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# Innodisk Market Notes

August 2025

# AGENDA

- [DRAM Market Trends](#)
- [DRAM Product Update](#)
- [NAND Flash Market Trends](#)
- [Flash Product Update](#)
- [EP Product Update](#)


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# DRAM Market & Product Update

Innodisk DRAM Business Unit

## Innodisk DDR4 Items Supply Status

This report was updated on August 1<sup>st</sup>. The DRAM market is changing rapidly, and suppliers' plans are frequently shifting. Please contact Innodisk sales for the latest updates.

	Adopted DRAM IC (x8)		Corresponding DDR4 Module Capacity
<b>Samsung</b>	<b>1xnm (EOL)</b> 512x8 F-die → <b>Limited stock</b> 1Gx8 C-die 2Gx8 A-die → <b>Out of Stock</b>	<b>1znm</b> 512x8 G-die → <b>Limited stock</b> 1Gx8, 512x16 G-die 2Gx8 C-die → <b>Limited stock</b>	<b>DDR4 4/8/16/32GB</b>
<b>Micron</b>	<b>1αnm</b> 1Gx8, R-die 2Gx8 F-die, 512x16 R-die	→ <b>Limited Stock</b> → <b>Out of Stock</b>	<b>DDR4 4/8/16/32GB</b> 
<b>SK Hynix</b>	<b>1ynm(EOL)/1znm</b> 1Gx8 D/E-die 2Gx8 C/D-die	→ <b>Limited Stock</b>	<b>DDR4 8/16/32GB</b>
<b>Nanya</b>	<b>1Bnm</b> 256x16/512x8 F-die 512x16/1Gx8 H-die	→ <b>Sampling</b> <b>Expect to take MP orders in January of 2026</b>	<b>DDR4 4/8/16GB</b> <b>*32GB sampling in Q3 2026</b>

## Summary on DDR4 IC Brands

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	Available Module Capacity	Innodisk Current Supply	Longevity
Samsung	4GB	★★	Cover ~2027 Q4
	DDR4 8/16GB	★★	
	16/32GB	★★	
Micron	8/16GB	★	Cover ~2030 Jan.
	16/32GB	★	
SK Hynix	8/16GB	★	Cover ~2027 Q2
	16/32GB	★★	
Nanya	4GB	Sample Orders	Cover ~2030 Q4
	DDR4 8/16GB	Sample Orders	

# DRAM IC Brands and Longevity

This report was updated on August 1<sup>st</sup>. The DRAM market is changing rapidly, and suppliers' plans are frequently shifting. Please contact Innodisk sales for the latest updates.



**Suggested Configuration**

Generation	IC Brand	IC	Density
<b>DDR4</b>	Samsung	512X8 F/G-die	4/8GB
	Samsung	512X16 G-die	4/8GB
	Samsung	1GX8 C/G-die	8/16GB
	Micron	1GX8 R-die	8/16GB
	Samsung	2GX8 C-die	16GB/32GB
	SK Hynix	2GX8 C-die	16GB/32GB

# DRAM Module New Product

# Innodisk Unveils DDR5 6400 64GB DRAM Series to Empower Edge AI and Generative AI Applications



Innodisk announces its DDR5 6400 DRAM series, featuring the industry's largest 64GB single-module capacity. This 6400 series is purpose-built for data-intensive applications in AI, telehealth, and edge computing, where high performance at the edge is crucial. Available in versatile form factors, including [CUDIMM](#), [CSODIMM](#), and RDIMM, the series delivers unmatched speed, stability, and capacity to meet the rigorous demands of modern edge AI and industrial applications.

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# NAND Flash Market & Product Update

# NAND Flash Market Trends



## NAND Flash Industry Outlook

### 3Q25 NAND Flash Contract Prices Projected to Rise 5–10%

TrendForce's latest investigations find that the NAND Flash market has seen significant improvement in supply-demand balance following production cuts and inventory reduction in the first half of 2025. As suppliers shift production capacity toward higher-margin products, the overall supply in circulation has tightened.

On the demand side, increased enterprise investment in AI has provided strong support. Looking ahead to the third quarter, average NAND Flash contract prices are projected to rise by 5% to 10%.

Client SSDs benefit from restocking as enterprise SSD supply lags behind surging orders

TrendForce reports that the client SSD market is set to experience strong restocking momentum in 3Q25, following better-than-expected inventory clearance by OEMs and ODMs in the first half of the year. In addition, suppliers are actively promoting high-capacity QLC products, further accelerating shipment volumes. As a result, client SSD contract prices are projected to rise by 3% to 8% in the third quarter.

