



Connect Tech
A **HEICO** COMPANY

Corporate Overview

Our Mission and Capabilities

Patrick Dietrich, P.Eng. | President





Connect Tech

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Our Place on the Edge

Dependable Platforms for Real-World Robotics

As robotics moves from the lab into real-world deployment, reliability at the Edge becomes critical. Connect Tech engineers and delivers platforms for robotics and Physical AI that operate reliably in real environments, simplifying Edge deployment and enabling production-ready systems.

“Everything that moves will be robotic someday, and it will be soon.”
— Jensen Huang, CEO, NVIDIA

Who We Are

Founded in 1985 and headquartered in Guelph, Canada, Connect Tech Inc. (CTI) is a global leader in rugged Edge AI and embedded computing platforms for robotics, autonomous systems, and mission-critical applications.

With over 40 years of in-house design and manufacturing experience, CTI delivers integrated Edge AI architectures that unify compute, vision, networking, and thermal technologies to accelerate deployment in demanding real-world environments. Through CTai LABS, CTI extends this foundation into production-ready Physical AI solutions at scale.

Acquired by HEICO Corporation in 2020, CTI operates within a global aerospace, industrial, defense, and electronics technology portfolio.



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Connect Tech Enables AI at the Edge

The Three-Computer Solution of Physical AI



Connect Tech

Training

Model Development and Optimization

- Model Training
- Foundation Models
- Scaled Compute



Simulation

Digital Twins and Validation

- Digital Twins
- Validation and Testing
- Performance Analytics

Inference

Edge AI Deployment

- Robots and Devices
- Sensors and Actuation
- Human Interaction



Where We've Come From

40+ Years and Counting...

1985



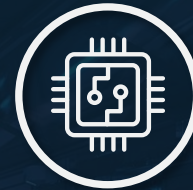
1985: CTI is founded
1986: First ISA based product



1994: First PCI based product
1995: First PC/104 product
1998: First USB based product



2003: First Ethernet Processor Product
Moved to 42 Arrow Road (larger facility)
2005: First PCI Express Product
2006: First FPGA Product



2014: First Rugged System Product
2015: CTI *the first* NVIDIA Jetson deployable product
2017: 50+ NVIDIA Jetson Designs



2020: HEICO Acquires CTI
2021: Moved to current HQ / MFG expansion
2022: Nvidia Elite Partnership
2025: CTI Launches CTai LABS

2026



Our Focus Industries and Applications



Connect Tech



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Robotics and Logistics



**Construction,
Agriculture and Mining**



Aerospace and Defense



Industrial Automation



**Smart Cities
and Retail**



Healthcare



Customers & Applications

Aerospace and Defense



Robotics and Logistics



Agriculture, Construction, and Mining



Industrial Automation



NVIDIA Elite Partner

- 15 years of innovative partnership with the NVIDIA® Jetson™ Platform
- Expert Jetson infrastructure, hardware, BSP, sensor integration, and AI
- Customers benefit from accelerated time-to-market and direct collaboration



Defining Physical AI at the Edge

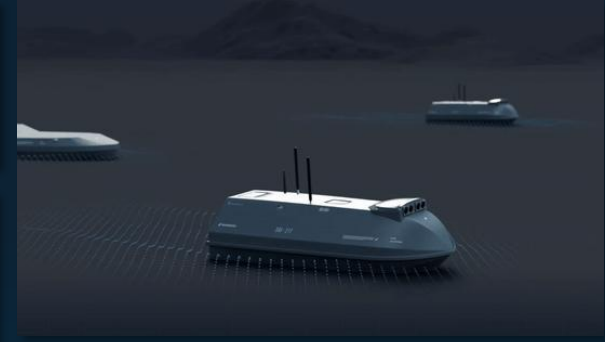
Where is the Edge? Physical AI?

Physical AI

Combines sensing, computation, and control to enable machines to autonomously interact with the physical world.

Edge

Compute at the device, not the cloud.



Real-Time AI Under Real-World Constraints

What Makes this Uniquely Difficult?

Enabling physical systems to:

