SMART CAMERAS AND VISION SENSORS

Edge AI and Vision Software Solutions

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We are Edge.

Why Go Smart?

Traditional cameras require high effort but yield low data.

VIDEO

Easier to Manage

No analyst is required to continuously monitor or review footage.

Faster Resolutions

Issues are reported in real-time instead of relying on a person to identify/report.

Better Automation

More data to facilitate system-level integrations.

Scalable and Private

Processing is done where the data is, improving performance, reducing data bottlenecks, cloud costs and preserving privacy.

Smart Cameras and Sensors

SMART CAMERA

Web Dashboard

Management and monitoring

Configuration

Feature and system setup

AI Analytics

Actionable real-time insights

Telemetry and Events

Real-time events

Statistics

Performance data

Playback and Storage

Video timeline, search, playback and export tools

Live Streaming

Live annotated video

SMART VISION SENSOR

Applications

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Our Core Expertise

We deliver value by reducing risk, development time and cost.

Edge AI

Machine Learning, data science and vision.

Analytics

Analytics applications and models

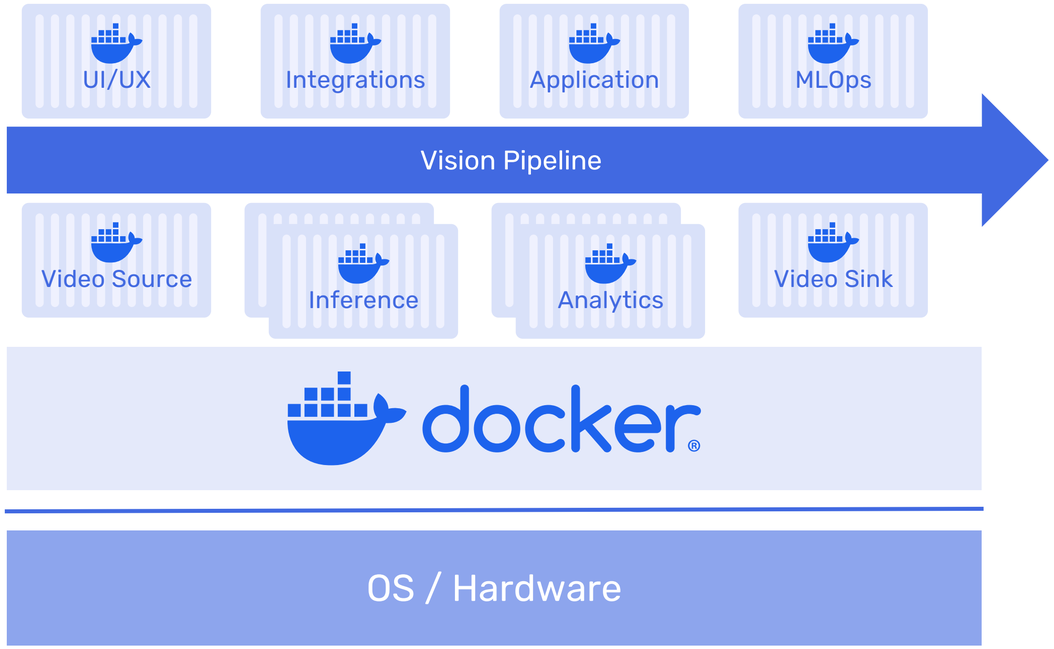
Full-stack system

Comprehensive system integration and complete solutions.

Modern architecture

Containerized microservices platform.

Modern Architecture



A containerized microservices platform at the edge

Faster Development

Remove compile-time bottlenecks and facilitate faster experimentation using runtime orchestration.

Simplified Deployment

Easily manage containers with a proven ecosystem of tools.

Improved Compatibility

Abstract underpinning OS and package dependencies.

Limitless Scalability

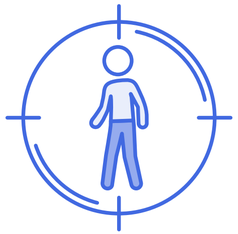
Process workloads where you need using interconnected microservices.

Platform Services

Future-proof business and technical objectives by enabling services on-demand.

Analytics Applications

Custom models combined with data and vision algorithms to deliver high performance insights.



People

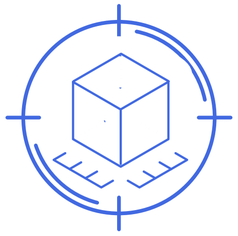
Safety, security and productivity.

