ADLINK
LEADING EDGE COMPUTING



Intelligent Smart Manufacturing Solutions



Product Brochure

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From Automation to Autonomous

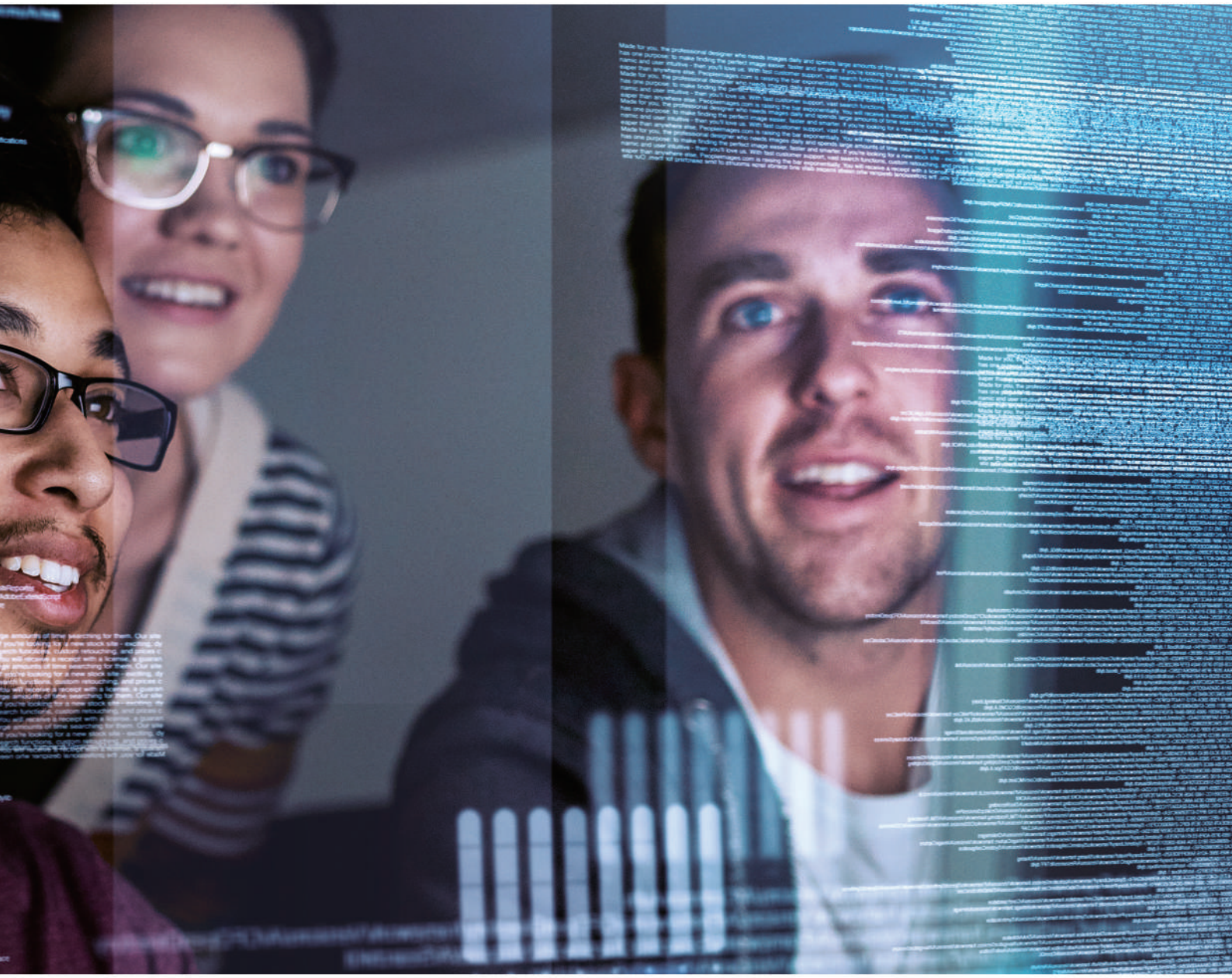
A Smart Factory that Enables Real-time Data-to-Decision for Improved Efficiency, Quality and Safety

As 5G rollouts increase, enterprise private 5G is becoming a game changer for smart factories. With low latency and high security levels, private 5G is expected to drive digital transformation on the factory floor, including edge AI vision, autonomous vehicles, real-time data acquisition as well as the core of the factory, high-precision machine automation. Under such infrastructure, ADLINK's connected equipment plays a key role from production intelligence to facility and labor management, delivering an efficient, high quality, and safe smart factory.



PROACTIVE
OPTIMIZED

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Why ADLINK

Rely on ADLINK to support you through the process of choosing, configuring, and implementing your solution.
Our 25 years of experience in industrial automation have earned us recognition, most recently as one of
BISinfotech's "Top 10 Industrial Automation Manufacturers in the World".
We can put that experience to work for you as you take your operation one step closer to evolving into a smart factory.



Local Engineering Teams

- Dedicated to the specific needs of customers in different regions
- Ability to collaborate face-to-face



Capability

- Local access to complete set of engineering disciplines and design capabilities
- Electrical, mechanical, firmware & software
- Board- to system-level



Validation

- Aligned with regulatory labs to help support necessary agency approvals
- Humidity, Altitude, EMC, Temperature, Vibration, SALT spray, Shock



Key Focus Areas

- Both x86 and ARM
- Hardware
- BIOS
- Software service

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Smart Manufacturing Solutions

ADLINK offers comprehensive ready to deployment solutions for various automation control solutions to accelerate the implementation of Smart manufacturing in industry

4.0



A Motion Control

- Centralized and distributed motion control to match performance and precision positioning

B Machine Vision

- Full spectrum of frame grabbers supporting digital and analog interfaces

C IO Sensing

- Comprehensive slave modules for the bridge connected to EtherCAT

D AI AOI

- Improves inspection accuracy and
- Quality control
- Reduce manpower cost and error rate

E Data Extraction

- Production information monitoring
- Availability/uptime management

Product Solutions

Motion Control and IO Sensing



Machine Vision



Edge AI Vision



Data Extraction Platform



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F Data Acquisition

- Device control
- Device management

G QA/QC testing

- QA/QC testing
- Validation

H Condition Monitoring

- Instant monitoring and alarm
- Equipment life cycle warning

I Geofencing

- Unauthorized access detection
- Robot hazard prevention

J SOP Compliance

- Improves production quality and cycle time
- Secures staff safety

K Safety AI

- Hazmat offload safety management
- Protective equipment detection

L AGV/AMR

- Simple development & flexible deployment
- End-to-end communicability

Edge DAQ



Machine Condition Monitoring Platform



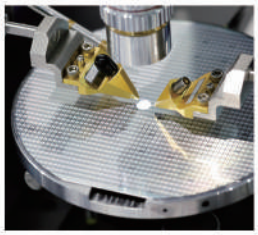
PXI Platform



ROS2 Solutions



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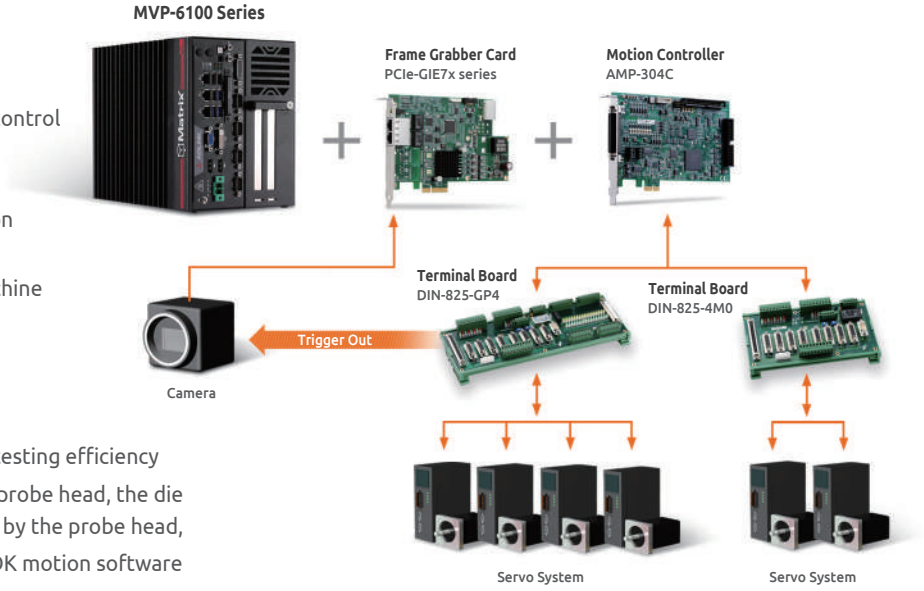


High Efficiency, Precision IC Probe Testing

The electrical input of the silicon wafer measurement signals are invisible to the naked eye. To ensure the probe head accurately touches the wafer, simulation generates a real-time response based on the analog signal between the probe and the wafer.