Sense Their Environment

Make Autonomous Decisions

**Real-Time Processing,
On-Prem, No Cloud**

Latency & Determinism

Decisions in
milliseconds. Cloud
latency is often
unacceptable

Resource Constraints

Limited power, thermal
headroom, compute,
and memory

System Integration Complexity

AI must integrate with
sensors, networking,
and control systems

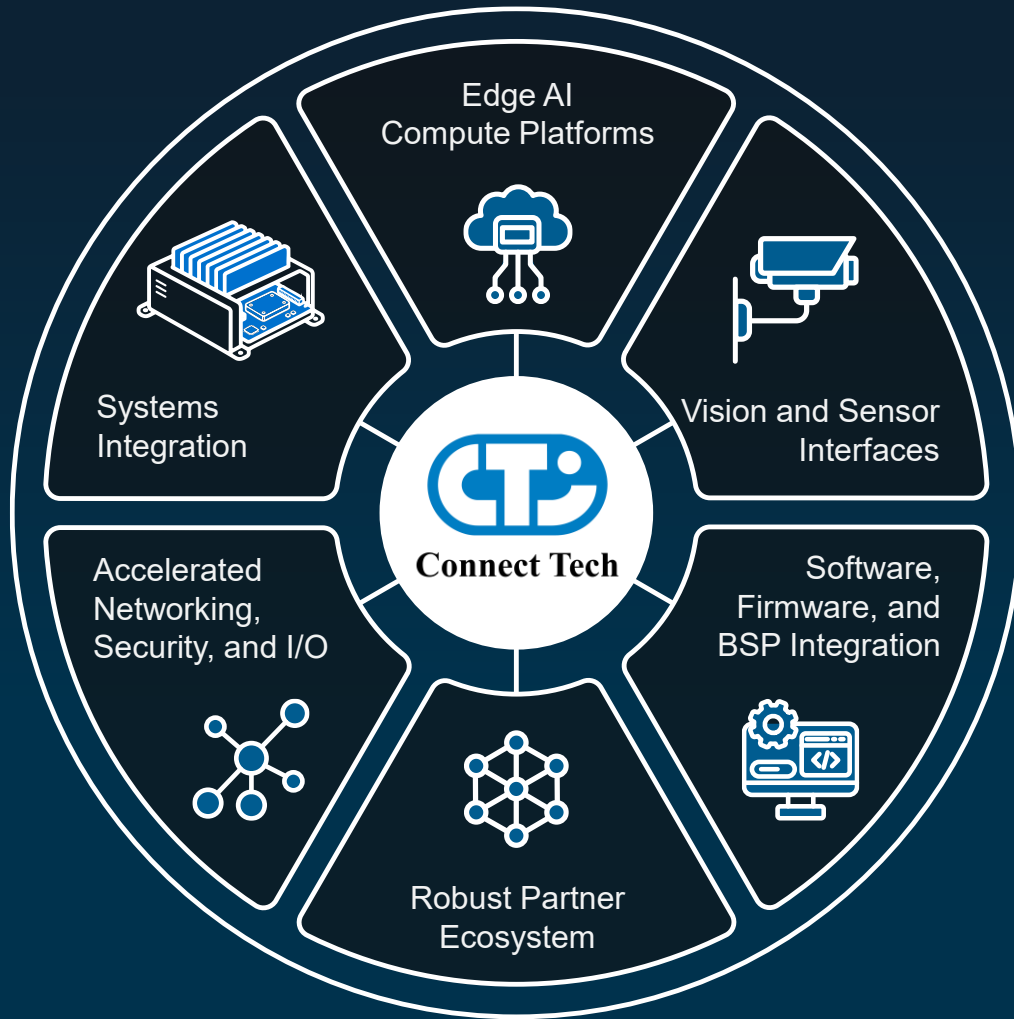
Reliability and Uptime

Continuous operation in
harsh environments

Deployment at Scale

From prototype to
production and
long-term support





We Help You Build Robots, Faster

A Complete Portfolio to Deliver From Concept Through Production, That Scales

Edge AI Compute Platforms

Edge AI compute performance spanning 1–10 TOPS to 100–300 TOPS to 2000+ TOPS, with power profiles from 5W to 130W+

End-to-End Deployable Solutions

Edge AI solutions adaptable for systems in any environment and applications that require real-time reliable processing

Production Scale Integrated Solutions

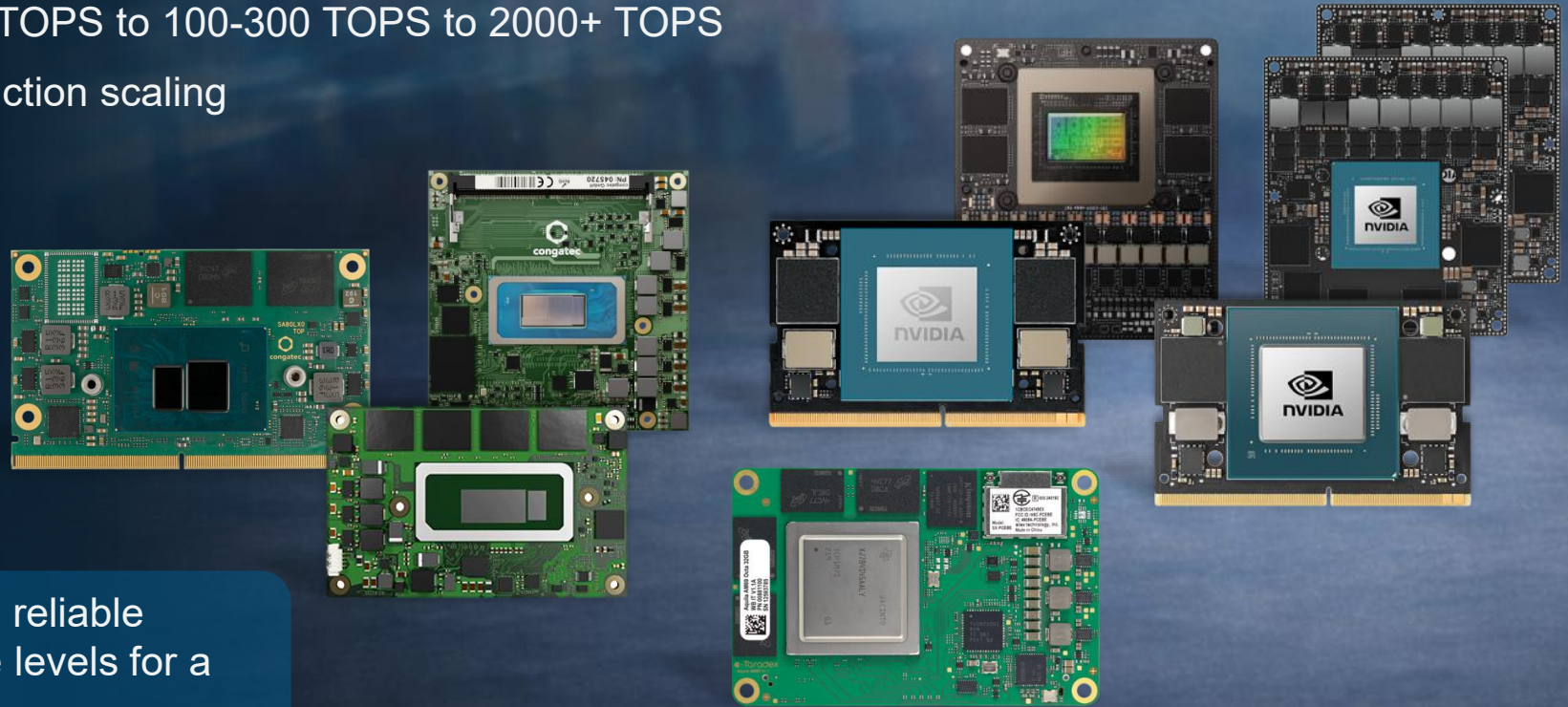
From PoC to full scale production CTI solutions are customizable or off-the-shelf ready for scale