However, due to a surge in orders, some supply chain vendors are struggling to meet delivery deadlines. Coupled with capacity reductions implemented by suppliers earlier this year, enterprise SSD contract prices are projected to climb by 5% to 10% in 3Q25.



## NAND Flash Industry Outlook

### Kioxia BiCS FLASH 9th Generation - Sample Shipments Begin

KIOXIA America, Inc. today announced it has commenced sample shipments of 512Gb TLC memory devices incorporating its 9th generation BiCS FLASH™ 3D flash memory technology. It plans to commence mass production in fiscal year 2025.

#### High Capacity & Performance

Designed for high-capacity, high-performance applications, targeting SSDs and other storage solutions.

#### Advanced Architecture

Leverages Kioxia's advanced architecture to enhance performance and efficiency.

#### Target Applications

Focuses on enabling next-generation SSDs for data centers, mobile devices, and gaming consoles.

Future Roadmap: This is a key step in Kioxia's roadmap for advancing 3D flash memory technology.

# PRODUCT HIGHLIGHTS



## Innodisk Datacenter SSD

### Reliability

Datacenters are running 24/7. High-reliability SSDs are essential to support the workload and data integrity.

### Endurance

SSDs for datacenter should possess good endurance level for constant write and erase operations.

### Performance

Datacenters process massive amount of data. High-performance and low latency is needed for the high data demand.

### Security

SSDs with security features help to protect data against any unauthorized access or attack

### Maintenance

Minimizing service down-time is critical. Reducing any debugging effort helps to improve datacenter operating efficiency.

### Customization

Innodisk is able to customize the solution to meet the specific requirements of an application.

Meeting the Key Aspects in Modern Datacenters



## Product Highlight

# Datcenter Boot SSD Selection



## SATA 3TS9-P Series

Form Factors	2.5" SSD, M.2 2280		
Seq. Read/Write	550/520 MB/s (max.)		
Endurance  (JEDEC 219, Enterprise workload, Warranty 5 Years)	Application	Recommended Capacity*	DWPD
	Mainstream	240GB-960GB	1
Operation Temp.	0°C - 70°C		

## PCIe 4TS2-P Series

Form Factors	U.2, M.2 2280, M.2 22110, E.1S		
Seq. Read/Write	6950/4100 MB/s (max.)		
Endurance  (JEDEC 219, Enterprise workload, Warranty 5 Years)	Application	Recommended Capacity*	DWPD
	Mainstream	240GB-960GB	1
Operation Temp.	0°C - 70°C		

\*Higher capacity available. Please refer to product datasheet for more info.



## Product Highlight

# Data Center Storage SSD- PCIe Gen5



## Features

- 3D eTLC/QLC
- NVMe 2.0
- Innodisk DSSD Feature Set
- Enhanced Thermal Management
- Customizable Features
- OCP 2.0



## PCIe 5TS-P / 5QS-P Series

Form Factors	U.2, E1.S, E3.S, E3.L		
Seq. Read/Write	14 / 10 GB/s (max.)		
Endurance  (JEDEC 219, Enterprise workload, Warranty 5 Years)	Application	Capacity*	DWPD
	Mainstream (eTLC)	1.9TB-15.3TB	1
	Mixed-use (eTLC)	1.6TB-12.8TB	3
	High-capacity (E3.L QLC)	128TB	TBA

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# IPA/EP x OUTFRONT


Intelligent Peripheral Appliance, Embedded Peripheral Div.