Solution Features

- High-speed and high-precision Z-axis motion control function increases accuracy up to 0.1μm
- No vibrating to execute subsequent testing, continuous route detection shortens operation time by 15-20%
- Exceptional compatibility and usability of machine components with unified PC-based interface



Customer Benefits

- Ensure timeliness, enhancing the over probe testing efficiency
- Lower damage ratio and cost of both die and probe head, the die will accurately be tested and not be damaged by the probe head,
- Reduce secondary development costs, APS SDK motion software delivers future-proof development

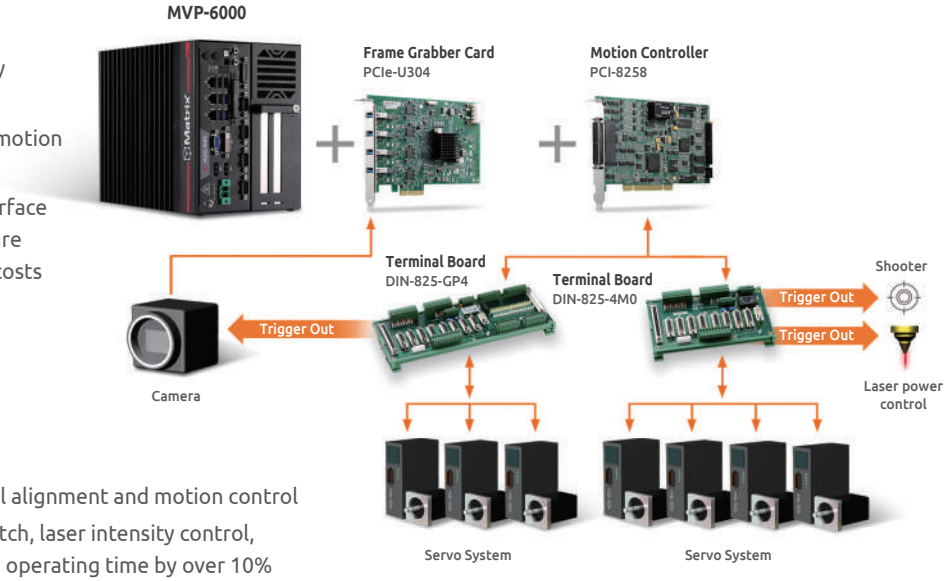


Technological Breakthrough for Laser Dicing

Advanced semiconductor's manufacturing processes are now sub-2nm, and still getting smaller with three-dimensional heterogeneous integration. Miniaturization of chips requires laser dicing equipment with higher precision, higher stability, higher integration, faster positioning, a simpler operating interface, easier speed planning, and instant trigger control feedback.

Solution Features

- 2D compensation support for cutting accuracy up to 0.1μm
- Built-in speed planning, PID, and closed-loop motion control system minimize tracking errors
- APS SDK software with trajectory setting interface for chip cutting to quickly set and update future processes, reducing secondary development costs
- PC-based system for improved compatibility, more I/O options for different sensors, and synchronization control



Customer Benefits

- Efficient laser dicing through integrated visual alignment and motion control
- High stability for quick positioning, sensor match, laser intensity control, and laser power switch and adjust, shortening operating time by over 10% and saving up to 25-50%
- Automatically plan a graphic path, improve cutting speed and smoothness, and enhance overall productivity.

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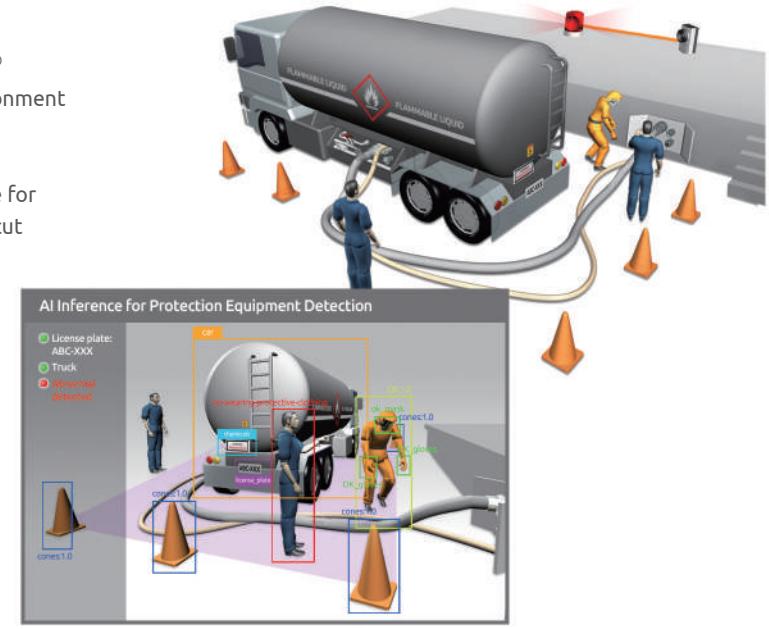


AI-Enabled Cargo Tank Hazmat Offload Safety Management

Offloading hazardous chemicals for semiconductor production is dangerous. Safety precautions make that process smoother and safer. Now, AI-enabled smart cameras can ensure cargo tank hazmat offloading procedures are followed and protect against potential dangers.

Solution Features

- All-in-one standalone AI smart camera with integrated NVIDIA® Jetson Xavier NX, image sensor, and optimized software environment
- Industrial-grade DIO for frictionless hardware installation, enabling the addition of visual and audio warning devices.
- Included EVA SDK provides a no-code/low-code visual interface for creating an AI pipeline and includes a suite of plugins that can cut development time to just two weeks.



Customer Benefits

- Flexibly define restricted or dangerous areas and detect unauthorized personnel access to define restricted areas without hardware replacement
- Real-time visual or audio alarm if personnel enter dangerous areas without protective equipment
- Flexible and customized AI detection capabilities including safety perimeter, safety gear, vehicle stability, and more.



Intelligent Pump Monitoring

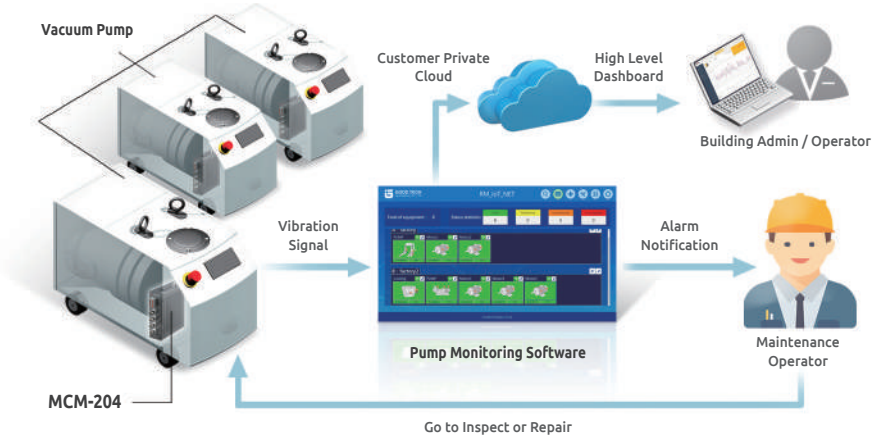
The intelligent pump monitoring solution provides more comprehensive monitoring than traditional monitoring systems and improves the operational reliability of the vacuum pumps used in semiconductor fabs by measuring vibrations to predict failures and prevent unplanned downtime.

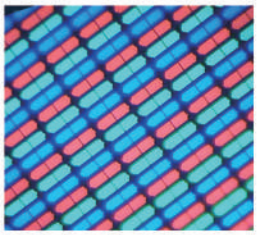
Solution Features

- 24/7 monitoring and alarms with automatic real time data logging, analysis and uploading, connected with SCADA system
- Non-intrusive method for easy installation without the need to cease production during installation

Customer Benefits

- Forecasts equipment issues ahead of time to prepare for earlier intervention
- Remote monitoring and alert delivery via the cloud to improve maintenance efficiency





High-Speed Automated LED Chip Sorting

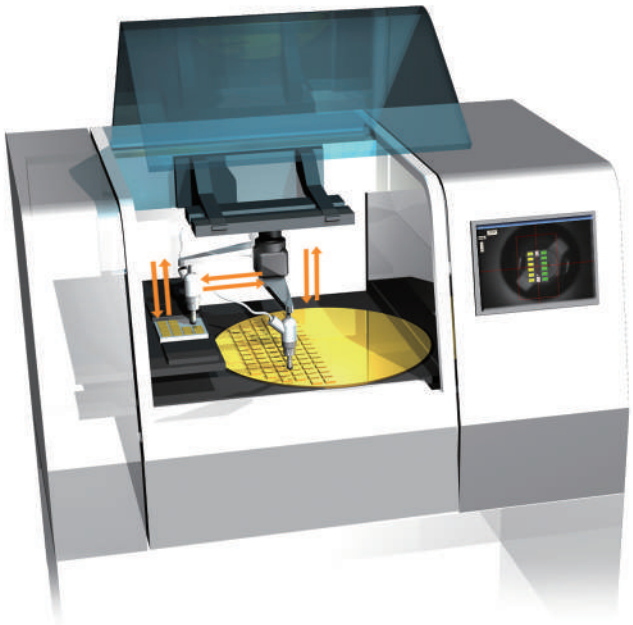
Chip sizes have become increasingly smaller while the number of units that need to be tested has conversely grown exponentially. Significantly increase efficiency for quality inspections of chips, allowing end users to easily achieve rapid feedback response, striking the optimal balance between speed and accuracy.

