

#### **Key Features**

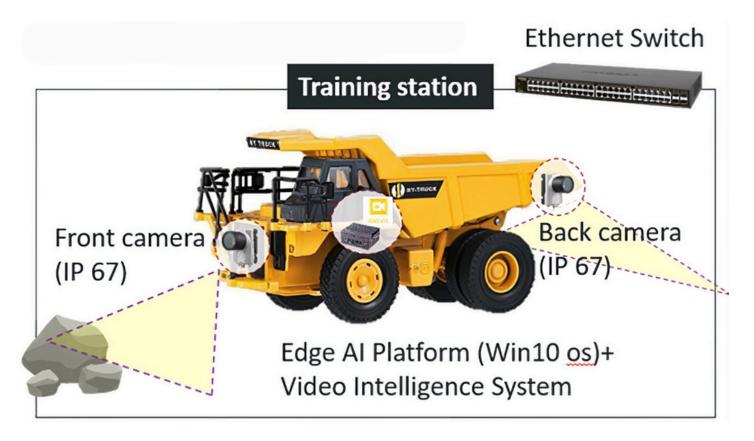
- Ampere® Altra® SoC (Arm Neoverse N1 based architecture)
- 32/64/96/128 Arm v8.2 64-bit cores up to 2.6GHz
- 3 x16 slots and 4 x4 slots PCIe Gen4
- IPMI BMC and dedicated Ethernet for remote management
- Arm SystemReady SR compliance (finalizing approval), open source EDKII



Backed by a broad Arm® ecosystem with an Ampere® Altra® SoC at its core, using the Arm® Neoverse™ N1 platform, the Ampere Altra Developer Platform provides premium performance from a cloud-to-edge infrastructure, keeps an extremely low thermal envelope, lower TCO, and significantly lower power consumption than x86 designs. It supports the open source EDKII as bootloader with UEFI, so customers can just download a stock AArch64 (arm64) ISO such as Ubuntu and install it through booting a live ISO directly on the target. The same convenience we have become used to by using x86 / amd64 target systems.

It's powered by the COM-HPC based server type module with head-turning performance and scalability necessary to drive a variety of use cases across the cloud-to-edge development communities. Examples include real-time applications that require reliable and predictable processing of the most computationally demanding workloads like medical imaging and robotic surgery, stationary and mobile robotics, autonomous driving, test and measurement to multimedia broadcasting, and more.

Computer-on- Modue	COM-HPC Server Type module with Ampere® Altra® 32/64/96/128-core SoC with open source EDKII compliant with PICMG COM- HPC: Rev 1.0	Front I/O	<ul> <li>USB: 2x USB 3.0/2.0/1.1</li> <li>LED button: Toggles through the LED lighting modes of the 5 ARGB system fans</li> <li>Power button: Turns the system on/off function spate least in a start in a start</li></ul>
Carrier Board	COM-HPC Server Base in extended ATX form factor		Audio port: Inactive     GbE:
Memory	32/64/128GB DDR4 RDIMM memory with individual memory channels		<ul> <li>Intel® MAC/PHY based on Intel® Ethernet Controller I210</li> <li>Interface: 10/100/1000 Mbit/s Ethernet connection</li> </ul>
Storage	128/512GB NVMe M.2 SSD	Rear I/O	<ul> <li>Mgt. GbE: Up to 100 Mbit/s based on Intel® I210 and AST2500, with out of band management (TBD)</li> <li>USB: 4x USB 3.0/2.0/1.1</li> <li>VGA: Analog VGA display</li> <li>Serial: Serial console for debugging</li> </ul>
Power	750 watts		
Cooling Solution	Liquid Cooler		<ul> <li>Power input: 100-240V</li> <li>Power switch: Runs power to the system (without booting up)</li> </ul>
Operating Systems	<ul> <li>Preinstalled: Ubuntu Server 20.04.3</li> <li>Standard Support: Windows PE (10.0.22000.1), VMware ESXi-Arm Fling v1.8, Fedora Server 35, FreeBSD 13.0- RELEASE, CentOS Stream 9</li> </ul>		
Dimensions	• 492mm x 220mm x 441mm (HxWxD)		



# Mining Haul Road Defect Detection with AI

The mining industry faces a challenge with haul truck tire lifespan. Currently, human operators monitor road conditions, but limited visibility, especially at night, prompts a need for AI support to reduce tire costs and downtime for haul truck fleets.

Real-time hazardous rock detection system can be implemented by Installing the smart camera to the front and back of the truck. Then. send the image data from smart camera for training to the edge AI video analysis platform. Next, send out the hazardous rock detection AI model to the edge AI platform video intelligence system. All the systems must be connected with an ethernet switch.



#### **Recommended Solutions**



Smart Camera NEON-2000-JT2



Edge AI Platform RQX Series/MVP Series



Edge Al Video Analysis DLAP Series

# **Edge AI Platforms**

ADLINK Edge<sup>™</sup> IoT software solutions release the power of your real-time operational data to optimize efficiency and digital transformation by enabling AI at the edge. With our plug and play hardware and software solutions you can connect, process and evaluate your data and take action - whatever equipment, systems, AI technology and cloud platform you use. All in real-time.



- **Ready for production:** Simply connect, stream & control. Based on open standards and open architecture, for easy and secure connection to AI for real-time results and action at the edge.
- Quick start & reduce risk: A low code approach with one point of contact for support of your hardware and software infrastructure.
- Flexibility: Modular architecture allows for flexibility in deployments and easy upgrading as systems evolve
- **Extensibility:** An ecosystem of connector apps from the ADLINK Marketplace and an SDK to extend your system with additional sensor types, connections to physical machines or cloud systems.