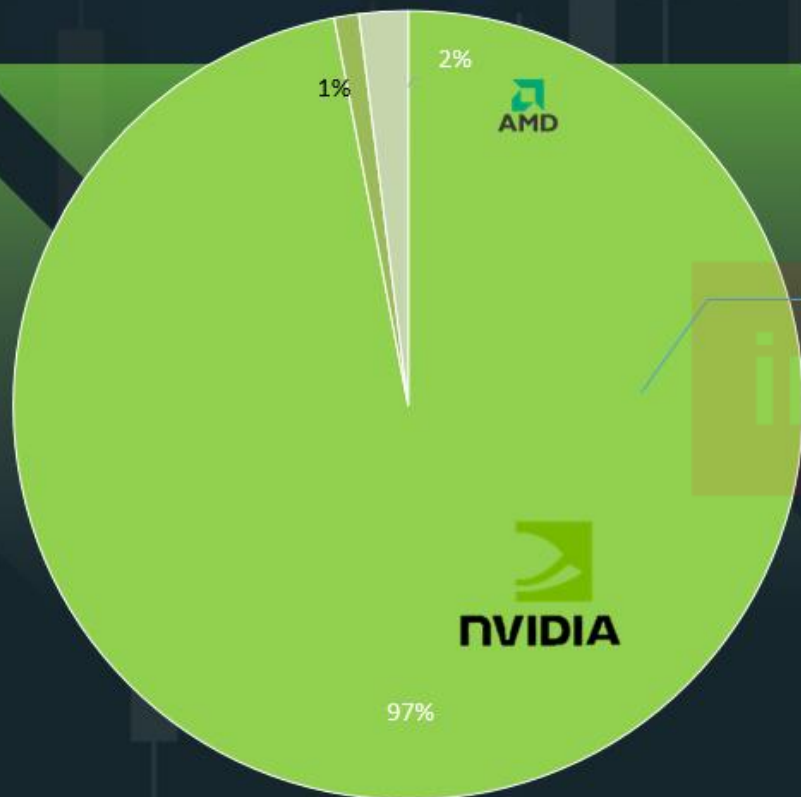
# **EP Module x NVIDIA Jetson**

**Perfect match for NVIDIA Jetson, ready for AI**

Intelligent Peripheral Appliance, Embedded Peripheral Div.



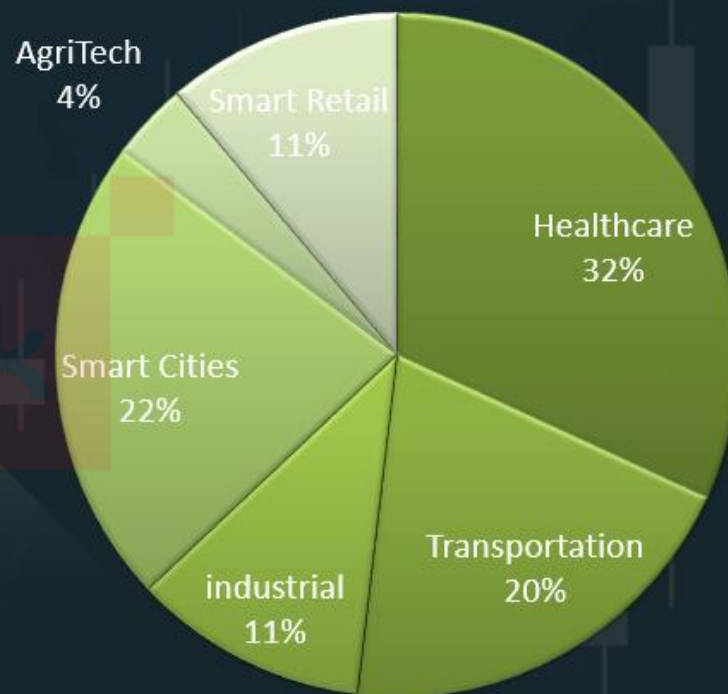
## AI Platform Key Player



■ Nvidia ■ AMD ■ Others

Chosen By Over 1M Developers, NVIDIA Jetson Dominates Edge AI And Robotics Platforms.

## Market share by End user



■ Healthcare ■ Transportation ■ Industrial  
■ Smart Cities ■ AgriTech ■ Smart Retail