Vehicles

Identifying vehicles types and attributes.

Packages

Package detection, theft and ownership.



Inspection

2D and 3D detection and tracking systems.

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Available Solutions

Tracking / Reidentification

Region / Zone Monitoring

Clothing Characterization

Smart Search

Action Recognition

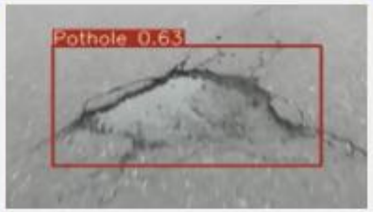
Audience Awareness

Sentiment Analysis

License Plate Recognition

Vehicle Classification

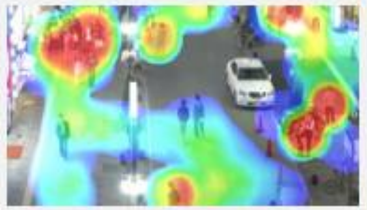
Package Security



2D / 3D Road Inspection

Industrial Inspection

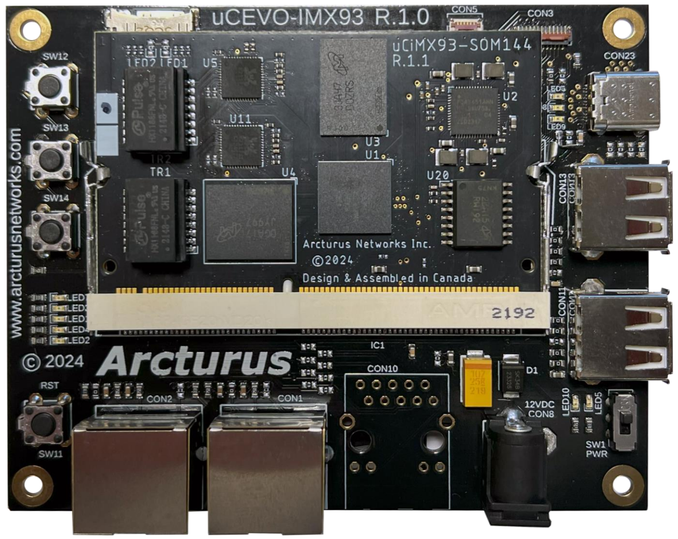
Occupancy Sensing



Footfall Heatmaps

Broadcast PTZ Tracking

Hardware Support



NXP

synaptics

Qualcomm

arm

Rockchip

RENESAS

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NVIDIA

ADLINK
LEADING EDGE COMPUTING

EmCraft systems

Smart Cameras

A comprehensive full-stack solution for smart cameras.

- Web Dashboard
- Configuration
- AI Analytics
- Telemetry and Events
- Statistics
- Playback and Storage
- Live Streaming