#### Learn More



ADLINK DLAP Series: Edge AI Platforms for Deep Learning



Processor	NVIDIA® Jetson™ TX2	
Memory	8GB	
Graphic Output	1 HDMI 2.0 (w. lock)	
Front Panel I/O Interface	<ul> <li>Ethernet: 2x GbE</li> <li>USB 3.0: 3x Type A</li> <li>Audio: Mic-in, line-out</li> </ul>	
Rear Panel I/O Interface	<ul> <li>USB 2.0: 1x OTG</li> <li>Serial Port: 1x COM RS- 232/485</li> <li>CAN Bus: 1 CAN bus (2.0b)</li> </ul>	
Internal I/O Interface	<ul> <li>Mini PCIe: 1x PCIe mini-card slot</li> <li>USIM: 1x USIM slot</li> <li>DIO: 4 channel DIO</li> <li>Debug Port: 1x debug console</li> </ul>	

Storage Device	<ul><li>SATA Extension: mSATA</li><li>SD Card: 1x SD</li></ul>
Power Requirements	<ul> <li>DC Input: 12V</li> <li>AC Input: 60 W AC-DC adapter</li> <li>Fail Reset: Reset/recovery button Power LED Indicator: Power button</li> </ul>
Environmental	<ul> <li>Operating Temperature Standard -20°C to 70°C</li> <li>Operating Humidity ~95% @40C (non-condensing)</li> <li>Storage Temperature -40°C to 85°C</li> </ul>

ADLINK DLAP-211-JNX Edge AI Platform leverages the power of NVIDIA® Jetson<sup>™</sup> NX SOM to deliver artificial intelligence (AI) at the edge, accelerating deep learning workloads for object detection, recognition, and classification suitable for industrial embedded applications such as medical image processing, logistics automation, autonomous vehicles, smart retail, and AI NVR.

ADLINK DLAP-211-JT2 Edge AI Platform, an edge inference platform powered by the NVIDIA® Jetson<sup>™</sup> TX2 NX System on Module (SOM) to expedite AI deployment. It offers AI-accelerated performance and ruggedness for edge AI and computing applications, enhancing efficiency, productivity and manageability across industries and is ideal for edge deployments that require fanless wide temperature operation.



DLAP-211-JNX/ DLAP-211-JT2

Model	DLAP-211-JNX	DLAP-211-JT2	
GPU	384-core NVIDIA Volta™ GPU with 48 Tensor Cores NVIDIA Pascal™ Architecture GPU with 256 CUDA® cores		
CPU	6-core ARM® v8.2 64-bit	2-core Denver 2 64-bit and 4-core ARM A57 Complex	
RAM	8GB/16GB	4GB	
Storage	16 GB eMMC 5.1		
os	Linux® Ubuntu		
Front Panel I/O Ports	<ul> <li>Button: 1x power, 1x reset, 1x recovery</li> <li>HDMI: 1x lockable</li> <li>USB: 4x USB 3.0 Type-A</li> <li>Ethernet: 2x 10/100/1000Mbps Ethernet</li> <li>Audio: Mic-in, line-out</li> </ul>		
Back Panel I/O Ports	<ul> <li>USB: 1x USB 2.0 OTG</li> <li>Serial Port: 1x COM RS-232/RS-422/RS-485</li> <li>CAN Bus: 1x 2.0b</li> </ul>		
Extension Slots	<ul> <li>Mini PCIe: 1x PCIe mini card slot</li> <li>M.2: 1x M.2 B key 2242 socket</li> <li>SD Card Slot: 1x SD card slot</li> </ul>		
Power Supply	<ul> <li>DC Input: 12V</li> <li>AC Input: 60W power adapter</li> </ul>		
Environmental	<ul> <li>Operating Temperature: Standard -20°C to 70°C (system level), -20°C to 85°C (board level)</li> <li>Operating Humidity: ~95% @40°C (non-condensing, optional with fanless solution)</li> <li>Storage Temperature: -40°C to +85°C</li> </ul>		

ADLNK DLAP-411-Orin Edge AI Inference Platform powered by NVIDIA® Jetson AGX Orin<sup>™</sup> is a high-performance platform designed for deployment of AI-powered systems at the edge, providing the computing power needed for demanding AI applications.

Its compact size designed makes it easy to integrate into a wide range of edge devices and systems but unlimited its connection capability, DLAP-411-Orin offers flexible connectivity, including Gigabit Ethernet, dual USB, and M.2 interfaces. DLAP-411-Orin is a versatile and powerful AI Platform, and easy to integrate with a wide range of devices and sensors.