# Edge AI Applications



## Industrial and Manufacturing



- Ai-driven Production
- Quality Inspection

## Healthcare and Life Science



- Medical Imaging Analysis
- Remote Diagnosis

## Smart cities



- Smart Transportation
- Intelligent Security

## AgriTech



- AI Sprayer
- Smart Irrigation and Environmental Monitoring

## Transportation and Logistics



- Logistics Automation
- Inventory Management

## Smart Retail



- Smart Counters
- Unmanned Stores

All modules validated on NVIDIA Jetson platform, ideal for AI edge deployment



## Industrial and Manufacturing

Robot Arm

- ✓ CAN Bus
- ✓ LAN



## Healthcare and Life Science

Medical Image Analysis

- ✓ LAN



## Smart cities

Traffic Signal

- ✓ CAN Bus
- ✓ Serial



## AgriTech

AI Sprayer

- ✓ CAN Bus



## Transportation and Logistics

AGV&AMR

- ✓ CAN Bus
- ✓ Serial



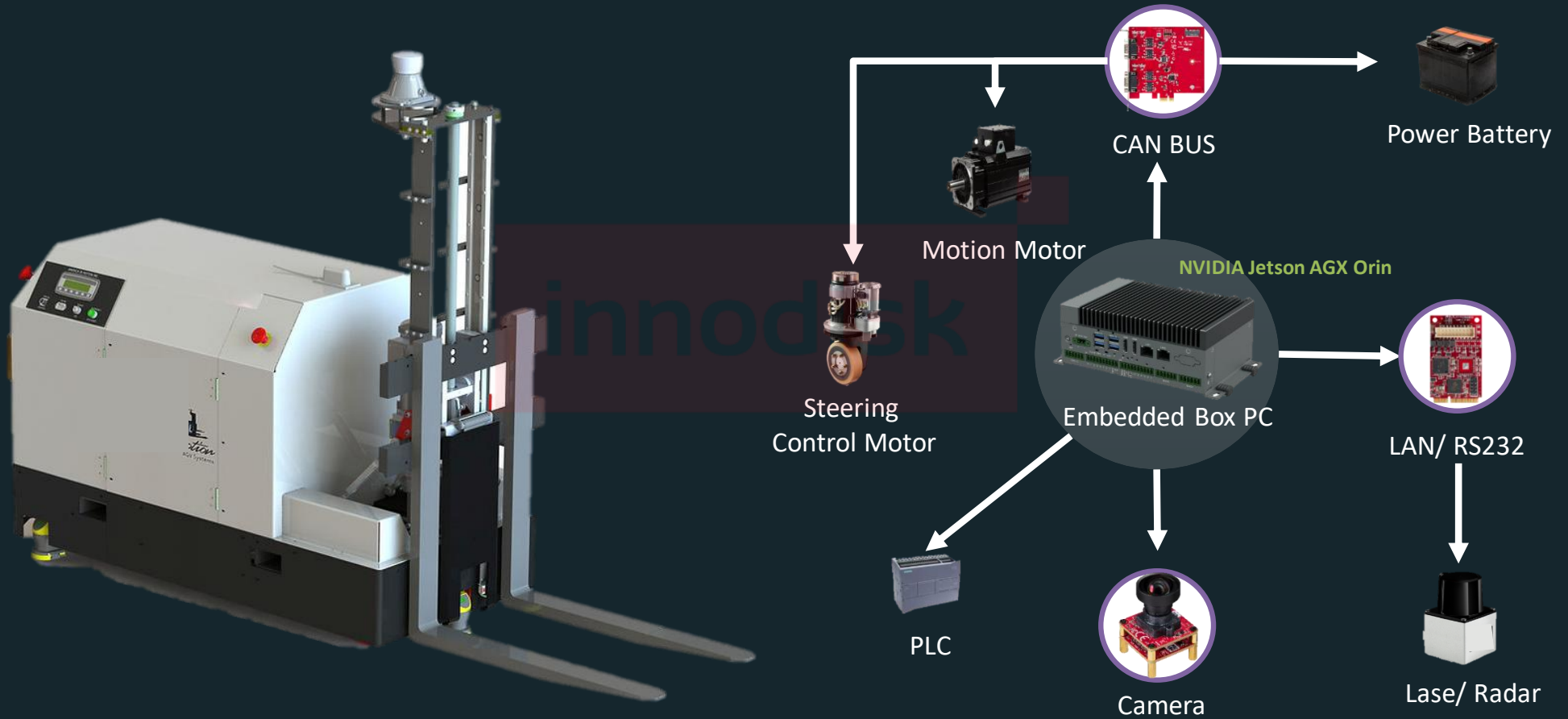
## Smart Retail

Automated Checkout

- ✓ Serial
- ✓ LAN



# Hardware System Architecture



# Robotics Exploded View

NVIDIA Jetson AGX Orin  
AI Platform

Executes Decision-making And Perception Algorithms Based On Sensory Input.