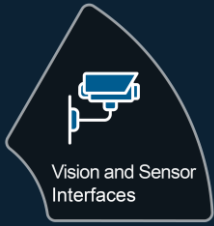
Compute Platforms

Rugged and Validated Compute Platforms

- Computer-on-Modules (COM) / System-on-Modules as a building block for all solutions
- Processing platforms include NVIDIA®, Intel®, AMD, TI, NXP, Qualcomm®
- Compute power ranging from 1-10 TOPS to 100-300 TOPS to 2000+ TOPS
- Long lifecycle availability and production scaling



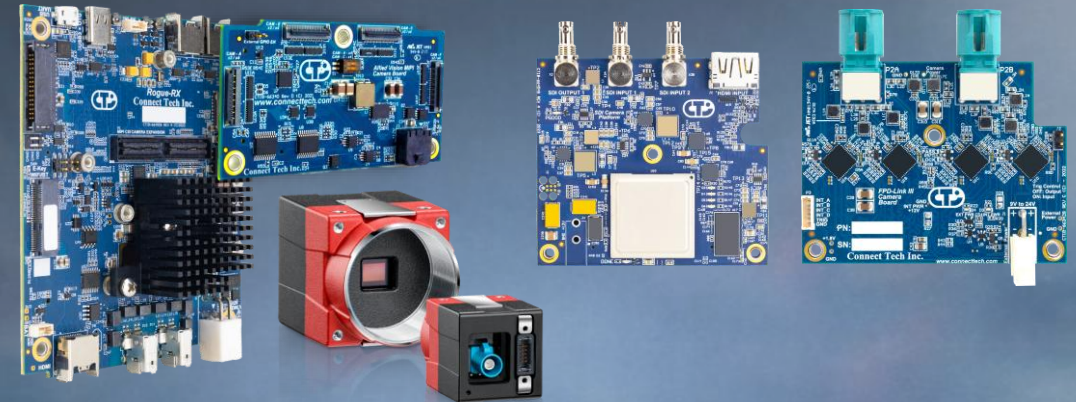
Customer value: Immediate access to reliable Edge compute at different performance levels for a variety of rugged applications



Vision and Sensor Systems Off-the-Shelf Integrations

- Close collaborations with NVIDIA Vision industry leaders
- Full vision integration at the Edge
 - Leading Edge Perception: RGB/CMOS
 - Situational awareness and mapping: Stereo/ToF Sensors
 - Data in the lowest light conditions: LWIR, SWIR, Thermal Cameras
 - Specialized scenarios: Event-based sensing, Multispectral Imaging
- Rugged Interconnect and Technology:
 - MIPI CSI / GMSL 2/3 / SDI/HD-SDI / FPD-Link III / USB / 10G/1G Ethernet
 - Global/Rolling Shutter, Wide range of FOV/Resolutions
- Multi-sensor real-time processing and synchronization
 - Multi-Camera Sync, INT/EXT Triggering and Capture

Customer value: Full front line vision support, faster sensor bring-up, and fewer field failures



 Allied Vision

Alvium FP3,
GM2



D3 Embedded

IMX390 (GMSL),
AR0234 (GMSL)



FSM:GO IMX900
FSM:GO IMX678



StereoLabs*

ZED X (GMSL),
ZED X Mini (GMSL)



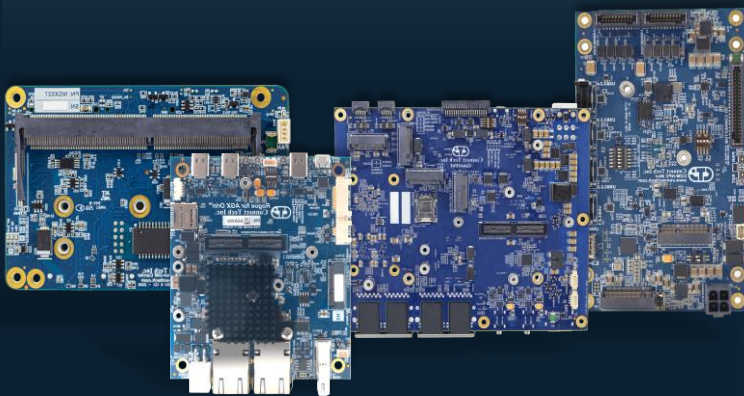


Carrier Board, Cooling, and Systems

From Board-Level to Ruggedized Systems

Board-Level

- Carrier Boards
- Vision Connectivity and Processing
- Rugged Interface Platforms



Integrated Stack

- Fully Integrated Compute Platforms
- Integrated Vision Inputs and Software
- Optimize with ThermiQ™ Cooling Solutions



Full System

- Commercial (IP5X)
- Industrial Rugged (IP65)
- MIL-SPEC Rugged (IP67+, MIL STD)



Customer value: Predictable performance from prototype through production

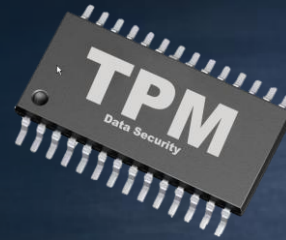
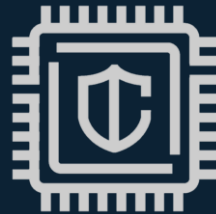
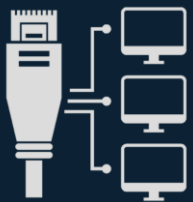