Solution Features

- High quality video capture, simultaneous multiaxial control integration
- Fast and accurate positioning, rapid feedback response
- Exceptional compatibility and usability of machine components with unified PC-based interface

Customer Benefits

- Quickly classify the die level that matches the required specifications
- Enhance the speed of motion control systems to keep up with production efficiency
- Overcome the complexity of integration through multi-axis synchronous control





AI-based Robot Hazard Prevention

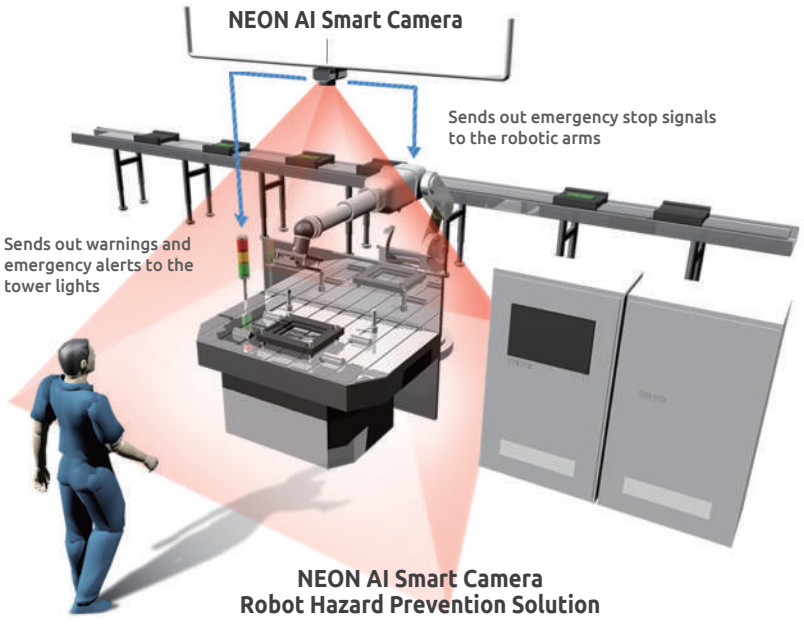
Machine vision-based robot hazard protection with IP surveillance and AI NVR prevents hazards better than traditional large safety light curtains. Now, industrial smart cameras along with mature AI algorithms simplify the complex cabling and quality network bandwidth requirements.

Solution Features

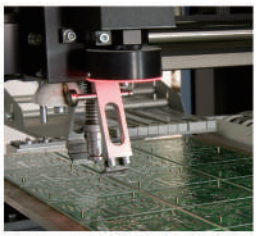
- Easy cabling, only requires a cable to connect NEON AI smart camera and robot arms.
- Low space and bandwidth requirements
- Minimal delays with easy integration

Customer Benefits

- Hazard zone indication markings on the floor free floor space for production
- Image analysis done on the NEON smart camera triggers robot arms to stop upon zone intrusion
- Simple deployment and moderate network quality requirements allow for easy maintenance.



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Accurate 2D/3D Quality Inspection

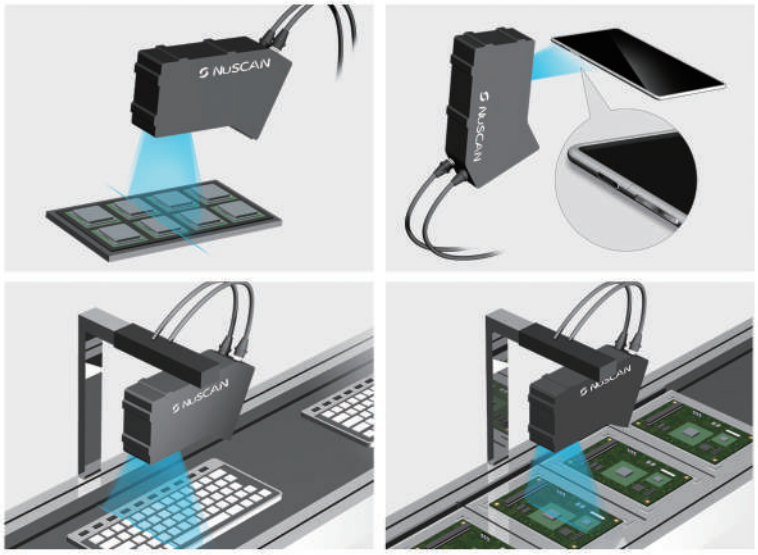
Automotive manufacturing processes require precise assembly, inspection, and defect detection to improve quality, reduce costs, and increase throughput. ADLINK's micro-level accuracy inspection components enable system integrators to meet high-speed, complex vision quality control requirements and accelerate market development in automotive, electrics, food and beverage, and other demanding applications.

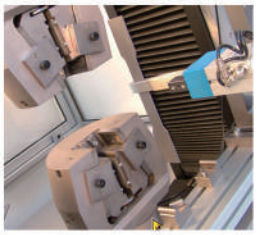
Solution Features

- High-resolution, high-speed, on-the-fly scanning for dimensional measurements
- Factory pre-calibrated sensors and a low-noise blue light laser
- X-axis resolution up to 0.022 mm and Z-axis repeatability down to 0.8 µm

Customer Benefits

- Medium-size measurement range from 42 to 186 mm
- Versatile application-ready ZX-Toolkit, no programming required
- Flexible PC-based architecture, easy to integrate into existing systems





Accelerated Automatic Material Testing

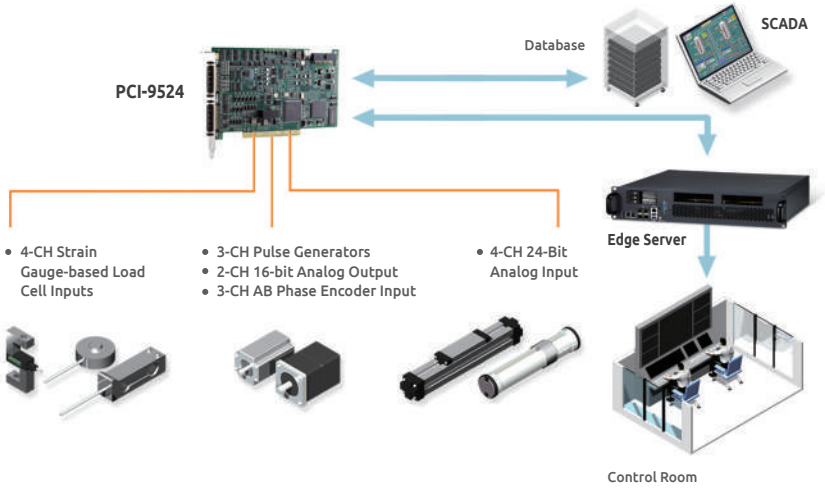
An automatic material system usually consists of signal conditioning, transducer excitation, transducer measurement, LVDT measurement, and actuator control to a stepper motor or hydraulic system. The PCI-9524 speeds up system integration for material testing developers by combining accurate load change measurement, displacement, and motor control.

Solution Features

- On-board amplifier, four load cell inputs, 2.5/10 VDC, 1.0 to 4.0 mV/V, accurate up to 200,000 counts
- 4-channel general-purpose 24-bit analog inputs for high accuracy LVDT measurements
- Three pulse generator channels: one 3-axes AB phase encoder for step motor control, two 16-bit analog outputs for hydraulic systems control

Customer Benefits

- Quicker integration
- Higher accuracy with high-resolution measurements
- Supports various commonly used inputs and outputs



Improving Efficiency, Precision, Quality of Machine Automation

Machine automation is at the core of smart manufacturing, integrating motion, machine vision, and IO sensing to maximize efficiency, optimize visual inspection, and improve quality. As information technology (IT) and operations technology (OT) merge, ADLINK's software-defined edge controller brings the highly connected efficiency and productivity to make the transformation possible.



Solution Highlights

Software-Defined EtherCAT Controller

New-generation EtherCAT solution integrates PC hardware and real-time software, bringing the flexibility of controller form factor selection and the guarantee of compatibility between motion controllers and subsystems.



Multiple Camera Interface Standards

Achieve optimum results for a vision system, fulfill a wide range of imaging processing bandwidth and camera interface standards with extensive frame grabber selection.