## Camera Sensors

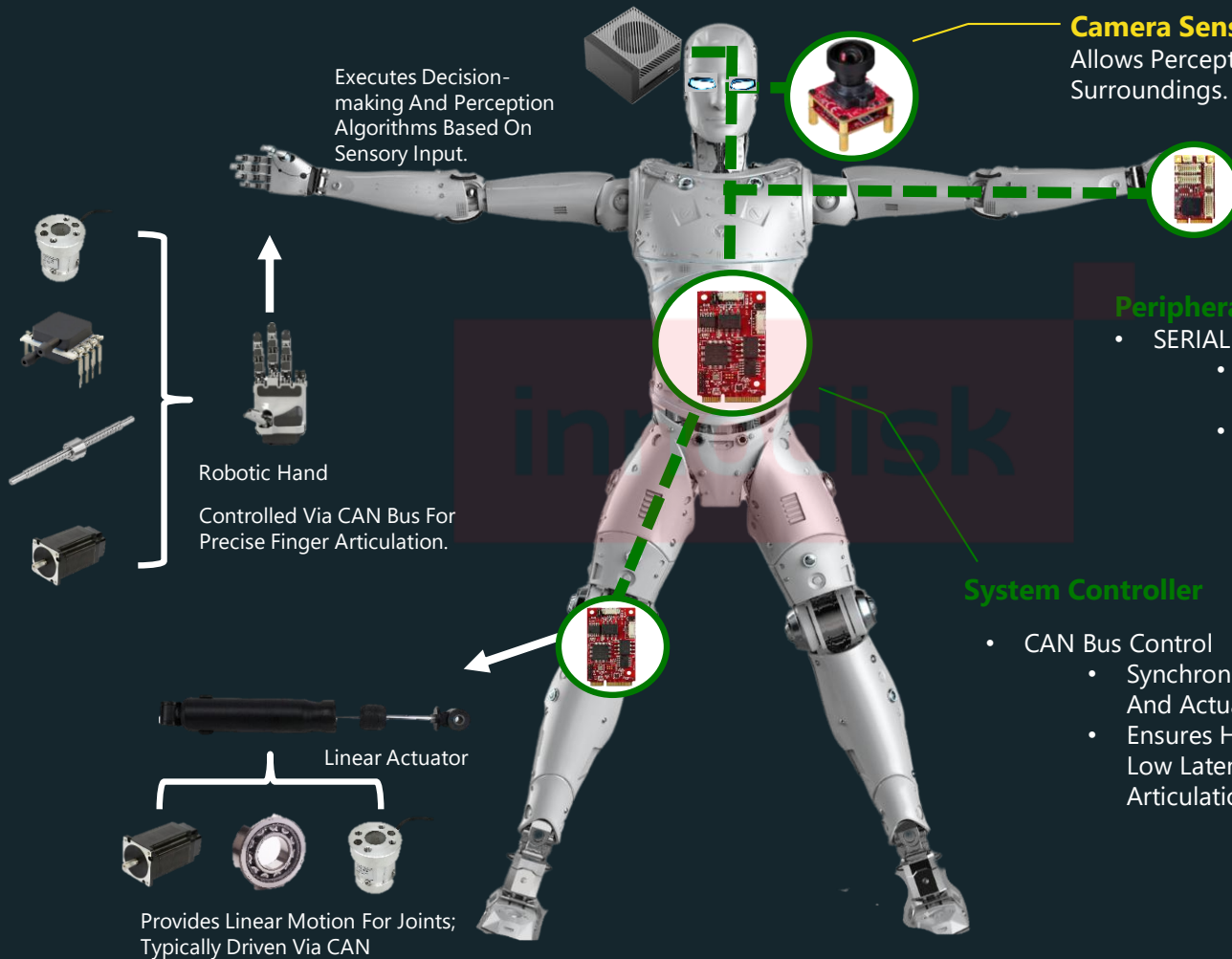
Allows Perception And Engagement With Surroundings.

## Peripheral Communication

- SERIAL Communication (RS485)
  - Transfers Fine Joint Position Data
  - Used For Micro-movement Sensors In Fingers And Joints

## System Controller

- CAN Bus Control
  - Synchronizes Multiple Joints And Actuators
  - Ensures High Reliability And Low Latency For Precise Articulation



Robotic Hand

Controlled Via CAN Bus For Precise Finger Articulation.

Linear Actuator

Provides Linear Motion For Joints; Typically Driven Via CAN

- **One-Stop Solution from Hardware to Software**

Tailor-made services from hardware to application help accelerate deployment, enhance stability, and unlock full system performance on NVIDIA and x86 platforms.

- **Versatile Form Factor Support for Diverse Systems**

Rich form factor options fit edge, embedded, and server systems helping you integrate faster and design with flexibility.