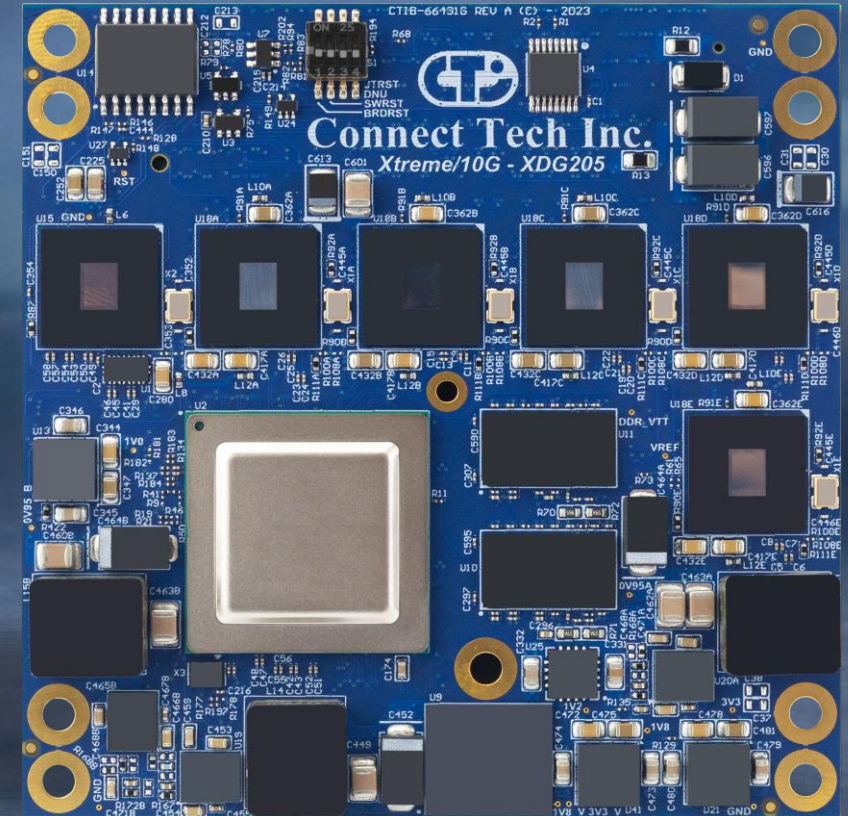
Accelerated Networking, Security, and I/O

Connecting Edge AI systems to the real world, securely and reliably

- Unique ruggedized ultra-small form factor embedded Ethernet switches
- High bandwidth TSN / PTP / IEEE 1588 Ethernet: 25G/10G/1G copper/fiber
- Robust I/O: CAN, Serial, USB, GPIO, MIL-STD-1553, ARINC-429
- Security: TPM, Secure Boot, Secure Drivers, and Encryption
- Modular Design: Flexible M.2 and Mini-PCIe Expansion



Customer value: Faster system integration and fewer downstream customizations





Software, Firmware, and BSP Integration

Bridging Hardware, Sensors, and OS for Deployed AI Applications

- Best-in-class NVIDIA Jetson support, BSP development, and deep software expertise from true NVIDIA experts
- Alignment with NVIDIA® software frameworks and toolchains
- CTI reduces the friction between hardware and software stacks
- Linux BSPs, drivers, and firmware integration
- Reduced bring-up time and lower engineering overhead
- Plug-and-play camera compatibility across CTI Vision Partner Solutions, enabling GMSL, FPD-Link III, MIPI, and more

Customer value: Engineers focus on applications, not low-level enablement





Robust Partner Ecosystem

A Multiplier for Customer Success

- Expands COTS solutions through vertical integration
- Integrates with AI, sensor, and software partner ecosystems
- Validated interoperability across the stack
- Reduces vendor fragmentation and integration risk