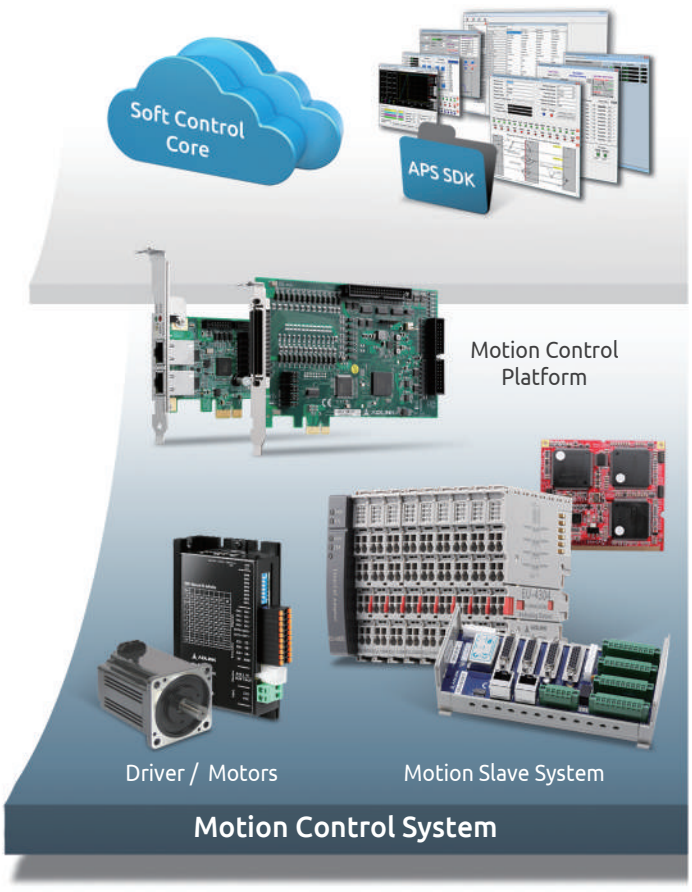
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Featured Solutions





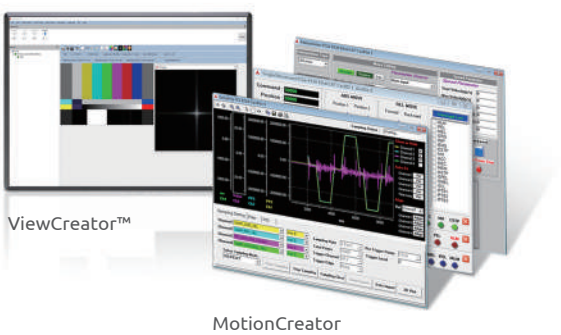






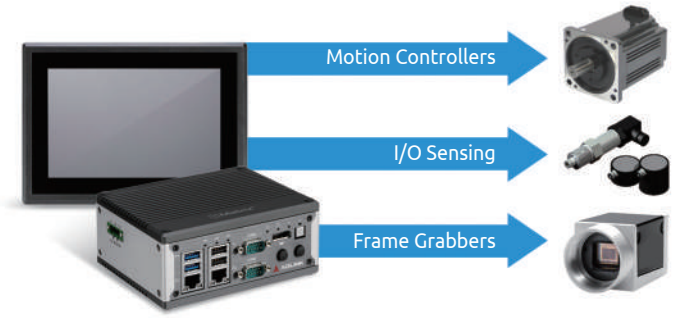
Application Level Software

Reduce development time and complexity through application level ready API and driver framework for a wide variety of machine automation application in motion and vision.



One-Stop Integrated Solution

Simplify your system deployment with a highly integrated product portfolio including motion controllers, frame grabbers and IO sensing to meet and exceed customer requirements, supporting the setup of smart factories.

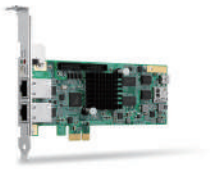


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Motion Controllers

ADLINK motion control solutions have been widely adopted, resulting in extensive field experience that has driven the development of powerful, high performance motion controllers, embedded controllers, time-deterministic I/O slaves, and comprehensive, easy-to-use APIs.

EhterCAT Master Controllers



PCIe-833x Series

PCIe EtherCAT master motion controllers

- Up to 64-axis motion control and 10,000 I/O point control
- EtherCAT cycle times up to 250μs
- Broad range of compatible EtherCAT slaves
- Dedicated emergency stop input
- 4CH isolated digital input/ 4CH isolated digital output



EMX-100

Ethernet-based 4-axis motion controller

- Libraries and utilities for Windows 7/10
- Expansion deployment up to 100 meters via Ethernet
- Support for standard C++, C#, VB.NET
- 2-axis position Compare Trigger output



Coming Soon

Edge Controller

Soft EtherCAT controller

- Cardless EtherCAT master in diversify platform
- Very computing power to fit different application
- Fully support ADLINK APS SDK & programing language
- Up to 32 axes motion controller in 250μs EtherCAT cycle

EtherCAT Slave Controllers



EU Series

EtherCAT slave system

- Optimization with ADLINK EtherCAT master (250us cycle time)
- Comprehensive slave modules including digital I/O, analog I/O, coupler, power supply, and terminal shield
- Compliance with industrial IEC standard Excellent scalability powered by modularized and slice-type design



ECAT-4XMO/TRG4

4-channel motion control and high-speed trigger and module for the bridge connected to EtherCAT

- 4 table trigger—10 Mhz max w/ FIFO 255 points
- 4 linear trigger—10 Mhz max.
- 4 channel latch response—3 MHz max. w/ 255 points
- Hardware emergency stop interface

Motion Drivers

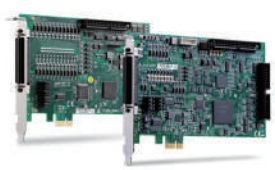


Nu-Step

EtherCAT stepper driver

- Small & wide power input range EtherCAT stepper driver
- Programmable IO for Alarm/INP/EMG/EL function
- Supports both software and hardware EtherCAT slave ID
- Built-in linear and table compare trigger for AOI inspection

Pulse Train Motion Controller



NEW

AMP-104C / AMP-304C

4-Axis pulse motion controller

- PCI Express interface, up to 9.99 Mpps pulse output rate, and 64-ch GPIO
- High speed position latch function with 12-ch configurable filter input
- Flexible position comparison trigger function with 16-ch output

Motion Control Software



Automation Product Software SDK (APS SDK)

Supports ADLINK EtherCAT solutions, centralized motion controllers, and distributed motion control

- ADLINK automation product drivers
- APS Library
- MotionCreatorPro2
- ADCNC Library

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Video Capture Cards / Frame Grabbers

ADLINK's machine vision solution offers image acquisition systems a full spectrum of frame grabbers supporting digital and analog interfaces that are easily integrated and compatible with most popular cameras, software and computing platforms.

GigE Vision



PCIe-10GPoE

2-CH 10 GigE Vision PoE+ Grabber

- PCI Express® x4 Gen 3 compliant
- 2 independent Intel® server-grade X550-AT2 10GbE controller, supports NBASE-T (2.5/5G) technology
- IEEE 802.3at for PoE+
- Smart PoE power management, PoE protection for enhanced asset protection
- Firmware-based ToE with GigE Vision Action Command



PCIe-GIE7x Series

2/4-CH GigE Vision PoE+ Grabbers

- PCI Express® x4 Gen 2 compliant
- 2/4 independent Intel® GbE controller I210
- IEEE 802.3at for PoE+
- Smart PoE power management, PoE protection for enhanced asset protection
- Firmware-based ToE with GigE Vision Action Command

USB3 Vision

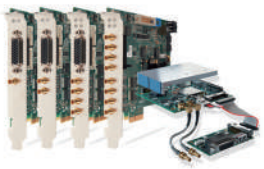


PCIe-U300 Series

4/8/12-CH USB3 Vision Grabbers

- PCI Express® x4 Gen 2 compliant
- 4 independent Fresco FL1100 Host Controller, compliant with USB 3.1 Gen 1 (identical to USB 3.0)
- 4/8 USB Type-A external ports, 4 additional internal USB 3.0 ports by pin headers
- Easy-to-use API provided for software-programmable per-port power on/off

CoaXPress



Euresys Coaxlink Series

CoaXPress frame grabbers, ultimate in performance with superior value

- PCIe 3.0 (Gen 3) or PCIe 2.0 (Gen 2) bus
- PCIe frame grabbers with up to eight CoaXPress connections
- Feature-rich set of up to 20 digital I/O lines
- Extensive camera control functions
- Memento Event Logging Tool

Cameralink



Euresys Grablink Series

Camera Link frame grabbers

- PCIe frame grabbers for Camera Link 80-bit, Full, Medium, Base and Lite configuration cameras
- Directly compatible with hundreds of Camera Link cameras available on the market
- ECCO+ / ECCO: Extended Camera Link Cable Operation
- Feature-rich set of digital IO lines
- Memento Event Logging Tool

3D Profile Sensor



ZX-5000 Series

Ultra-High-Resolution Smart 3D Profile Sensors

- Ultra-high resolution for micron-level inspection
- Medium-size measurement range from 42 to 186 mm
- Factory pre-calibrated, real-world coordinates, right out-of-the-box
- ZX-Creator enables development and deployment of 3D inspections in 3 easy steps

Images Analysis Tools

Open eVision Image Analysis Tools

Euresys Open eVision

Machine Vision Image Analysis Libraries and Software Tools

- Hardware-independent image processing and analysis libraries
- Compatible with any image source, frame grabbers, GigE Vision and USB3 Vision cameras
- Support the latest technologies such as Deep Learning and 3D
- 64-bit and 32-bit libraries for C++ and .NET (C#, VB.NET, C++/CLI) under Windows, 64-bit libraries for Linux (x86-64)
- Accurate sub-pixel measurement and calibration

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IO Sensing

ADLINK's Intelligent Remote IO sensing & control modules are the key components in flexible and cost effective remote data acquisition and control systems. The modules convert input/output signals to engineering units and transmit/receive, in ASCII format, to/from any host computer with an RS-232 or RS-485 port.