Model	DLAP-411-Orin Jetson AGX Orin 32GB	DLAP-411-Orin Jetson AGX Orin 64GB	
GPU	NVIDIA Ampere architecture with 1792 NVIDIA® CUDA® cores and 56 Tensor Cores	NVIDIA Ampere architecture with 2048 NVIDIA® CUDA® cores and 64 Tensor Cores	
CPU	8-core Arm® Cortex®-A78AE v8.2 64-bit CPU 2MB L2 + 4MB L	12-core Arm® Cortex®-A78AE v8.2 64-bit CPU 3MB L2 + 6MB L3	
RAM	32GB 256-bit LPDDR5	64GB 256-bit LPDDR5	
Storage	64GB eMMC 5.1		
OS	Linux® Ubuntu		
I/O Ports	<ul> <li>Button: 1x power, 1x reset, 1x recovery</li> <li>HDMI: 1x HDMI (Max. resolution 3840x2160 @ 60Hz)</li> <li>USB: 4x USB 3.2 Gen2 Type-A</li> <li>Ethernet: 4x 10/100/1000Mbps Ethernets (Optional PoE support, IEEE 802.3af/at)</li> <li>Audio: Mic-in, line-out</li> <li>I/O Connector: 2x D-sub 26-pin connector (GPIO, I2 C, SPI)</li> <li>USB: 1x USB 3.2 Gen2 Type-C (OTG)</li> <li>Serial Port: 1x COM RS-232/RS-422/RS-485 (DB9)</li> <li>CAN Bus: 1x 2.0b, isolated (DB9)</li> </ul>		
Extension Slots	<ul> <li>M.2: 1x M.2 M key 2242 and 2280 PCIe Gen4; 1x M.2 B key 3042 and 3052 for 5G/LTE; M.2 E key 2230 for Wifi 5/6</li> <li>SD Card Slot: 1x Micro SIM Slot (support )</li> <li>Out-Of-Band (OOB): Support Ethernet and Wifi, monitoring and managing at remote locations</li> </ul>		
Power Supply	<ul> <li>DC Input: 24V (OVP,OCP)</li> <li>AC Input: 160 up to 220W power adapter</li> </ul>		
Environmental	<ul> <li>Operating Temperature: Standard -20°C to 55°C with Air Flow 0.6 m/s (system level), -25°C to 85°C (board level)</li> <li>Operating Humidity: ~95% @40°C (non-condensing, optional with fanless solution)</li> <li>Storage Temperature: -40°C to +85°C</li> </ul>		

ADLNK DLAP-411-Orin Edge AI Inference Platform powered by NVIDIA® Jetson AGX Orin<sup>™</sup> is a high-performance platform designed for deployment of AI-powered systems at the edge, providing the computing power needed for demanding AI applications.

Its compact size designed makes it easy to integrate into a wide range of edge devices and systems but unlimited its connection capability, DLAP-411-Orin offers flexible connectivity, including Gigabit Ethernet, dual USB, and M.2 interfaces. DLAP-411-Orin is a versatile and powerful AI Platform, and easy to integrate with a wide range of devices and sensors.



**DLAP-8000** Series

Model	DLAP-800X	DLAP-8001	DLAP-8002	DLAP-8003
Processor	Intel® Xeon® E-2278GE 80W	Intel® Core™ i7-9700TE 35W	Intel® Core™ i5-9500TE 35W	Intel® Core™ i3-9100TE 35W
Core #	8	8	6	4
Chipset	Workstation Intel® C246			
Memory	<ul> <li>4GB DDR4 2400MHz, du</li> <li>Optional: 8, 16, 32GB DD</li> </ul>	al SODIMMs, up to 64GB R4 ECC 2400MHz (Xeon® and i3	support ECC)	
Display	2x DP++ and 1x DVI-I			
I/O Interfaces	<ul> <li>Ethernet: 3x Intel® GbE: 2x i211AT + 1x i219; iAMT support</li> <li>Serial Ports: COM1/2: RS-232/422/485, COM3/4: RS-232</li> <li>USB: 2x USB 3.1 Gen 2 + 1x USB 3.1 Gen 1 + 3x USB 2.0, 1x internal USB 2.0 dongle</li> <li>Audio: Line-out, Mic-in (Optional: speaker-out)</li> <li>Mini PCIe: 1x Full size (USB 2.0 + PCIe)</li> <li>M.2: 1x socket, key B+M, 2280/3042: USB 3.1 Gen 1, SATA 6 Gb/s and PCIe x2</li> <li>USIM: 2 (1 for Mini PCIe and 1 for M.2)</li> <li>DI/O: 8-ch DI and 8-ch DO</li> <li>1<sup>2</sup>C: 2 (3.3V &amp; 5V)</li> <li>TPM 2.0: Supported</li> <li>Expansion Slots: Physical: 2x PCIe x16, 2x PCIe x8, 1x PCIe x4; Signal: 2x PCIe x8, 2x PCIe x4, 1x PCIe x1</li> </ul>			
Storage Devices	<ul> <li>2.5" SATA: 4x external swappable trays (supports RAID 0, 1, 5, 10)</li> <li>CFast: 1x Type II</li> </ul>			
Power Supply	<ul> <li>DC Input: 24 Vdc</li> <li>AC Input: Optional AC SKU for 90-260 Vac</li> </ul>			
Environmental	<ul> <li>Operating Temperature: Standard: 0°C to 50°C</li> <li>Operating Humidity: -40°C to 85°C (-40°F to 185°F) (excluding storage)</li> <li>Storage Temperature: ~95% @ 40°C (104°F) (non-condensing)</li> </ul>			

# **Integrated Fanless Embedded Computers**

The MVP-5200 / MVP-6200 Compact Modular Industrial Computers powered by 12/13th Gen Intel® Core™ i9/i7/i5/i3 and Celeron processors. Featuring Intel R680E chipset and supporting up to 65W, the computers can also incorporate GPU cards in a rugged package suitable for AI inferencing at the Edge, and can be used for but not limited to smart manufacturing, semiconductor equipment, and warehouse applications.