Technology



Vision



Software



Channel

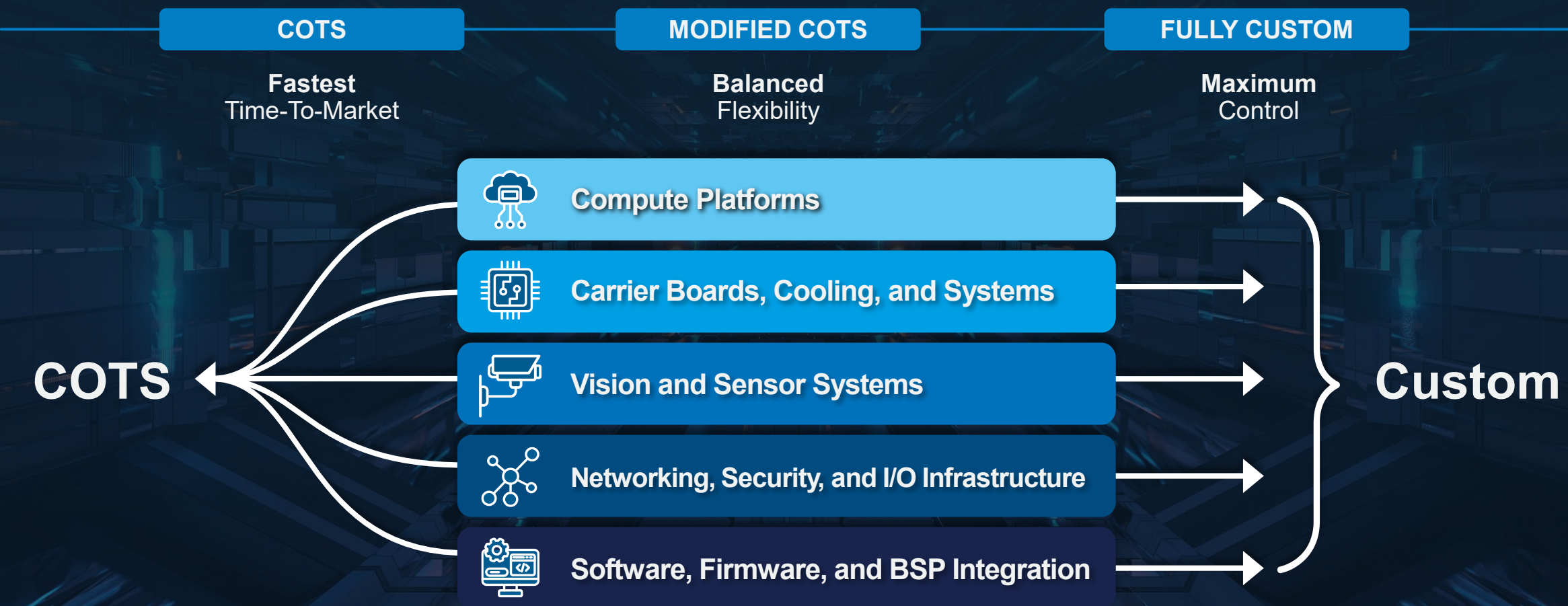


Customer value: Faster solution assembly with trusted, compatible components

CTI Custom Solution Benefits

We Can Customize Our EdgeAI Stack

CTI EdgeAI Stack Can Be Customized to Provide Optimized Flexibility for Time to Market Solutions



World Class In-House Production that Scales

Custom Manufacturing for the EdgeAI Stack

PCBA Assembly ↔ System Level Assembly

CTI maintains scalable manufacturing capacity supporting both low-volume prototypes and high-volume production

- Best in class EMS Facility, with advanced build and inspection capabilities
- Complete Box Build Assembly Services In House
- 40 years of EMS experience and passion

Surface Mount Assembly Capabilities Summary



Automated Stencil Printer



3D SPI



Automated Placement Machine



Tray Exchanger

In-House Production that Scales

Surface Mount Assembly Capabilities Summary



Reflow Ovens



Selective Soldering



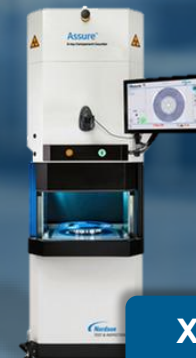
PCBA De-fluxing



3D AOI



X-Rays



X-Ray Counting



Digital Microscopy



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Your Physical ai
Integration Partner

A Department of Connect Tech Inc.



From Platform Enablement to Production-Ready Physical AI

CTai LABS Accelerates Connect Tech



Connect Tech

We Help You Build
Robots, Faster



Your Physical ai
Integration Partner

Accelerating AI robotics deployment with
CTI's EdgeAI Portfolio and modular
ecosystem integration capabilities

CTai LABS Simplifies Physical ai
So You Can Build Smarter, Faster

CTai LABS

Your Physical ai Integration Partner

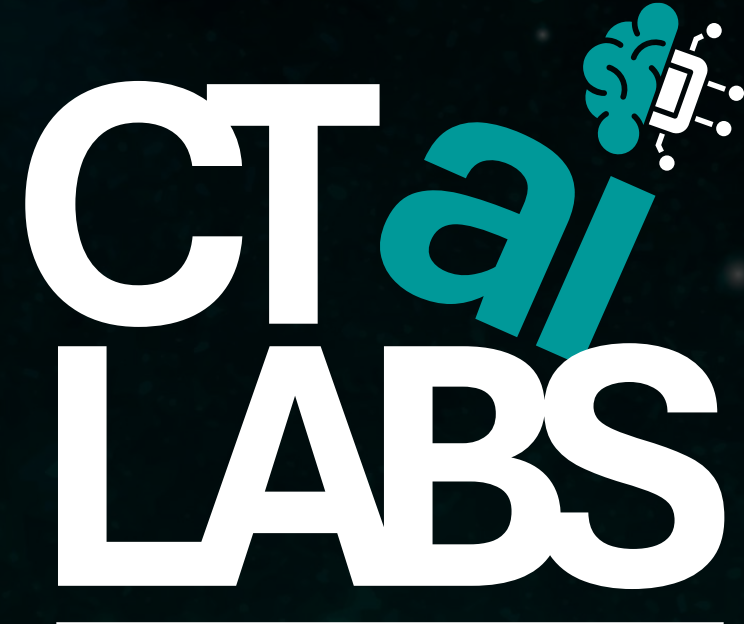
Mission

Simplify Physical ai deployment so customers can build smarter, faster

What We Do

- Full-stack ai engineering for Edge platforms
- System and sensor integration
- Software bring-up and optimization
- Accelerate time-to-market for robotics and vision ai applications

Customer Benefit: Focus on building your product, not integration issues



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Our Focus Industries and Applications