- **Industrial-Grade Protection for Extreme Environments**

Built with industrial-grade protection, supporting wide, anti-vibration, and anti-sulfur design. Tested for harsh environments. Built for multiple industries

## Innodisk I/O Solutions for NVIDIA NV Platforms

Item	Series	Form Factor	Model Name	NV Support	Isolation	D. board	W.Temp	Sample ready
1	LAN	M.2 2242	EGPL-G105/G205	✓	✓	✓	✓	✓
2	LAN	M.2 2242	EGPL-G102/G202	✓	✓	✓	✓	✓
3	CAN Bus	M.2 2242	EGUC-F1S3	✓	✓		✓	✓
4	CAN Bus	M.2 2280	EGUC-F2S3	✓	✓		✓	✓
5	Serial	M.2 2280	EGP2-X4S1	✓	✓		✓	✓
6	Serial	M.2 2242	EGP2-X401	✓	✓		✓	✓

\* We offer more products that support the NVIDIA platform. Please contact us for more information.



**Project :** Railway



**Product :** NVIDIA : NVIDIA Jetson AGX Orin 64G  
Innodisk : EGUC-F2S3

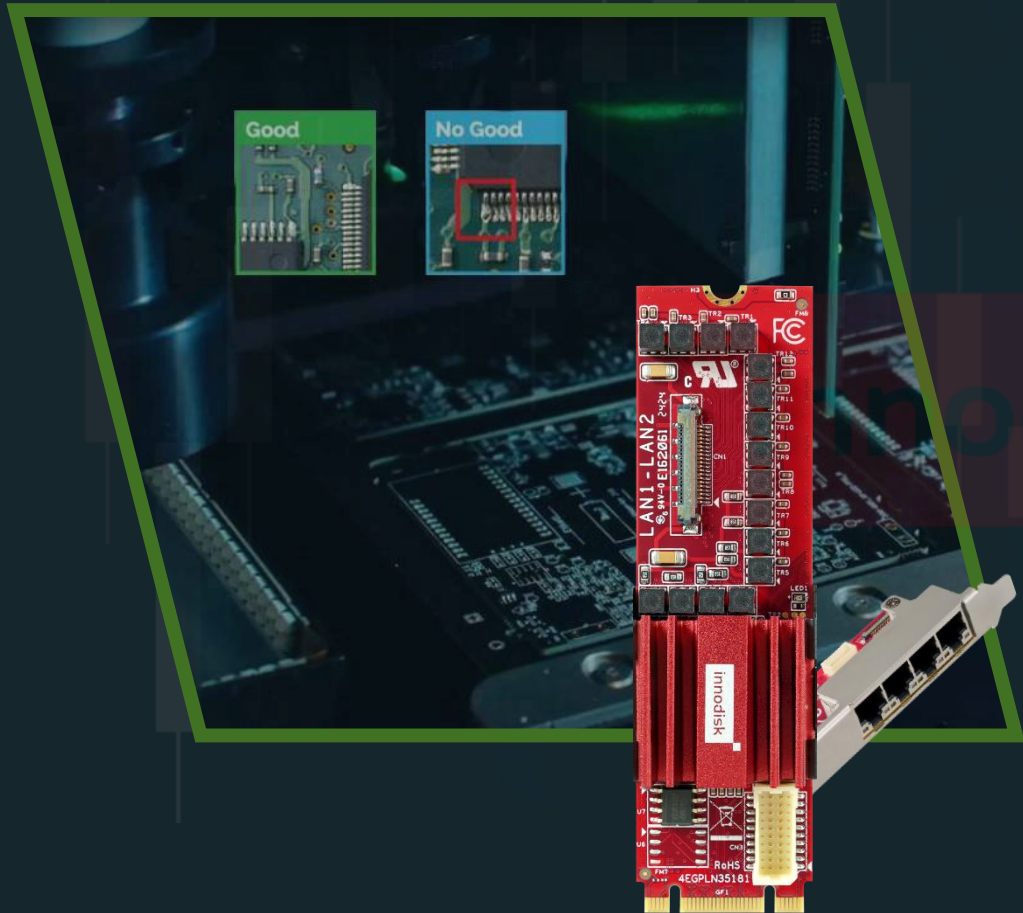


**Highlight :**

- AI-based Door & Speed Monitoring
- Real-time Brake Prediction via CAN Bus

This robust AI solution combines the power of **Jetson AGX Orin** with **Innodisk CAN Bus**, enabling real-time sensor data collection for mission-critical rail applications.

Key AI tasks include **door status monitoring**, **speed tracking**, and **brake system prediction**, supporting timely, accurate decision-making.