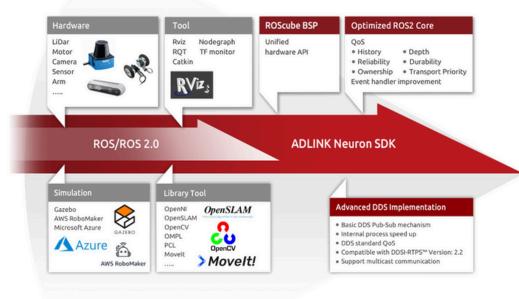
Model	MVP-5200 Series	MVP-6200 Series		
СРИ	12th Gen. Intel® Celeron® or Core™ i3/ i5/ i7/ i9, up to 65W			
RAM	DDR5 3600 MHz (up to 128GB), 4 x SODIMM			
Storage	2x SATA	2x SATA + 1x SATA (optional)		
os	Windows 10 IoT Enterprise 64-bit or Ubuntu 20.04	Optional Windows 10 IoT Enterprise 64-bit or Ubuntu 20.04		
I/O Ports	<ul> <li>Control Button: 1 power button and 1 reset button</li> <li>HDMI: 2x HDMI 1.4b</li> <li>DisplayPort: 2x DisplayPort 1.4</li> <li>USB: 4x USB 3.2 Gen2 (Type A) &amp; 2x USB 3.2 Gen 1 (Type A)</li> <li>Ethernet (LAN A/B/C): 3x 2.5GBE with TSN supported (i225) &amp; 1x vPro supported</li> <li>COM: COM1/2: RS-232/422/485 &amp; COM3/4: RS-232</li> <li>Digita;I: 8 DI and 8 DO</li> <li>Audio (Speaker-out) Line-out, MIC-IN</li> <li>SMA Antenna Connector: 6</li> <li>LED Indicator: 1 storage, 1 WDT, 1 diagnostic and 3 user-dfined</li> </ul>	<ul> <li>Control Button: 1 power button and 1 reset button</li> <li>HDMI: 2x HDMI 1.4b</li> <li>DisplayPort: 2x DisplayPort 1.4</li> <li>USB: 4x USB 3.2 Gen2 (Type A) &amp; 2x USB 3.2 Gen 1 (Type A)</li> <li>Ethernet (LAN A/B/C): 3x 2.5GBE with TSN supported (i225) &amp; 1x vPro supported</li> <li>COM: COM1/2: RS-232/422/485 &amp; COM3/4: RS-232</li> <li>Digital: 8 DI and 8 DO</li> <li>Audio: (Speaker-out) Line-out, MIC-IN</li> <li>Backplane Extension: 2 slots: 1x PCIe Gen4x16, 1x PCI x1 &amp; 4 slots: 1x PCIe Gen4x16, 2xPCIe Gen3x4, 1x PCI x1</li> <li>SMA Antenna Connector: 6</li> <li>LED Indicator: 1 storage, 1 WDT, 1 diagnostic and 3 user-dfined</li> </ul>		
Extension Slots	<ul> <li>M.2: 1x A+E Key 2230, 1x B Key 3052/3042, and</li> <li>1x M Key 2280</li> <li>USB Dongle: USB 2.0</li> </ul>	<ul> <li>Mini PCIe: 1x PCIe mini card slot</li> <li>M.2: 1x M.2 B key 2242 socket</li> <li>SD Card Slot: 1x SD card slot</li> </ul>		
Power Supply	DC Input: 9 to 32V, 280W adapter (optional)	<ul><li>DC Input: 12V</li><li>AC Input: 60W power adapter</li></ul>		
Environmental	<ul> <li>Operating Temperature: -20°C to 60°C (35W CPU) -20°C to 50°C (65W CPU)</li> <li>Operating Humidity: ~95% @ 40°C (non-condensing)</li> <li>Storage Temperature: -40°C to 85°C</li> </ul>	<ul> <li>Operating Temperature: Standard -20°C to 70°C (system level), -20°C to 85°C (board level)</li> <li>Operating Humidity: ~95% @40°C (non-condensing, optional with fanless solution)</li> <li>Storage Temperature: -40°C to +85°C</li> </ul>		

# **ROS2** Solution

The automated guided vehicle (AGV) market has become almost saturated but is now stagnated due to the difficulty of developing products for new applications. The next generation of AGV systems need to be smarter and have more flexibility. Autonomous mobile robots (AMR) will become prevalent in several vertical markets such as logistics, medical, agriculture and mining. As labor costs increase, more swarm robotic systems will be developed and deployed to perform repeated tasks.

ADLINK is advancing autonomous mobile robots with new generation ROS2 hardware. It allow users to develop complex robotic applications with minimal investment outlay, whereby they enjoy the benefits of various AI engines, development environments, flexible hardware systems, and evolving Data Distribution Service

The ADLINK Neuron SDK, delivering powerful development capabilities, is fully compatible with both ROS and ROS 2, featuring an optimized environment providing full access to hundreds of open source robotic algorithms, achieving rapid development for faster time-to-market.





ROS 2 Jetson AGX Orin Controller RQX - 59 series



#### ROS 2 Jetson NX Controller NPN-1B/2B



#### ROS 2 Compact Fanless Controller RQP-T33/35/37



#### ROS 2 Expandable Controller RQI-53/55/57/58



#### Simplified System Integration

Rich tool/module portfolios and ROS / ROS 2 compatible environment make it easy to integrate application requirements across multiple hardware, software package, and service types.