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Robotics and Logistics



**Construction,
Agriculture and Mining**



Aerospace and Defense



Industrial Automation



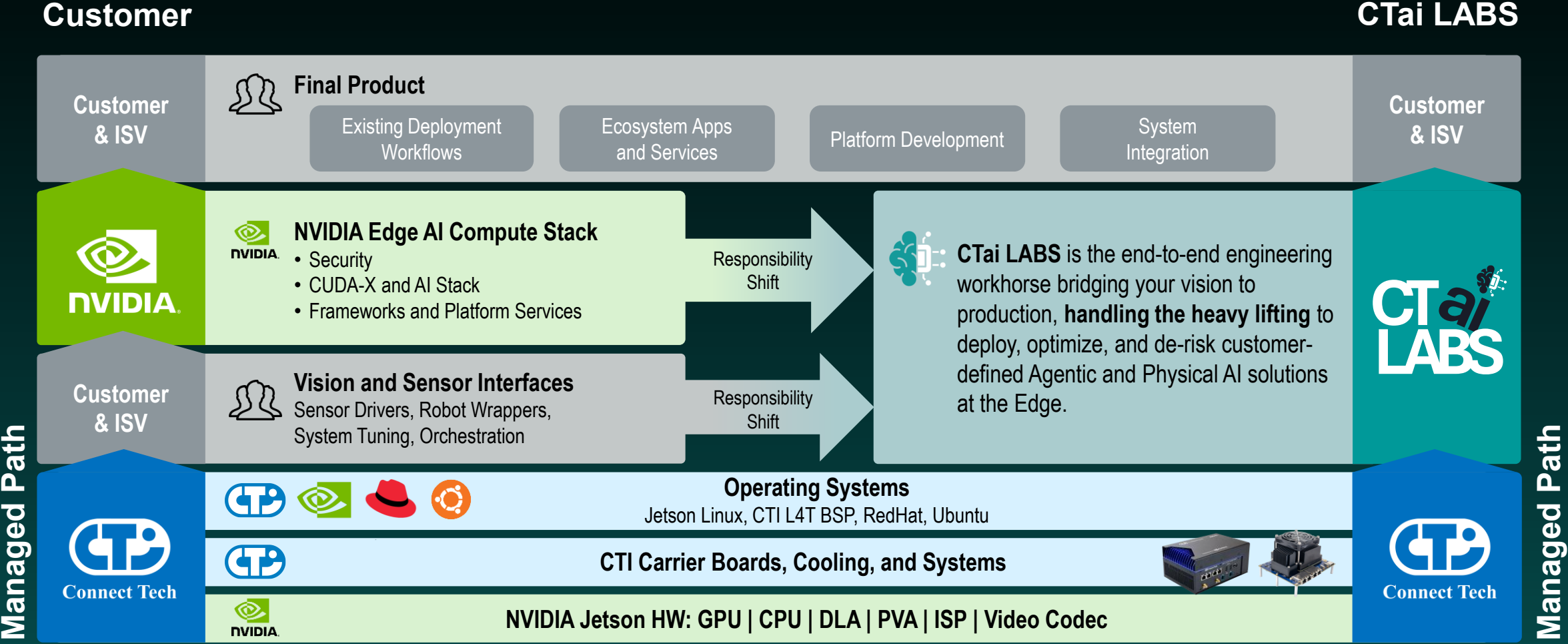
**Smart Cities
and Retail**



Healthcare



CTai LABS Solution Stack



CTai LABS Simplifies Physical ai



Benefits for Target Markets:



AI PRODUCT BUILDERS

- Robotics and Vision AI ISVs
- Scaling Physical AI products
- Building rugged / regulated platforms



EDGE DEPLOYMENT TEAMS

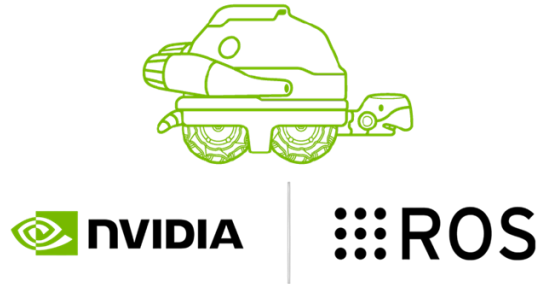
- Fleet provisioning and AI deployment
- Migration from x86 to Jetson (ARM)
- Orchestration teams deploying at scale



PLATFORM DECISION MAKERS

- Under time or budget pressure
- Make vs. buy

CTai LABS Key Capabilities



NVIDIA Robotics Stack

- Isaac ROS, Isaac Sim, Isaac Perceptor, Isaac Manipulator
- ROS-Ready Launchpad (simplified ROS2 deployment)
- Long-Term Memory and Reasoning for Robots (Agentic AI)
- NVIDIA Cosmos World Foundation Models (Physical AI)



NVIDIA Metropolis Stack

- Low latency vision analytics for smart spaces
- Scene Analyzer Agent (video search and summarization)
- Real-time alerts with Generative AI



NVIDIA Omniverse Integration

- Synthetic data generation
- Simulation-first Physical AI development and deployment
- Software-in-the-Loop and Hardware-in-the-Loop (SIL/HIL)
- Digital Twin development

Key Differentiators

Why CTai LABS?

End-to-End Solutions

- SOTA AI and Robotics solutions, based on reference blueprints
- Full CUDA-X stack acceleration

Fast Adoption

- Latest NVIDIA ecosystem rigorously tested
- Accelerate time-to-market
- Integration with existing solutions

Expertise & Support

- Combined design and software expertise
- Production-ready deployments with professional support

Integration as a Service

- We handle the complexity: system integration, sensor set-up, software bring-up
- You focus on your core product innovation



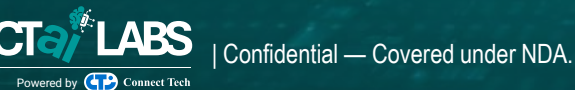
CTai LABS Solution Portfolio

Robotics

Advanced Spatial Understanding with 3D-LLM



Long-Term Memory & Reasoning for Robots (Agentic AI)



CTai LABS Solution Portfolio

Metropolis

Scene Analyzer Agent (Agentic AI for Vision Analytics)

The screenshot displays the 'Scene Analyzer Agent' dashboard. At the top, there's a navigation bar with the CTai logo, 'Scene Analyzer Agent' title, and links for 'Dashboard' and 'Summaries'. A 'Stream 1' button with a plus icon is also present. The main interface is divided into several panels:

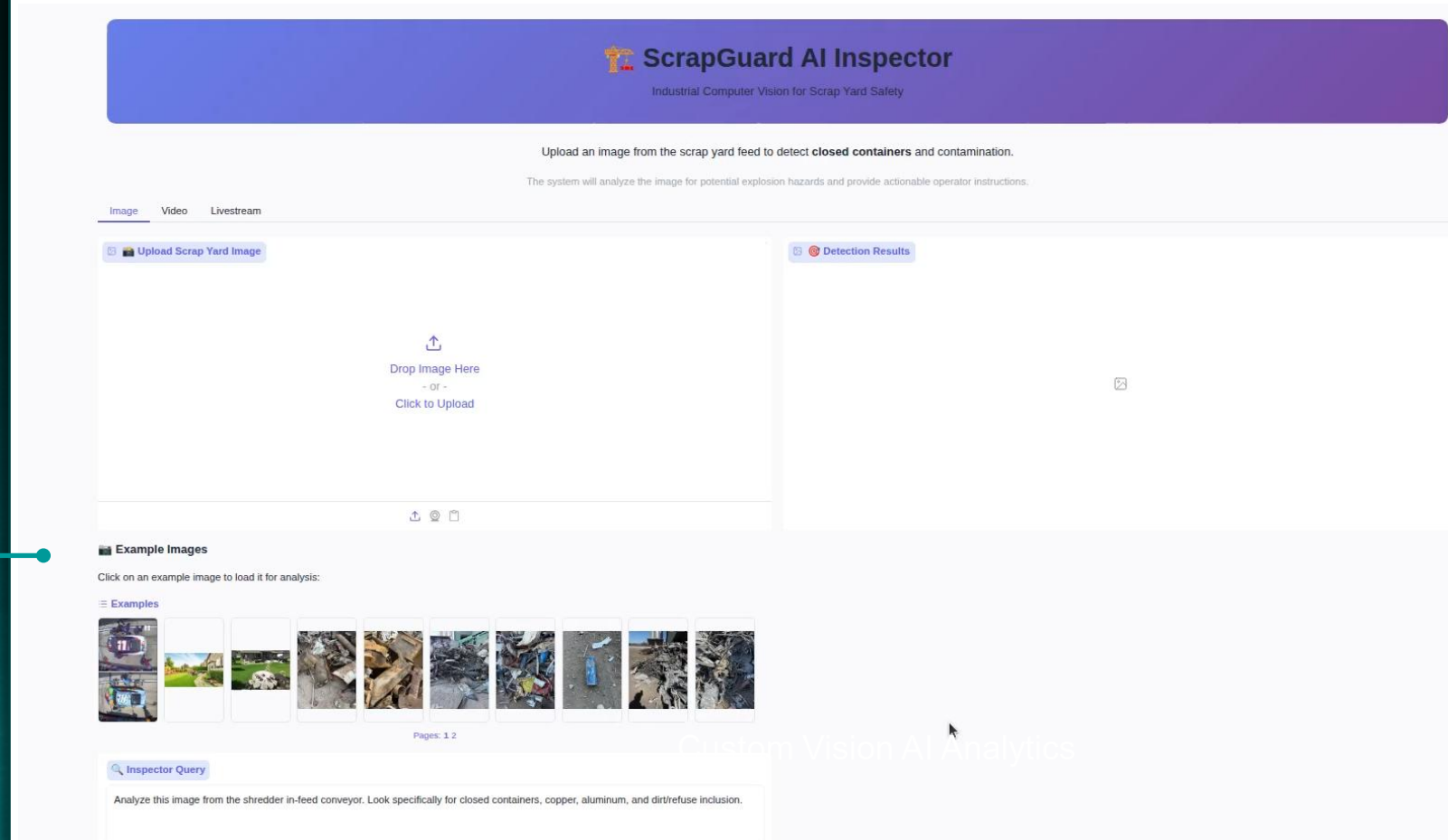
- Live Stream:** Features a video feed of an airport tarmac with an 'Active' status indicator.
- Event Summaries:** Shows a 'Live' status and a placeholder for summaries, with the text 'Awaiting first summary...' and 'Summaries will appear here as they're generated'.
- Stream Controls:** Includes a 'Streaming from RTSP' status, 'CAMERA SOURCE' selection (USB Camera or RTSP Stream), an 'RTSP URL' field with the value 'rtsp://192.168.1.230:31556/nvstream/opt/store/nvstrea', 'CHUNK SIZE' (3s, 5s, 10s, 15s, 30s), 'SUMMARY DURATION' (1m, 5m, 10m, 15m, 30m), 'FRAME INTERVAL' (3, 5, 10, 15, 30, 10 ≈3.0 FPS), and 'Start/Stop' buttons.
- Prompt Configuration:** Has an 'Update' button, an 'Analysis Prompt' field with the text 'What is happening in this video segment?', a character count '40/1000', and a description 'Describe what the AI should look for in the video stream'.
- Important Moments:** Shows '0 clips' and a message 'No clips yet' with the text 'Important moments will appear here'.
- Search your streams:** Includes a 'GraphRAG' dropdown, a search input field with the placeholder 'Ask about your video streams...', an 'Ask' button, and three example prompts: 'What vehicles arrived at the dock?', 'What people appeared in the last hour?', and 'What happened at the loading dock?'.
- Alert Patterns:** Features an 'Add' button.

At the bottom right, there's a section for 'Search across all summaries & clips' with a magnifying glass icon.