Analog IO



PCIe-6208

8-CH 16-Bit PCI Express analog output card

- 4-CH TTL digital inputs and 4-CH TTL digital outputs
- Bipolar analog output range
- 8-CH voltage outputs
- 16-bit D/A resolution
- x1 PCI Express® interface



PCI-6308 Series

8-CH 12-bit isolated analog output cards

- Supports a 32-bit 5V PCI bus
- Isolated 8-CH 12-bit voltage output
- 2500 VRMS optical isolation
- Jumper selectable bipolar and unipolar output ranges
- 4-CH isolated DI and 4-CH isolated DO



PCI-6208/6216 Series

8/16-CH 16-bit analog output cards

- 4-CH TTL digital inputs and 4-CH TTL digital outputs
- Bipolar analog output range
- 8-CH current outputs (PCI-6208A)
- 16-CH voltage outputs (PCI-6216V-GL)
- 8-CH voltage outputs (PCI-6208V-GL and PCI-6208A)

Digital IO



PCIe-7396

96-CH high-driving DIO card

- Supports a 32-bit 5V PCI Express bus
- 96-CH digital TTL inputs/outputs
- High driving up to 48 mA (sink) and 15 mA (source)
- Emulates 4/2 industry standard 8255 PPI (mode 0)
- Ports are independently configurable as input or output



PCIe-7432

32-CH isolated DI & 32-CH isolated DO PCIe card with high input range

- Supports 3.3V 12V PCIe bus
- 32CH isolated digital inputs & 32CH isolated digital outputs
- Isolation voltage: 2500V RMS
- Sink current up to 500mA on single isolated output
- Isolated input voltage up to 24V (PCIe-7432/7432HIR)



LPCIe-7230

32-CH isolated DIO card

- 2500 Vrms optical isolation
- Sink current up to 500 mA on each isolated output
- Two external interrupt sources
- Compact, low-profile PCI size
- 16-CH isolated digital input and 16 isolated digital output



PCIe-7442

High-density 128-CH Isolated DIO/DI/DO card

- Support universal 32-bit 3.3V and 5V PCI bus, plug-and-play
- High-density, opto-isolated digital input and/or digital output
- 1250 VRMS isolation voltage
- Programmable Change-of-State (COS) detection for all digital input channels



PCIe-7248/7296

96/48-CH Opto-22 compatible PCI Express digital I/O cards

- x1 PCI Express® interface
- 48/96-CH digital TTL/DTL inputs/outputs
- Emulates 4/2/1 industry standard 8255 PPI (mode 0)
- Direct interface with OPTO-22 compatible I/O modules
- Output port status read back



LPCIe-7250

8-CH relay outputs and 8-CH isolated DI card

- x1 lane PCI Express interface
- 8-CH SPDT
- 8-CH isolated digital inputs
- Non-latching relays
- On-board LED indicators for relay status

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High Speed Link



NEW

PCIe-7853

Master-slave distributed motion and I/O master controller

- Connected I/O points: up to 2,016 points
- RJ-45 jack for easy installation
- Software selectable transmission speed: 3/6/12 Mbps for HSL
- Non-volatile RAM onboard



HSL-DI16DO16-M-NN

6-CH discrete input 16-CH discrete output module

- Input voltage: ±40 V (Max)
- Output switching capacity: Single channel 500 mA; all channels 60 mA at 24VDC
- Photo couple isolation voltage: 2500 Vrms
- Input impedance: 4.7 KΩ



HSL-TB32-M-DIN

32-CH I/O terminal base

- Field I/O wiring connection for HSL I/O modules
- Spring terminal for easy field wiring
- Power and ground included for each signal channel
- Interlocking design for rugged installation
- Power LED indicator

Communication Cards



cPCIe-3544

4-Port RS-422/485 isolated serial communications card

- 32-bit CompactPCI®, PICMG® 2.0 Rev 2.1
- Plug-and-play, IRQ & I/O address automatically assigned by PCI BIOS
- Four asynchronous communications ports with intelligent buffer
- Four RS-422/485 ports
- 2500 VRMS isolation voltage



cPCI-3538

8-port asynchronous serial communications

- 32-bit CompactPCI, PICMG 2.0 Rev 2.1
- Plug-and-play, IRQ & I/O address automatically assigned by PCI BIOS
- 8 asynchronized communications ports with intelligent buffer
- 8 independent RS-232 ports



PCI-7841

Dual-port isolated CAN interface card

- PICMG® 2.0 Rev 2.1
- Dual-independent CAN network operation
- Up to 1 Mbps programmable transfer rate
- 16 MHz CAN controller frequency
- 2500 VRMS optical isolation
- Direct memory mapping to the CAN controllers

Motionnet



MNET-4XMO-(C)

Distributed 4-axis motion control module (with high-speed trigger function)

- Up to 256 axes on a single Motionnet network
- Transmission speed selectable: 2.5/5/10/20 Mbps
- Maximum wiring distance: up to 100 meters
- 4-axis pulse train output channels; frequency up to 9.9 MHz
- Encoder frequency up to 20 MHz under 4xAB feedback mode



NEW

PCIe-7856

Master-slave distributed motion and I/O master controller

- Up to 256 axes on a single Motionnet network
- Connected I/O points: up to 2,016 points
- Programmable timer interrupt
- Transmission speed: 3/6/12 Mbps for HSL; 2.5/5/10/20 Mbps for Motionnet

NuDAM



NuDAM-6100 Series *Modules supporting Modbus RTU protocol*

- The NuDAM modules provide direct communications with a wide variety of sensors; perform signal conditioning, scaling, linearization and conversion; can acquire measurements of temperature, pressure, flow, voltage, current; and handle multiple digital signal types broadly used in IoT and other industrial applications, such as facility monitoring, environment monitoring, and industrial process control. The new ND6117, ND-6124, ND-6150, and ND-6160 modules feature Modbus/RTU as the best remote data transmission protocol, which provides customers a comprehensive product offering.

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Digital Transformation with Edge AI Machine Vision

AI edge computing enables easy implementation of normally difficult production tasks such as customized quality inspection, detection of minute irregularities in textured surfaces, and labeling recognition for irregularly stacked cargo. Machine learning, cognitive services, image processing analysis, and other complex information management tasks can be performed at the edge to make adjustments in real time. Production equipment, unmanned vehicles, and complex robotics benefit from the increased stability, reduced latency, and enhanced efficiency provided in FoF operations, with accuracy increased through continuous training and significantly reduced development time.



Solution Highlights

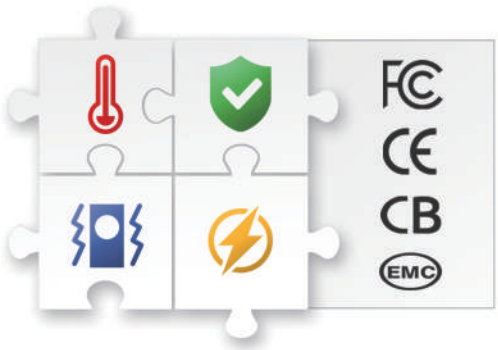
Optimized for Vision Applications

Tightly integrated hardware and software, already verified for compatibility, providing AI developers a convenient launchpad for their projects.

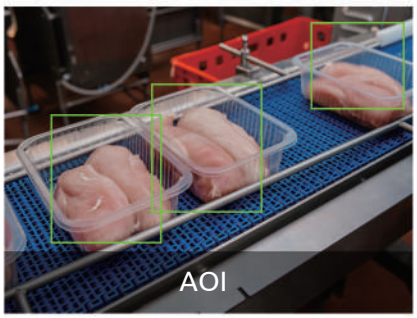


Worry-Free Reliability

CE/FCC/Safety verified to reduce EMC/ESD issues. Shock, vibration and temp. cycle validated for stability.



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Safety AI

- Geo Fence System
- Personal protection equipment detection

OEE Enhancement

- SOP compliance
- AI AOI for challenging inspection

High AI Inference Compatibility

Supports leading AI inference engines such as ONNX, TensorRT and OpenVINO for seamless connection between AI model training to inference.

ONNX

TensorRT

Ai

OpenVINO™

No-code and Low-code AI PoC Development

Intuitive GUI for fast and easy AI inference pipeline development, 2 weeks to PoC



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Edge AI Vision Platform

ADLINK AI Vision Solution is ideal for visual inspection, object detection, automatic number plate recognition, and behavior monitoring, with all the intensive processing done on the device. Labor-intensive industries such as food sorting, logistics, packaging, and farming can all benefit. The various AI Vision Solutions perform product sorting and classification tasks, and quality assurance.