#### Reduced Total Cost of Ownership (TCO)

End-to-end expenditure, from purchase to disposal, including expected costs of service, repair, and warranty can be decreased significantly.



#### **Enhanced Communications**

System-wide communications connect multiple devices via DDS.

#### DiGiCOR

ADLINK's ROScube Pico TGL is a real-time ROS 2 enabled robotic controller based on the 11th Gen Intel® Core<sup>™</sup> i7/i5/i3 processors with Intel® Iris® Xe Graphics featuring exceptional I/O connectivity and supporting a wide variety of sensors and actuators for unlimited robotic applications. The ROScube Pico TGL supports the full complement of resources developed with ADLINK Neuron SDK. Bundled with AI features and capabilities and developed with the Intel® distribution of OpenVINO<sup>™</sup> toolkit, the ROScube Pico TGL is a perfect platform for industrial service robot applications such as autonomous mobile robots (AMR) and autonomous mobile industrial robots (AMIR).



RQP-T33/35/37

Model	RQP-T37	RQP-T35	RQP-T33
Processor	Intel® Core™ i7-1185G7E 28W	Intel® Core™ i5-1145G7E 28W	Intel® Core™ i3-1115G4E 28W
Cores	4		2
Threads	8		4
Base Freq.	1.8GHz @ 15W	1.5GHz @ 15W	2.2GHz @ 15W
Memory	2x 16GB DDR4 3200MHz	2x 8GB DDR4 3200MHz	2x 4GB DDR4 3200MHz
Storage	16GB eMMC 5.1 on NV module		
I/O Interface	<ul> <li>Display: 1x DP, 1x HDMI</li> <li>USB: 1x USB 3.2 Gen2 Type A port with lockable connectors; 1x USB 3.2 Gen2 Type A port</li> <li>Audio: 1x headphone, 1x microphone jack</li> <li>USB: 1x USB 3.2 Gen2 Type A port with lockable connectors; 1x USB 3.2 Gen2 Type A port; 2x USB 3.2 Gen2 Type C ports</li> <li>M.2: 1x M.2 Key-E 2230 for Wi-Fi; 1x M.2 Key-M for NVMe PCIe Gen4 x4 SSD</li> <li>TPM: TPM 2.0</li> <li>Series Ports: COM 1: RS-232</li> <li>Power Management: COM 2: 1x power button, 1x reset button, 1x power LED</li> </ul>		
Ethernet	LAN1: Intel® I219LM 10/100/1000 Mbps     LAN2: Intel® I225LM, 10/100/1000/2500 Mbps     LAN2: Intel® I225LM, 10/100/1000/2500 Mbps		
Storage Devices	256GB NVMe	128GB NVMe	64GB NVMe
Power Requirements	<ul> <li>DC Power Input: 12-19VDC (±10% tolerance, reverse polarity protection)</li> <li>Power Consumption: 60.5 W</li> <li>AC/DC Power Adapter: 90W AC/DC power adapter (optional)</li> </ul>		
Environmental	<ul> <li>Operating Temperature: 0°C-50°C (with 0.6 m/s airflow)</li> <li>Operating Humidity: ~95% @40°C (non-condensing)</li> <li>Storage Temperature: -40°C to 85°C (-40°F to 185°F)</li> </ul>		

ADLINK ROScube-I is a real-time ROS 2 enabled robotic controller based on Intel® Xeon® 9th Gen Intel® Core<sup>™</sup> i7/i3 and 8th Gen Intel® Core<sup>™</sup> i5 processors featuring exceptional I/O connectivity supporting a wide variety of sensors and actuators for unlimited robotic applications. Also supported are Intel® VPU and NVIDIA GPU cards for computation of AI algorithms and inference. The extension box allows for convenient functional and performance expansion. ROScube-I supports the full complement of resources developed with ADLINK Neuron SDK, a perfect platform for development of industrial use service robotic applications such as autonomous mobile robots (AMR) and autonomous mobile industrial robots (AMIR).



RQI-53/55/57/58

Model	RQI-58 RQI-58-E	RQI-57 RQI-57-E	RQI-55 RQI-55-E	RQI-53 RQI-53-E
Processor	Intel® Xeon® E-2276ME 45W	IIntel® Core™ i7-9850HE 45W	Intel® Core™ i5-8400H 45W	Intel® Core™ i3-9100HL 25W
Cores	6		4	
Base Freq.	2.8GHz	2.7GHz	2.5GHz	1.6GHz
MAX Turbo Freq.	4.5GHz	4.4GHz	4.2GHz	2.9GHz
Chipset	Mobile Intel® CM246 Chipse	et		
Memory	2x DDR4 16GB 2400MHz, dual SO-DIMMs, up to 32GB		2x DDR4 8GB 2400MHz, dual SO-DIMMs, up to 32GB	2x DDR4 4GB 2400MHz, dual SO-DIMMs, up to 32GB
Display	2x DP++ and 1x HDMI			
I/O Interface	<ul> <li>Ethernet: 4x GbE: 3x Intel® i211AT + 1x Intel® i219LM with iAMT support, IEEE 1588 and 802.1AS</li> <li>Series Port: COM 1/2: RS-232/422/485</li> <li>USB: 2x USB 3.1 Gen1 Type A with lockable connectors; 4x USB 3.1 Gen 1 Type A; 4x USB 2.0 Type A</li> <li>Multi-I/Os on DB 50 connector (Support real time OS): Two channel I2 C 8x Digital Input: VIH: 2 to 5.25V, VIL: 0 to 0.8V 8x Digital Output: VOH: 2.4 to 5V, VOL: 0 to 0.5V, Current: 24mA/per channel</li> <li>Optional: Dual Channel: FARO-FP900, PEAK IPEH-003049* Single Channel: PEAK IPEH-003048* *: This module supports real time OS</li> <li>Mini PCIe: 2x full size (one for CAN, one for Wi-Fi or LTE)</li> <li>M.2: 1x Socket 1, Key A and A+E key, 2230 for Wi-Fi</li> <li>USIM: 1x Socket</li> <li>TPM: TPM 2.0</li> </ul>			
Storage Devices	256GB mSATA SSD		128GB mSATA SSD	64GB mSATA SSD
Expansion Slots (only for -E model)	<ul> <li>1x PCle Gen3 x 16</li> <li>1x PCle Gen3 x 4</li> </ul>			
Power Requirements	<ul> <li>DC Power Input: 9-32V (±5% tolerance, reverse polarity protection)</li> <li>Power Consumption: 16.7-4.7A (w/o expansion) 29-8.75A (w/ expansion)</li> <li>AC/DC Power Adapter: 160W, 220W or 280W AC/DC power adapter (optional)</li> </ul>			
Storage Devices	256GB mSATA SSD		128GB mSATA SSD	64GB mSATA SSD