**Project :** Defect Detection In Manufacturing



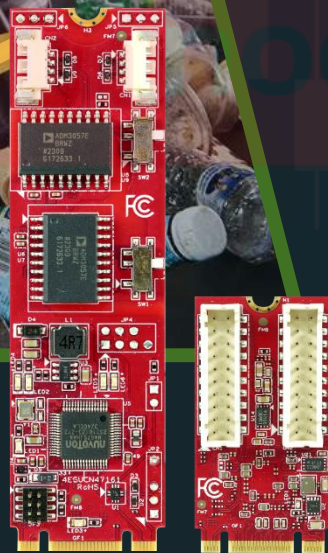
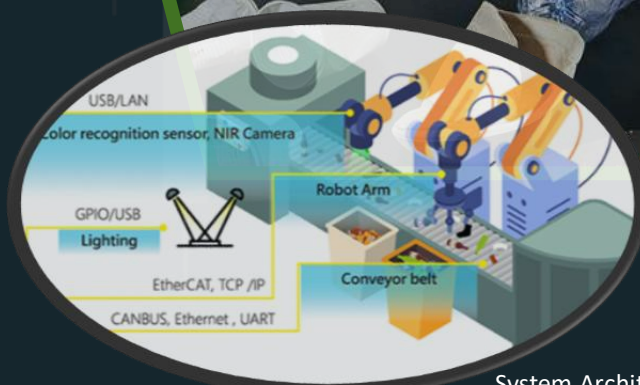
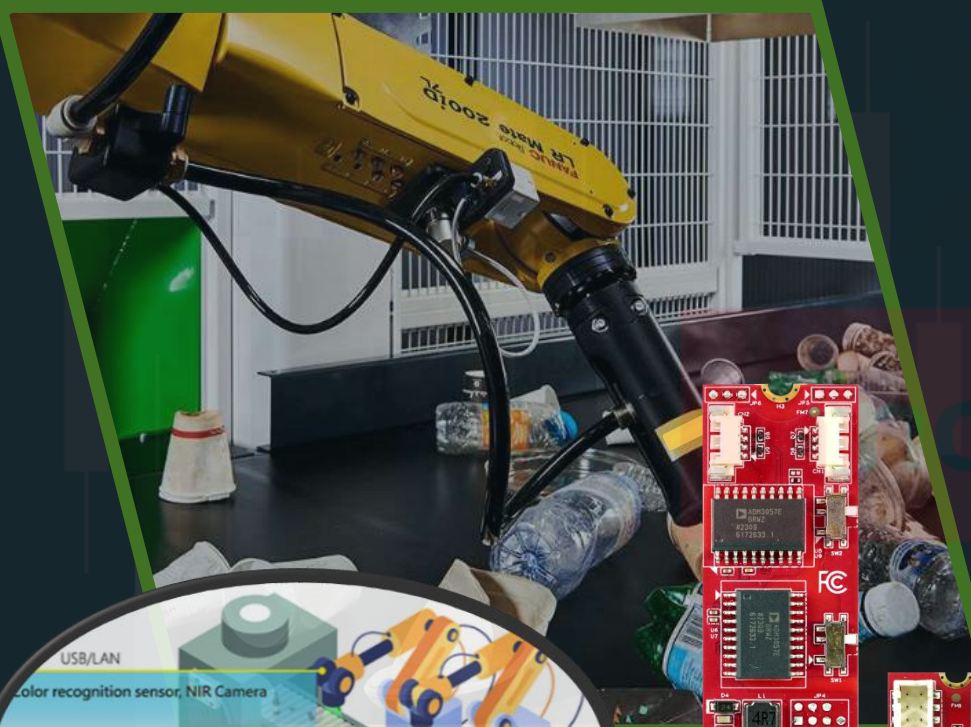
**Product :** NVIDIA : NVIDIA Jetson AGX Orin 64G  
Innodisk : EGPL-G401



**Highlight :** • AI-Powered Real-Time Wafer Defect Detection

This powerful AI system integrates **Jetson AGX Orin** with Innodisk's **EGPL-G401 LAN module** to enable fast and accurate visual inspection on semiconductor lines.

High-speed cameras work with AI models to detect cracks and pattern defects. Through LAN connectivity, results are instantly shared with **MES/SCADA** systems



**Customers :** Smart Recycling



**Product :** NVIDIA : Jetson Nano  
Innodisk : EGUC-F2S3 & EGPL-G202



**Highlight :**

- AI-powered Material Recognition
- Real-time Sorting with CAN Bus Control

In this smart recycling solution, Jetson Nano works with Innodisk CAN Bus and LAN to automate real-time object sorting.