EDGE VISION ANALYTICS



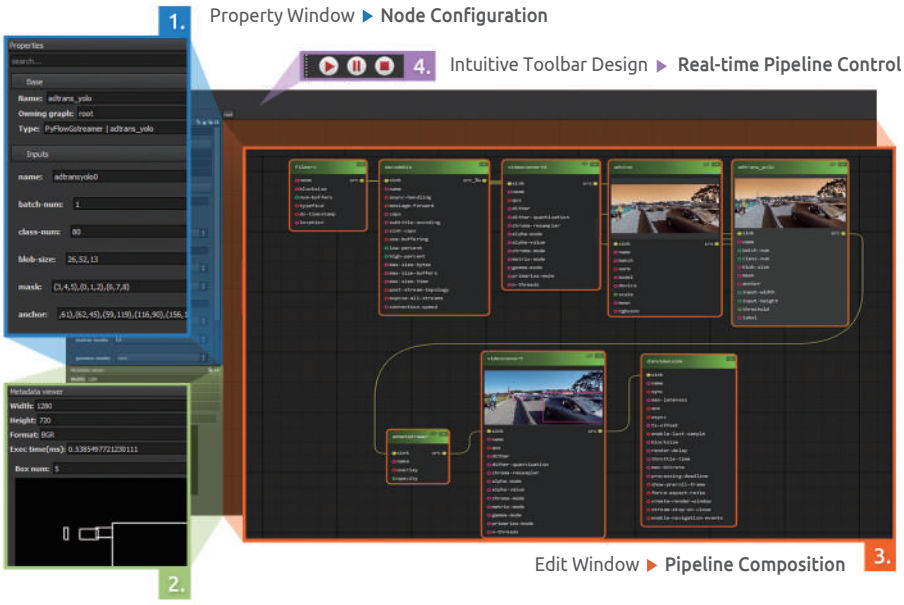


Smart Pallets | Patrol Robots | Safety & Security | Inspection/ Classification | Behavior Analytics | Weed detection | Robot Collaboration | Asset Management

Low-code/no-code EVA SDK Simplifies Edge AI Vision PoC

ADLINK AI vision platform supports EVA — ADLINK's edge vision analytics software — which serves as a unified platform for streamlining AI vision project deployment in a heterogeneous computing environment.

- Supports 10+ camera protocols and field-ready application plugins
- Supports TensorRT and OpenVINO AI inference engines
- No-code/low-code IDE AI development environment lowers thresholds
- Four weeks from PoC to mass deployment



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Edge AI Smart Camera



NEON-1000-MDX

Intel Atom® E3930 and Movidius™ Myriad™ X-based Industrial AI Smart Camera for the Edge

- Integration of Intel Atom® E3930, Movidius™ Myriad™ X, and image sensor, easy to deploy
- FPGA-based digital I/O for accurate real-time triggering
- USB Type-C port for video, power, and USB simplifies connectivity
- 1x microSD slot for additional storage
- Supports four types of image sensors and C-mount lenses
- Digital I/O, 1x LAN, and 1x COM



NEON-2000-JNX/JNO

NVIDIA® Jetson Xavier™ NX / Jetson™ Nano -based industrial AI smart camera for the edge

- Integration of NVIDIA® Jetson Xavier NX or NVIDIA® Jetson Nano™, image sensor and vision software suites, ready to deploy
- FPGA-based DI/O for accurate, real-time triggering
- USB Type-C port for video, power, and USB simplifies connectivity
- Choose from six different image sensors
- DI/O, 1x LAN and 1x COM
- Supports C-mount lenses
- Supports ADLINK EVA (Edge Video Analytics), reducing the development time of deep learning applications



NEON-2000-JT2-X

NVIDIA® Jetson™ TX2-based IP67-certified AI smart camera for the Edge

- Integration of Jetson TX2, image sensor and vision software suites, ready to deploy
- IP67-certified
- FPGA-based DI/O for accurate, real-time triggering
- USB Type-C port for video, power, and USB simplifies connectivity
- Choose from four different image sensors
- DI/O, 1x LAN and 1x COM, Supports C-mount lenses



NEON-3000-IM8 *Coming Soon*

NXP® i.MX 8M Plus -based industrial AI smart camera for the edge

- Integration of NXP® i.MX 8M Plus, image sensor and vision software suites, ready to deploy
- FPGA-based DI/O for accurate, real-time triggering
- USB Type-C port for video, power, and USB simplifies connectivity
- Choose from four different image sensors
- DI/O, 1x LAN and 1x COM
- Supports C-mount lenses

Edge AI Vision System



EOS-JNX-I

NVIDIA® Jetson Xavier™ NX AI System for IP camera surveillance with 4 PoE ports

- AI inference acceleration with NVIDIA® Jetson Xavier™ NX
- Fanless system 187.5 x 149.5 x 55.25 mm (WxDxH), solid enclosure
- Wide temperature range from -20°C to 70°C
- Expanded storage by microSD/M.2 PCIe SSD for larger application installation
- 4 PoE ports supporting 60W total power for IP camera (10M/100M)
- 1Gb uplink port enables easy NVR connection
- Smart PoE software API supports power output control and power loss detection



EOS-JNX-G

NVIDIA® Jetson Xavier™ NX AI System for industrial GigE cameras with 4 PoE ports

- AI inference acceleration with NVIDIA® Jetson Xavier™ NX
- Fanless system 187.5 x 149.5 x 55.25 mm (WxDxH), solid enclosure
- Wide temperature range from -20°C to 70°C Expanded storage by microSD/M.2 PCIe SSD for larger application installation
- 4 PoE ports supporting 60W total power for GigE camera (1Gb)
- Smart PoE software API supports power output control and power loss detection

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Increasing Feasibility of Real-Time Remote Management at Scale

Innovative edge DAQ technology expedites MCM deployment, simplifies configuration and maintenance, and collects, pre-processes, and transmits sensor data with improved reliability and efficiency. This novel approach allows plants to rapidly expand their scope of real-time operational awareness and improve their responsiveness to changing machine conditions, production processes, and environmental parameters.



Solution Highlights

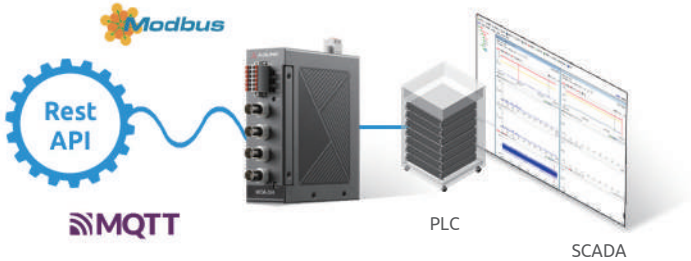
Highly Integrated

Integrated sensor data collection, network connectivity, and edge computing in a single system, providing edge analytics, and converting data to information for edge decision and action.



Worry-free Data Connectivity

Supports multiple data formats and protocols to enable a wider range of options for remote equipment monitoring and control tasks. Simple data transfer to the backend server or SCADA.