Model	RQI-58 RQI-58-E	RQI-57 RQI-57-E	RQI-55 RQI-55-E	RQI-53 RQI-53-E
Environmental	<ul> <li>Operating Temperature -20~70°C(-4°F~158°F w/ 1x SODIMM) with 0.6m/s air flow condition20~60°C(-4°F~140°F, w/ 2x SODIMM) with 0.6m/s air flow condition. *Default: 2x DDR4 memory</li> <li>Operating Humidity: ~95% @40°C (non-condensing)</li> <li>Storage Temperature: -40~85°C(-40°F~185°F)</li> </ul>			
Safety	UL, cUL, CB			
Software Support	<ul> <li>SDK: ADLINK Neuron SDK</li> <li>Compatible environment: Ubuntu 20.04 LTS; Xenomai, ACRN</li> <li>Middleware: ROS/ROS 2; Intel® OpenVINO™; DDS with shared memory; DDS with extra QoS; Neuron Library</li> </ul>			

## **Smart Camera**

ADLINK's NEON-2000-JT2-X Series of the NVIDIA® Jetson<sup>™</sup> based industrial AI cameras, integrate the Jetson<sup>™</sup> TX2, image sensor, optimized OS, and Rich I/O for vision applications in a compact chassis with verified thermal performance, saving users' Total Cost Ownership on integration and trouble shooting, as well as minizing footprint and cableing required for installation.

Supporting four types image sensors, integration of DI/O, 1x communication port and 1x LAN port in a compact chassis, the NEON-2000-JT2-X Series is ideal for the AI vision applications at the edge. For harsh environments requiring ingress protection, the NEON-2000-JT2-X Series supports IP67, enabling AI vision capabilities in critical applications.



Model	NEON-201B-JT2-X	NEON-202B-JT2-X	NEON-203B-JT2-X	NEON-204B-JT2-X
Resolution (HxV)	1280x960	1600x1200	1920x1080	1920x1080
Resolution	1.2M	1.9M	2М	5M
Frame Rate (fps)	54	60	30	14
Color/Mono	Color			
Shutter	Global		Rolling	
Sensor Size	1/3"	1/1.8"	1/3.7"	1/2.5"
Pixel Size (µm)	3.75 x 3.75 4.5 x 4.5 2.2 x 2.2			
Sensor Vendor	ON Semiconductor e2v ON Semiconductor			
Lens Mount	C-Mount			
Image Sensor Trigger Mode	External H/W trigger, S/W trigger, free run			

All Model			
Computing Platform	NVIDIA® Jetson™ TX2	M12 17-pin FML for I/O and Power	<ul> <li>2x DI and 2x DO</li> <li>1x UART (TXD, RXD, GND)</li> <li>USB port &amp; I/O for flashing the TX2</li> </ul>
Processor	ARM Cortex-A57 and NVIDIA Denver 2		DC 24V power input
Supported OS	Ubuntu 18.04	Ingress Protection	IP67
GPU	256-core NVIDIA Pascal GPU	Power Consumption	<35W (camera only)
Memory/Storage	8GB LPDDR4/32G eMMC (integrated on TX2 module)	Environmental	<ul> <li>Operating Temperature: 0 to 50°C at full CPU frequency with 0.6m/s airflow</li> <li>-20 to 70°C (-4°F to 158°F with 1.4GHz CPU) with 0.6m/s airflow</li> </ul>
M12 8-pin FML for Ethernet	10/100/1000 Mbps		<ul> <li>Operating Humidity: Approx. 95% @40°C (non-condensing)</li> <li>Storage Temperature: -40 to 85°C</li> </ul>
M12 USB Type-C FML for Video, USB and Power	<ul> <li>Video output (DisplayPort), 1920x1080 @ 30fps</li> <li>1x USB 3.0 and 1x USB 2.0</li> <li>Power supply for the camera (when connected to a USB Type-C charger or adapter, DC 15V/2A)</li> <li>Power supply (5 W) for external USB Type-</li> </ul>		

C hub (when connected to the hub)

# **Industrial Display Systems & Panel PCs**

ADLINK offers comprehensive industrial-grade touch monitors and smart panel computers with in-house value-added customization through a one-stop solution service with our experts. Most importantly, ADLINK is a Titanium Tier member of the Intel® Partner Alliance and teams up with AUO® Display Plus to ensure delivering the products with solid-build quality, help customers significantly lower the total cost of ownership (TCO), and facilitate a fast time-to-market.