NIR and color sensors detect material types, while CAN Bus controls robotic arms to sort paper, plastics, and textiles with precision.

The system supports 24/7 unmanned operation and boosts efficiency through real-time image analysis over LAN.



**Customers :** Smart Agriculture Automated Fruit Picking

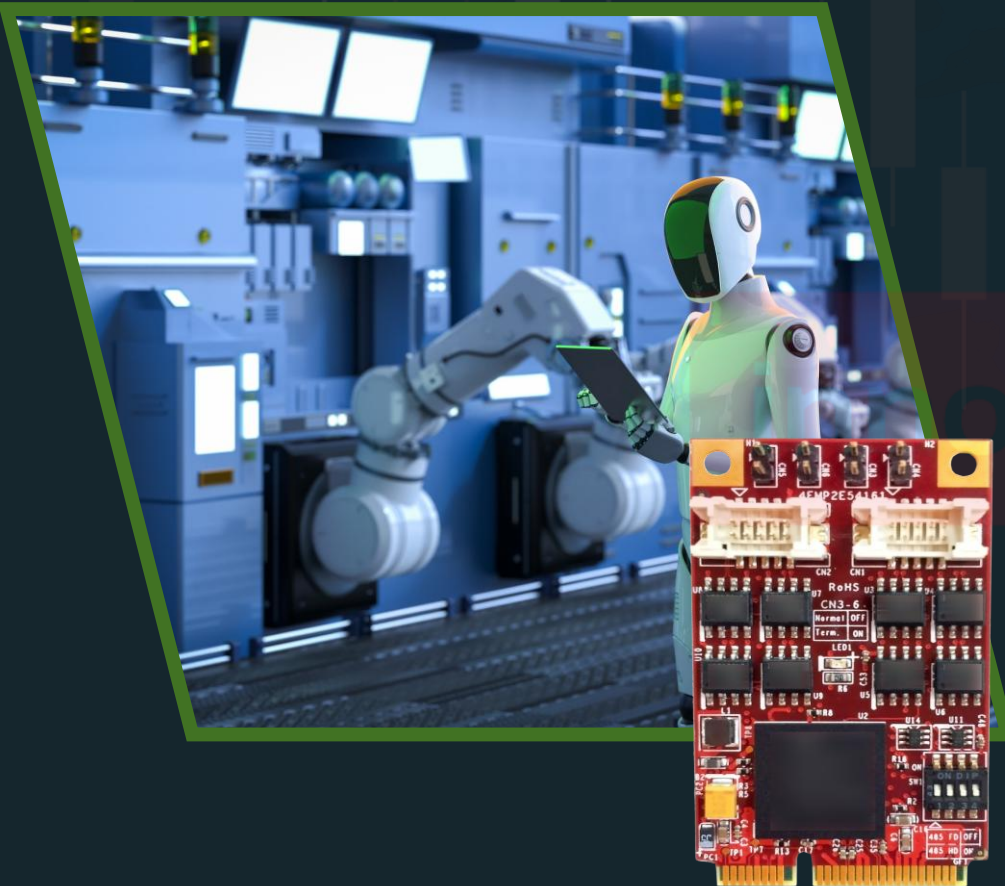


**Product :** NVIDIA : NVIDIA® Jetson Xavier™ NX  
Innodisk : EGUC-F1S3



**Highlight :** Real-time Control of Robotic Arms & Sensors

This smart agriculture solution integrates Jetson Xavier™ NX with Innodisk's CAN Bus module for seamless hardware-software integration in automated fruit-picking systems. CAN Bus enables stable, real-time communication between depth cameras, 3D sensors, and robotic arms, ensuring precise AI-driven harvesting. With remote monitoring and diagnostics, the system supports 24/7 unmanned operation, boosting productivity and reliability in modern farming.



**Project:** Humanoid Robot in Automobile assembly line



**Product:** NVIDIA : NVIDIA Jetson Thor  
Innodisk : EMP2-X402



**Highlight:**

- Multi-module Coordination
- Data Synchronization & Optimization

Faced with tight-space and unstable multi-interface control, the customer used Innodisk modules to achieve stable Serial RS-422/485 integration without redesign.

Technical Support



No MOQ

Flexible OEM/ODM Service



3 Years Warranty



**WORKING WITH IPA**

Absolute Service™

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# ARCHITECT INTELLIGENCE