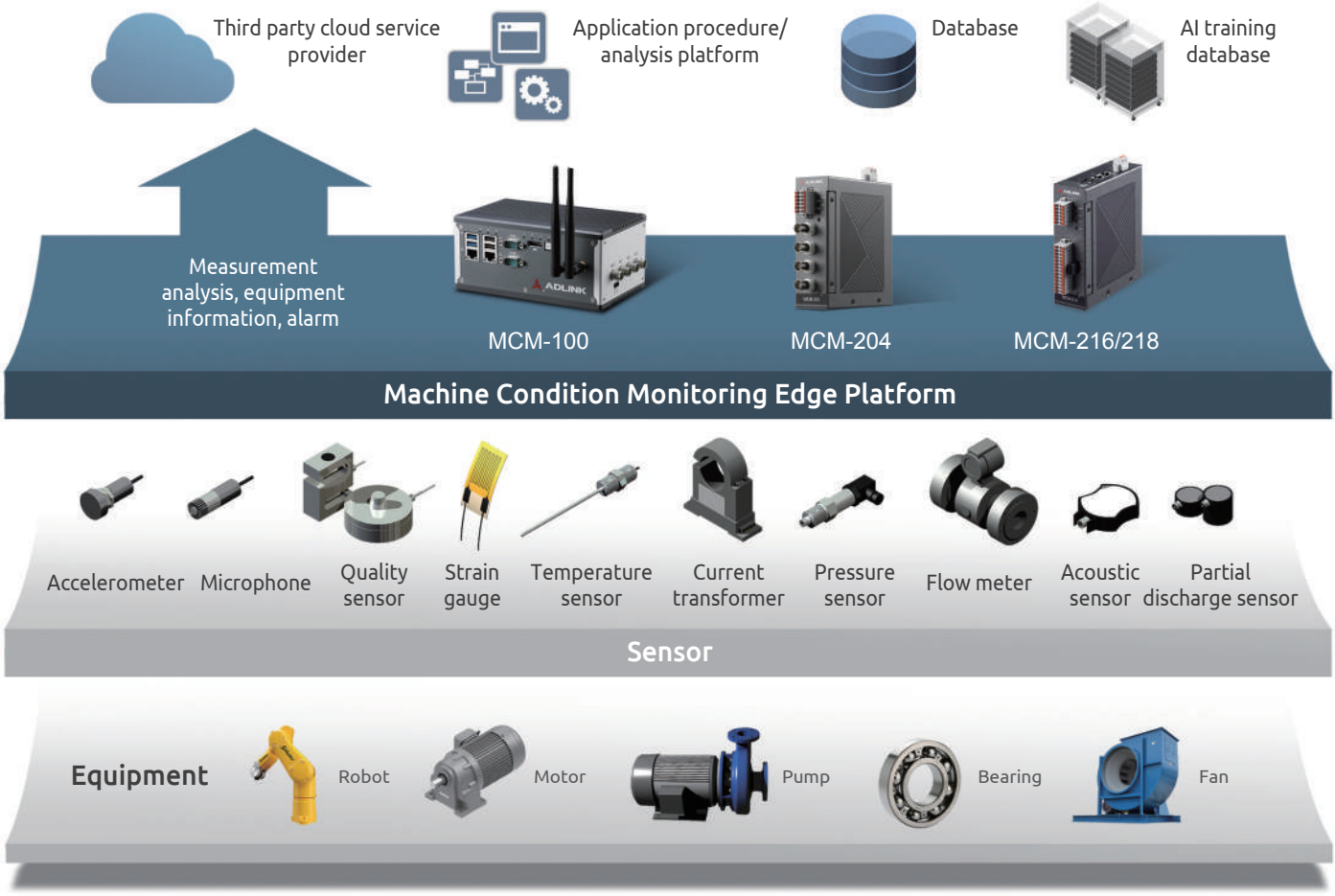


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Simplified System Deployment

Enable daisy-chain connection of multiple devices, greatly reducing the length of the signal line, avoiding signal weakness and saving deployment time and costs.



Remote Management

The built-in web-based device management console allows engineers to perform remote updates and configuration from a dashboard at any time and from any location.



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ADLINK's Complete Selection of Data Acquisition Solutions

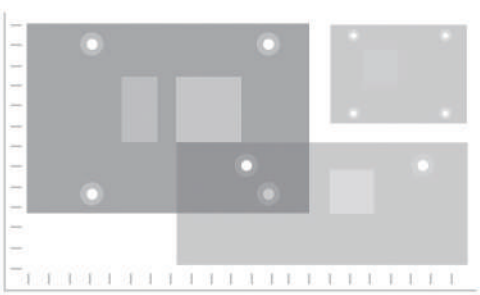
PC-based test and measurement systems are now widely used in industrial equipment manufacturing applications such as data acquisition, automated testing, and machine learning predictive maintenance.
For most engineers and scientists, sacrificing accuracy for throughput performance or sampling rate for resolution is not an option. Over the years, ADLINK has developed multiple technologies to maximize the absolute accuracy of measurements while delivering industry-leading performance in PC-based data acquisition.



Solution Highlights

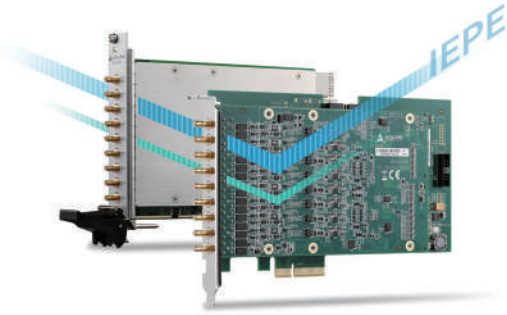
Various Form Factors

Our hardware solution has a complete range of DAQ devices in different form factors including PCI, PCIe cards, USB modules, modular DAQ systems, and DAQ computers for users.



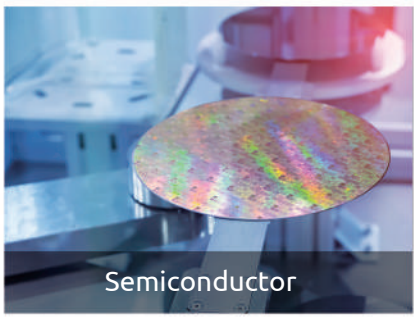
Direct Sensor Connection

ADLINK DAQ modules provide flexible digital and analog trigger functions for precise acquisition. Users can set levels, edge or delay parameters to start/stop the sampling function.



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Featured Solutions


Semiconductor


Electronic Manufacturing


Education and Research



Data Acquisitions


PXI Platforms

Sensor Measurement

Device Control

Automated Measurement

Automated Testing

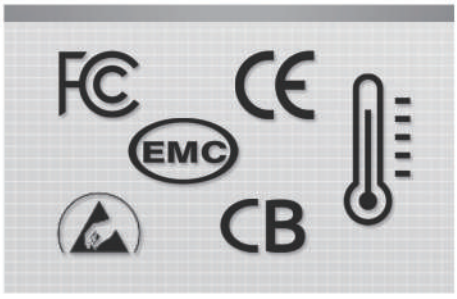
Complete Software Support

ADLINK eliminates this bottleneck with its new Measurement, Automation, and Platform Suite (MAPS), an all-in-one software solution that may be used in conjunction with ADLINK's DAQ and PXI modules.



Worry-Free Reliability

CE/FCC/Safety verified to reduce EMC/ESD issues. Shock, vibration and temp. cycle validated for stability.



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Data Acquisition and Control

ADLINK's easy, reliable, and intelligent DAQ solutions facilitate your IIoT applications by collecting accurate real-time data for analysis to improve production capabilities and increase operational efficiency.

Edge DAQs



Vibration

MCM-100

Machine condition monitoring edge platform

- Built-in 2/4-CH, 24-bit simultaneous sampling analog inputs, up to 128 kS/s
- Supports IEPE 2mA excitation current output on each analog input to drive accelerometer
- Equipped with Intel Atom® x7-E3950 processor (quad-core)
- Extremely compact with versatile I/O support



Vibration

MCM-204

Standalone Ethernet DAQ with 4-CH AI, 24-Bit, 128 kS/s, 4-CH DI/O

- RESTful API reports machine condition to IT system
- Built-in web console for easy configuration and use as portable DAQ
- Supports custom algorithms to filter data at the edge
- Supports IEPE 4mA excitation current output on each analog input to drive accelerometer



Voltage
Current

MCM-216/218

Standalone Ethernet DAQ with 8/16-ch AI, 16-bit, 250kS/s, 4-ch DI/O

- Built-in web console for easy configuration and use as a remote DAQ
- Two 1Gb Ethernet ports for cascading
- 16-ch 250KS/s voltage input (MCM-216); 8-ch 250KS/s current input (MCM-218)
- Supports custom algorithms
- Supports USB Wi-Fi dongle
- Supports TCP socket (client mode) to transmit data actively

Sensor Measurement



Vibration
Audio

PCI-9527L

24-bit high-resolution dynamic signal acquisition and generation module

- 24-bit Sigma-Delta ADC and DAC
- 2-ch simultaneous sampling analog
- input, and 2-ch simultaneous updated analog output
- 216 kS/s maximum sampling rate with
- software programmable rate



Vibration
Audio

PCIe/PXIe-9529

8-CH 24-bit high-resolution dynamic signal acquisition module

- 24-bit sigma-delta ADC
- 8 simultaneous analog inputs
- 192 kS/s maximum sampling rate
- ±1V, and 10V input ranges, 110 dB dynamic range
- IEPE - 4mA, software configurable



Vibration

USB-2405

4-CH 24-bit 128kS/s dynamic signal acquisition USB 2.0 module

- Hi-Speed USB 2.0, and USB bus powered
- 24-bit sigma-delta ADC with built-in anti-aliasing filter
- Analog and digital triggering and full auto-calibration
- Supports 2mA excitation output on each analog input channel for IEPE sensor measurement

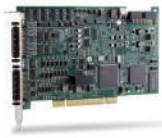


Temperature
Strain Gauge
Current
Voltage

USB-2401

4-CH 24-bit universal input USB DAQ modules

- 4-CH simultaneous-sampling analog input
- Built-in signal conditioning for high voltage, current, thermocouple, RTD, strain gauge, or load cell measurement
- Up to 2kS/s analog input rate



Strain Gauge

PCI-9524

24-bit precision load cell input card

- 4-CH strain gauged-based transducer inputs
- 4-CH 24-bit AI, up to 30 kS/s sampling rate
- Transducer input accuracy up to 1/200,000 counts at full-scale
- 3-CH PWM output, supporting single pulse and pulse train



Current

USB-1903

8/16-CH 16-bit 250 kS/s multi-function USB DAQ modules

- USB 2.0 high-speed function, USB bus power
- Removable screw-down terminal module
- Lockable USB cable for secure connectivity
- 8-CH 250 kS/s current input, 2-CH 1 MS/s voltage output