## **Industrial Touch Screen Monitors**

Break down the language barrier between humans and machines with ADLINK's open-frame, true-flat industrial touch screen monitors. Slim and easy to integrate into a wide array of systems, these industrial touch screen monitors offer smooth user interaction coupled with an unbeatable visual experience and the durability that industrial applications demand. ADLINK's industrial touch screen monitors are designed to streamline and automate daily operations, enhancing operational efficiency.





## **Smart Panels – Open-Frame Panel PCs**

With flexible configuration with a high level of modularization, ADLINK Smart Panels help system integrators, integrated solution providers, and brand vendors deliver cutting-edge functions unique to individual applications. Leveraging ADLINK's unique Function Module (FM) design, these panels accelerate prototyping according to the requirements of the application while saving time, money, and effort.

## **IP69K Stainless Industrial Panel PCs**

Rugged and powerful computers that can monitor and control production processes in industries that require high hygiene standards, such as food and beverage, pharmaceutical, automotive, and steel and metal. It features a high contrast display and an Intel Atom x7-E3950 processor. Encased in a corrosion-resistant 316L stainless steel housing that can withstand high pressure hot water cleaning and various chemicals.



## **Industrial Touch Screen Monitors**

The IM series from ADLINK are true flat industrial touch monitors that offer a sleek and elegant appearance for any industrial application. They feature a 10-point projected capacitive touch screen with an anti-fingerprint coating and a wide viewing angle. They have an IP65 front panel that prevents dust and water ingress, and a 7H hardness that resists scratches and abrasions. They come in various sizes from 21.5" to 27", with a resolution of 1920 x 1080. They have multiple I/O options and modular interfaces for RFID readers, barcode scanners, cameras, or speakers



IM Series

Model	IM-215	IM-238	IM-270	
Size	21.5"	23.8"	27"	
Resolution	1920 x 1080			
Aspect Ratio	16:9			
Color	16.7M			
Brightness (w/ touch)	400 nits	200 nits	240 nits	
Backlight Life (Hrs)	30,000		40,000	
Viewing Angle (U/D/R/L)	89/89/89/89	9/89/89 85/85/85		
Contrast Ratio	1000:1 3000:1			
Touchscreen	10-point, PCAP, Anti-fingerprint coating			
Bonding	Air bonding			
1/0	<ul> <li>USB Port: USB type B(for touch)</li> <li>Video: HDMI x1, VGA x 1</li> <li>Audio: w/o Audio</li> </ul>			
Operating Temperature	0°C to 60°C 0°C to 50°C			
Storage Temperature	-20°C to 60°C			
Power Input	DC-12V 5A Max.			

## **Smart Panels – Open-Frame Panel PCs**

ADLINK's open frame panel PCs can be easily tailored to application needs through customization of the computing performance, touch panel type, display size, and I/O interface. The Smart Panel's function modules support application-specific functions, and this modular architecture fast-tracks development, verification, and validation, resulting in significant savings in time, money, and resources.



Model	SP2-10WP-TGL	SP2-15WP-TGL	SP2-21WP-TGL		
Size	10.1"	15.6"	21.5"		
Resolution	1280 × 800	1920 × 1080			
Contrast Ratio	800:1	1000:1			
Processor	Default • Intel® Core™ i7-1185G7E, 1.80GHz, 4-Core • Intel® Core™ i5-1145G7E, 1.50GHz, 4-Core • Intel® Core™ i3-1115G4E, 2.20GHz, 2-Core • Intel® Celeron® 6305E, 1.80GHz, 2-Core By Request • Intel® Core™ i7-1185GRE, 1.80GHz, 4-Core • Intel® Core™ i5-1145GRE, 2.60 GHz, 4-Core • Intel® Core™ i3-1115GRE, 3.00 GHz, 2-Core				
Memory	2x SODIMM non-ECC 2400/3200 MHz	2x SODIMM non-ECC 2400/3200 MHz DDR4 memory up to 64GB			
Storage	1x M.2 SATA 6 Gbps port, M key 2280 and 1x 2.5" SSD/HDD SATA 6 Gbps port (Optional)				
I/O	<ul> <li>Ethernet: 2x GbE (Intel® I225), RJ-45, WOL, Up to 2.5 Gb/s</li> <li>Serial Port: 1x RS-232/422/485 programmable, auto flow</li> <li>USB Port: 1x USB 2.0, Type A, OCP, 1000mA; 1x USB 3.2, 5 Gbps, Type A, OCP, 1600mA; 2 x USB 3.2, gen 2, 10 Gbps, Type A, OCP, 1600mA</li> <li>DisplayPort: 1x DP, DP++, supports resolutions up to 5120x3200@60Hz; 1x MiniDP, DP++, supports resolutions up to 5120x3200@60Hz</li> <li>USB Port 1x USB 2.0 client</li> <li>I2C: 2x for I2C client</li> <li>Audio: 1x for 2x stereo speaker (2 watt); 1x Mic-in and Line-out; 1x buzzer</li> <li>Keys: 1x for 32 physical keys, 1x supports LCD backlight up/down and volume up/down (BOM optional)</li> <li>COM Port: 1x RS-232/422/485 programmable, auto flow</li> <li>GPIO: 1x supports 8-pin GPI/O</li> <li>PCIe Slot: 1x PCIe Gen 4 x4 (Optional)</li> <li>M.2: 1x A/E key 2230 (Wi-Fi/BT); 1x B key 3042 (4G/5G)</li> <li>SIM: 1x SIM slot for 4G/5G communication</li> </ul>				
Operating Temperature	0°C to 60°C (Default) -20°C to 60°C (By Request)		0°C to 60°C		