CTai LABS Solution Portfolio

Metropolis

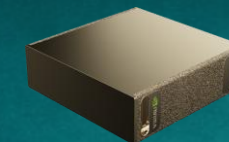
Scene Analyzer Agent (Agentic AI for Vision Analytics)



Physical AI Evaluation Kit



Connect Tech
Anvil



NVIDIA
DGX Spark

An End-to-End Simulation-First Robotics and Vision Analytics Approach Interacting With Digital Twins

NVIDIA ViT-Based Detection
NVIDIA BodyPose3DNet



Real-time pose estimation and tracking data from the real-world camera stream.

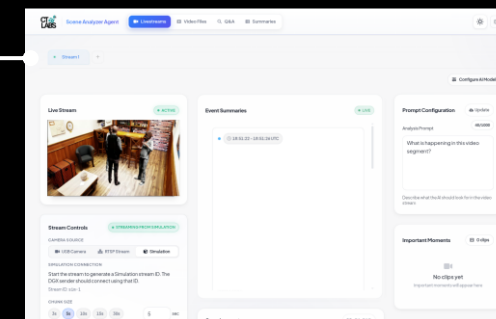
Real-Time Location System (RTLS)



Live object localization and positioning with inch-level accuracy.

Scene Understanding (NVIDIA Cosmos-Reason2)

Agentic AI understands and flags important events happening in the scene.



Digital Twins Synced with the Physical-World

Simulation-First Approach

Gaussian Splat & Marble integration
Live Simulation for Robotics & Vision AI

Real-world AI data is projected into a live digital twin in real time.

Key Savings – Robotics Case Study

Long-Term Memory and Context Reasoning for Robots



Key Savings – Case Study

Long-Term Memory and Context Reasoning for Robots

Resource/Domain	Description	In-House Development ("Make")	CTai LABS ("Buy")	Net Financial Advantage
Specialized Talent	Recruiting and retaining a cross-disciplinary team (Sr. AI, Robotics SW, Embedded Firmware).	>\$600,000 (Salaries + Recruiting + Overhead)	Included (Immediate access to domain experts)	~\$600,000 Saved
Hardware NRE	Custom carrier board design, thermal R&D, and driver development (Non-Recurring Engineering).	~\$200,000 (PCB Fab, Iterations, Testing)	<\$20,000 (Proven COTS + BSP Integration)	~\$180,000 Saved
Dev Tools and Sim	Establishing NVIDIA Isaac Sim/Omniverse environments and SIL/HIL testing rigs.	>\$50,000 (Asset Creation & infrastructure)	Included (Validated environment ready Day 1)	~\$50,000 Saved
Time-to-Market	Duration from kick-off to functional Physical AI prototype deployment.	12–18 Months (High risk of integration delays)	3–4 Months (Focus purely on application logic)	12+ Months Gained (Revenue acceleration)
Technical Debt	Ongoing costs to update GenAI models (LLM/VLM) and maintain ROS2 compatibility.	High (Continuous engineering drain)	Zero (Platform evolves with industry)	Future-Proofed (Avoids costly refactoring)
TOTAL YEAR 1	Combined Capital & Operational Expenditure	>\$850,000	<\$150,000	~\$700,000 Net Savings

Key Savings – Robotics Case Study

Scene Analyzer Agent

Problem

Advanced video analytics requires transforming raw video streams into searchable intelligence.

- Real-time detection, description, and indexing of video events
- Complex video pipeline and data infrastructure required
- Maintaining Agentic AI analytics systems at the Edge is difficult

Build In-House

\$750,000+

12-18 Months

Vision Analytics & Edge AI
Expertise Required
Complex Video Pipelines
Custom APIs From Scratch

CTai LABS

<\$100,000

1-3 Months

Pre-Built AI Platform
Production-Ready Pipeline
APIs and Integrations Included

Results

**~\$650,000
Saved**

12+ Months Faster
Domain Experts Day One
Faster Production Deployment

Key Savings – Case Study

Scene Analyzer Agent

Resource/Domain	Description	In-House Development ("Make")	CTai LABS ("Buy")	Net Financial Advantage
Specialized Talent	Recruiting talent for context-aware knowledge base, data, and Generative AI model optimization.	>\$550,000 <i>(Salaries + Recruiting + Overhead)</i>	Included <i>(Immediate access to domain experts)</i>	~\$550,000 Saved
Video Pipeline Architecture	Accelerated stream encoding/decoding, on-the-fly stream management, and end-to-end architecture for low latency.	~\$120,000 <i>(6+ months of backend development)</i>	\$0 <i>(Proven pipeline with HTTP/RTSP, and WebRTC ready)</i>	~\$120,000 Saved
Edge AI Optimization	Managing NVIDIA CUDA-X compute stack, reference workflows and blueprints, end-to-end optimization.	Continuous Drain <i>(Constant refactoring for CUDA)</i>	Managed Service <i>(New CUDA updates and security fixes)</i>	Zero "Dependency Hell"
Customization Flexibility	Building APIs and webhooks to allow the system to integrate with external dashboards or custom models.	3–4 Months <i>(Building secure APIs & Event Listeners from scratch)</i>	Included <i>(Ready-made RESTful API, Webhooks, and Custom Model support)</i>	3+ Months Gained <i>(Revenue acceleration)</i>
Time-to-Market	Time-to-functional-deployment on rugged/commercial Edge AI systems.	12–18 Months	30–90 Days <i>(Includes post-deployment support)</i>	1+ Year Revenue Head Start
TOTAL YEAR 1	Combined Capital & Operational Expenditure	>\$750,000	<\$100,000	~\$650,000 Net Savings

Together → Built to Deploy. Engineered to Scale.



- Hardware Manufacturer
- Edge AI Compute Platforms, Carrier Boards, Vision Interfaces
- Product-Focused

“We Build Hardware”

- ai and Robotics Solution Provider
- Full-Stack ai Engineering and Integration Services
- Solution and Service-Focused

“We Make ai Work on the Hardware”

We Help You Build Robots, Faster

Questions