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Multi Function DAQ Cards

Bus Type	Analog Input				Analog Output			Digital I/O	Product Name
	No. of Channels	Max. Sampling Rate	Resolution (bit)	Note	No. of Channels	Max. Update Rate	Resolution (bit)	No. of Channels	
USB	16	250 kS/s	16					8 DI & 4 DO	USB-1901
USB	16	250 kS/s	16		2	1 MS/s	16	8 DI & 4 DO	USB-1902
USB	16	250 kS/s	16		2	1 MS/s	16	8 DI & 4 DO	USB-1903
USB	4	2 MS/s	16	Simultaneous Sampling				8 DI & 4 DO	USB-1210
USB	4	2 kS/s	24					4 DI & 4 DO	USB-2401
USB	4	128 kS/s	24					2 GPIO	USB-2405
PCI/PCIe/PXI	4	2 MS/s	14		2	1 MS/s	12	24 DI & 24 DO	DAQ/DAQe-2010, PXI-2010
PCI/PCIe/PXI	4	500 kS/s	16		2	1 MS/s	12	24 DI & 24 DO	DAQ/DAQe-2005, PXI-2005
PCI/PCIe/PXI	4	250 kS/s	16		2	1 MS/s	12	24 DI & 24 DO	DAQ/DAQe-2006, PXI-2006
PCI/PCIe/PXI	96	3 MS/s	12					24 DI & 24 DO	DAQ/DAQe-2208, PXI-2208
PCI/PCIe/PXI	64	3 MS/s	12		2	1 MS/s	12	24 DI & 24 DO	DAQ/DAQe-2204, PXI-2204
PCI/PCIe/PXI	64	500 kS/s	16		2	1 MS/s	12	24 DI & 24 DO	DAQ/DAQe-2205, PXI-2205
PCI/PCIe/PXI	64	250 kS/s	16		2	1 MS/s	12	24 DI & 24 DO	DAQ/DAQe-2206, PXI-2206
PCI/PCIe	16	250 kS/s	16					24 DI & 24 DO	DAQ/DAQe-2213
PCI/PCIe	16	250 kS/s	16		2	1 MS/s	12	24 DI & 24 DO	DAQ/DAQe-2214
PCI	16	100 kS/s	16		1	Static	12	16 DI & 16 DO	PCI-9111HR(1)
PCI	16	100 kS/s	12		2	Static	12	16 DI & 16 DO	PCI-9112
PCI	16	100 kS/s	12					16 DI & 16 DO	PCI-9113(3)
PCI	32	250 kS/s	16						PCI-9114 Series
PCI	16	250 kS/s	16	Encoder Inputs	2	Static	16	8 DI & 4 DO	PCI-9221
PCI	16	250 kS/s	16		2	1 MS/s	16	16 DI & 16 DO	PCI-9222
PCI	32	500 kS/s	16		2	1 MS/s	16	16 DI & 16 DO	PCI-9223
PCI/PCIe/PXI	8	400 kS/s	14		4	1 MS/s	12	24 DI & 24 DO	DAQ/DAQe-2501, PXI-2501
PCI/PCIe/PXI	4	400 kS/s	14		8	1 MS/s	12	24 DI & 24 DO	DAQ/DAQe-2502, PXI-2502
PCI					8	Static	12	4 DI & 4 DO Isolated	PCI-6308V/6308A(2)
PCI/PCIe					8	Static	16	4 DI & 4 DO Isolated	PCI/PCIe-6208V, PCI-6208A(2)
PCI/PCIe					16	Static	16	4 DI & 4 DO Isolated	PCI/PCIe-6216V

Note : (1) HR : high gain (2) PCI-6208A/6308A : current output (3) Isolated analog input

High Speed Digital I/O



USB-7230/7250

Isolated USB digital I/O modules

- The USB-7230 is USB-powered with removable screw-down terminals for easy device connectivity
- 32-CH isolated digital I/O (USB-7230), 8-CH relay output, 8-CH isolated DI (USB-7250)
- Programmable digital filter removes unexpected glitches from input channels



PCIe-7360

100 MHz 32-CH high-speed digital I/O card

- Higher parallel data transfer rate and throughput with 8/16/24/32-CH at up to 100MHz for DI or DO
- Software selectable programmable logic level
- Flexible function I/O to provide additional 8-CH function I/O to satisfy various requirements of IC testing

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Digitizers and GPIB

ADLINK provides a diversity of modular instruments with market-leading price-performance ratio, for bigger and better measurement and automation systems. In addition, ADLINK GPIB interface cards in PCI, PCIe, and USB interfaces are delivered with complete software support, including a driver API that is fully binary compatible with NI-488.2* driver software.

Digitizers



PCIe-9814

4-CH 12-Bit 80 MS/s PCI Express digitizer

- Up to 80 MS/s sampling, and 4 simultaneous analog inputs
- High resolution 12-bit ADC
- Up to 40 MHz bandwidth for analog input, 1 GB onboard storage memory
- Programmable input voltage range of ±0.5V, ±1V, ±5V, or ±10V
- Provide 10 or 20 MHz digital onboard filter (FPGA)



PXIe/PCIe-9834

4CH 16-Bit 80 MS/s PXI/PCI Express digitizer

- Up to 80 MS/s sampling, and 4 simultaneous analog inputs
- High resolution 16-bit ADC
- Up to 40 MHz bandwidth for analog input, 1 GB onboard storage memory
- Programmable input voltage range of ±0.5V, ±1V, ±5V, or ±10V
- Provide 10 or 20 MHz digital onboard filter (FPGA)



PXIe-9848

8-CH 14-bit 100 MS/s High-Speed PXI Express digitizer

- PXI Express specification Rev. 1.0 compliant
- Up to 100 MS/s sampling rate & High resolution 14-bit ADC
- Up to 100 MHz bandwidth for analog input
- 512 MB onboard storage memory
- Programmable input voltage range of ±0.2 V or ±2 V, or ±100 V Max (PXIe-9848H)



PXIe/PCIe-9852

2-CH 14-bit 200 MS/s high-speed PXI/PCI Express digitizer

- 2 simultaneously analog inputs, up to 200 MS/s sampling rate, and high resolution 14-bit ADC
- Up to 90 MHz bandwidth for analog input
- 1 GB onboard storage memory
- Programmable input voltage range of ±0.2 V, ±2 V, or ±10 V
- One external digital trigger input and one external trigger output

GPIB



LPCI/LPCIe-3488A

Low-profile high-performance IEEE 488 GPIB interface for PCIe bus

- Fully compatible with the IEEE-488 standard
- Support 32-bit 3.3 V or 5 V PCI bus (LPCI-3488A)
- Up to 1.5 MB/s data transfer rates (USB-3488A and LPCI-3488A)
- Built-in FIFO for read/write operations
- Provide APIs compatible with NI-488.2 driver software*
- Support industrial-standard VISA library
- Interactive utility for testing and diagnostics



USB-3488A

High-performance IEEE-488 GPIB interface for USB

- Simple GPIB connectivity for laptop computers Plug and Play interface; APIs compatible with the NI-488.2* driver software
- Fully compatible with IEEE 488.1 and 488.2
- Fully compatible with industry-standard VISA libraries
- USB 2.0 compatible
- Maximum GPIB transfer rates of more than 1.2 MB/s
- No GPIB cable required

*NI, LabVIEW, and LabWindows CVI are trademarks or registered trademarks of National Instruments Corporation or its subsidiaries in the United States and other countries.

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PXI Platforms

PXI is an ideal deployment platform for measurement and automated test systems. ADLINK sets compatibility tests as critical for device verification to ensure complete compatibility. ADLINK guarantees rugged, highly reliable, solidly developed PXI products.



PXES-2314T

Compact 4-slot Thunderbolt™ 3 PXI Express™ Chassis

- 40Gb/s Thunderbolt™ 3 bandwidth



PXES-2301

6 All-Hybrid Slot 3U PXIe Chassis

- System bandwidth up to 8GB/S & peripheral bandwidth up to 2GB/s for all slots



PXES-2590

9-Slot 3U PXI Express Chassis

- Up to 8 GB/s system bandwidth & up to 2 GB/s peripheral bandwidth for all slots



PXES-2780

18-Slot 3U PXI Express Chassis

- Up to 8 GB/s system bandwidth and Up to 4 GB/s peripheral bandwidth for dedicated slots



PXES-2785

18-Slot 3U PXI Express Chassis

- Up to 24 GB/s (PCI Express 3.0 x8 x16 link) system bandwidth



PXIS-2719A

19-Slot 3U PXI Chassis

- One system slot and eighteen PXI/CompactPCI peripheral slots



PXIe-3987/3977/3937

3U 7th Generation Intel® Core™ i7/i5/i3 Processor-based PXI Express Gen3 Controller

- Up to 32 GB dual channel DDR4 at 2133/2400 MHz
- Maximum system throughput up to 16 GB/s by PCI Express 3.0 Bus



PXIe-3988

3U 9th Generation Intel® Xeon® E Processor-based PXI Express Gen3 Controller

- Up to 64GB GB dual channel DDR4 at 2133/2400 MHz (non-ECC)
- Maximum system throughput up to 16 GB/s by PCI Express 3.0 bus



PCIe-PXIe-8565

PCIe to PXIe Remote Controller

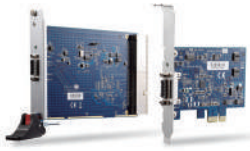
- PCIe Gen2, 250 MB/s



PCIe-PXIe-8638

PCIe to PXIe Remote Controller

- PCIe Gen2, 4 GB/s



PCIe-8560/PXI-8565

PCIe to PXI Remote Controller

- PCI, 133 MB/s

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