# **IP69K Stainless Industrial Panel PCs**

Rugged and powerful industrial computer that can withstand harsh environments and high hygiene standards. It has a 15.6", 21.5" or 23.8" full HD touchscreen with an 11th Gen Intel® Core™ i5/i3 processor. It is fully IP69K rated for dust and water ingress and has a corrosion-resistant stainless steel enclosure. It also has all M12 type connectors and a wide operating temperature range of -20°C to 60°C.

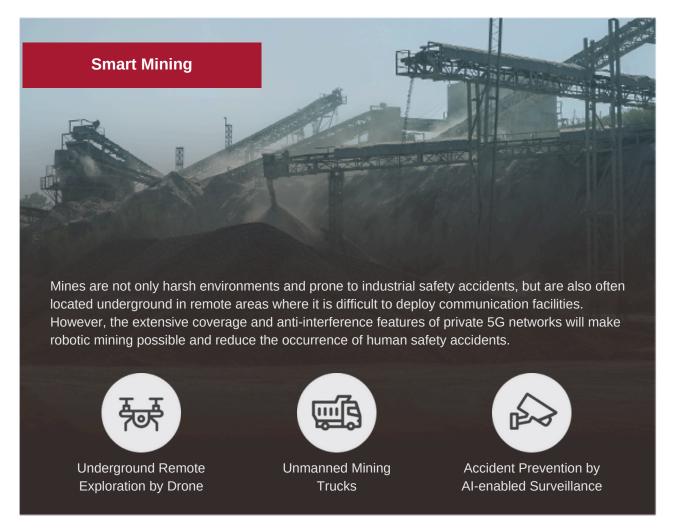


Titan2

Model	Titan2-15WP-VESA	Titan2-21WP-VESA	Titan2-24WP-VESA	
Size	15.6"	21.5"	23.8"	
Processor		<ul> <li>Intel® Core™ i5-1145G7E 1.5GHz 15W (4 Cores)</li> <li>Intel® Core™ i3-1115G4E 2.2GHz 15W (2 Cores)</li> </ul>		
Memory	DDR4 up to 32 GB			
I/O Interface	<ul> <li>USB: 1x M12 for 2x USB 2.0 (A-coded ) with waterproof cover</li> <li>Ethernet: 1x M12 for 2.5GbE LAN (X-coded )with waterproof cover</li> <li>Serial Ports: 1x M12 for RS-232/422/485 (default RS-232, A-coded) with waterproof cover</li> <li>Power Input: 1x M12 for DC power (T-coded)</li> <li>Expansion Slot: 1x M.2 E-key 2230 (PCIe+USB2.0) for optional WIFI/BT</li> <li>Storage: 1x M-key 2280 (SATA-III) for SSD</li> <li>Optional: <ul> <li>3 x optional blank M12 connectors with waterproof covers for selecting from the following options:</li> <li>1 x USB 3.2 Gen.1</li> <li>1 x LAN</li> <li>Optional integrated RFID/Camera at front bezel</li> </ul> </li> </ul>			
DC Input	9~36V DC			
Operating Temperature	<ul> <li>Standard : -10°C to 50°C (with 0.6 m/s air flow)</li> <li>ETT: -20°C to +60°C (not available for 23.8")</li> </ul>			
Storage Temperature	-30 to 70°C (excluding storage)			
Safety	UL/cUL, CB,			

# 5G+X: Private 5G Combines Edge Computing and AI Applications

Private 5G networks can be said to be specially formulated for enterprise organizations and governments. In addition to the large bandwidth, wide connection and low latency features, 5G also supports network slicing and multi-access edge computing (MEC). It can provide 5G network services that meet particular needs of users and devices in specific settings. Private 5G networks enable edge devices in various industrial environments, allowing them to obtain the required data at the right time, and make immediate decisions and take timely actions. It is suitable for use in factories, energy plants, logistics and mining settings that are highly dependent on efficiency, human resources, and safety.



The application of edge computing has already arrived in various industries. With AI technology, diversified intelligent solutions are flourishing. However, to connect the required edge devices and realize the vision of industrial intellectualization, private 5G networks will be the key technology of the last mile.

ADLINK teamed with 5G radio access network (RAN) provider Innogence Technology to create a wireless infrastructure solution. 5G Networks Improved the Overall Quality Control and Productivity Noticeably.



More effective monitoring and accurate review of footage



Enables the company's new weighbridge to operate without any staff present



Workers can be watched for safety practices to help prevent injuries.



Monitor all entry points and boundary fences to prevent trespassing,

# DiGiCOR

# Thank You

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Smart Camera NEON-2000-JT2



Edge AI Platform RQX Series/MVP Series



Edge AI Video Analysis DLAP Series



AI Computing Platform ADM & AVA



Industrial Display Systems and Panel PCs



**AVA Developer Platform**