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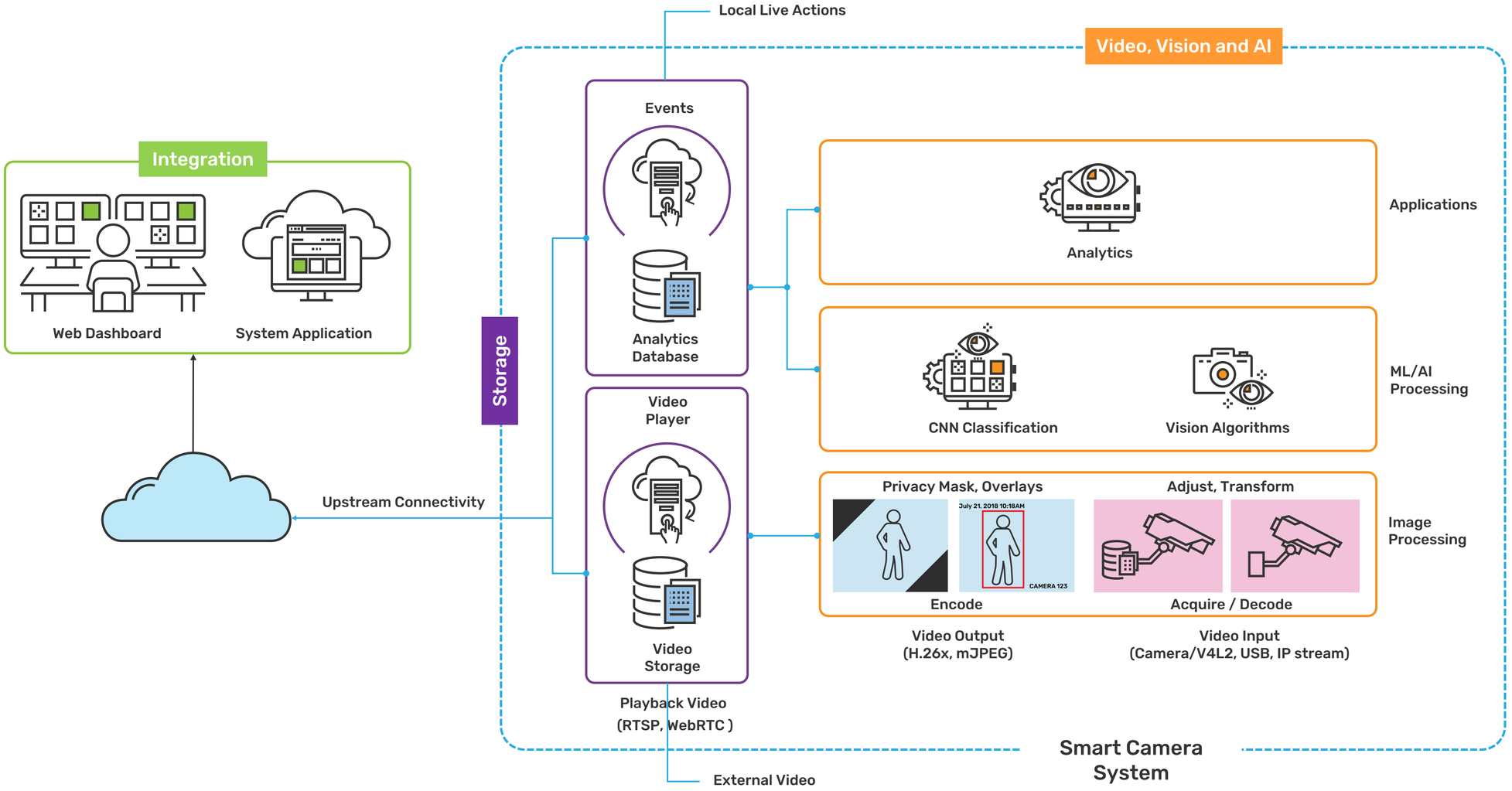
System Diagram



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Quality Control in Manufacturing

Use Case

A factory production line is equipped with smart cameras to detect defects in real-time, alert operators of anomalies and stream/store annotated video data locally for compliance.

Edge AI Analytics

Camera analytics are used to inspect products for anomalies and log production for compliance and traceability.

Real-time Events

Inspection anomalies trigger real-time events when defects are detected.

System Integration

Integration with production equipment automatically triages defective products and notifies operators.

Use Case

In a smart city, smart cameras monitor intersections to help reduce congestion, improve safety and upstream annotated video data for city operations.

Edge AI Analytics

Camera analytics analyze traffic patterns, classify commercial, transit and personal vehicles, monitor pedestrian flow and identify crowding.

Real-time Events

Alerts are triggered on disruptions, such as a congestion, sudden appearance of a crowd or detection of a vehicle involved in amber / silver alerts.

System Integration

Camera metadata integrates with traffic management systems, adjusting signal timing based on real-time conditions.

Traffic and Pedestrian Monitoring

Workplace Safety and Compliance

Use Case

At a construction site, smart cameras mounted at fixed locations and on vehicles monitor workplace safety.

Edge AI Analytics

Vision sensors mounted at access and access points use edge AI to check for protective equipment, while heavy machinery uses camera-based sensors to form a safe operating region.

Real-time Events

Real-time events lock access to a site unless appropriate safety gear is in place. Heavy equipment operators are notified visually of safety incursions.

System Integration

Integration with access control systems and heavy equipment provides meaningful safety feedback. While event logging to workplace management platforms provides compliance tracking.

Smart Vision Sensors

Edge AI solutions for highly integrated, stand-alone vision sensors.

- **Web Dashboard**
- **Configuration**
- **AI Analytics**
- **Telemetry and Events**
- **Statistics**

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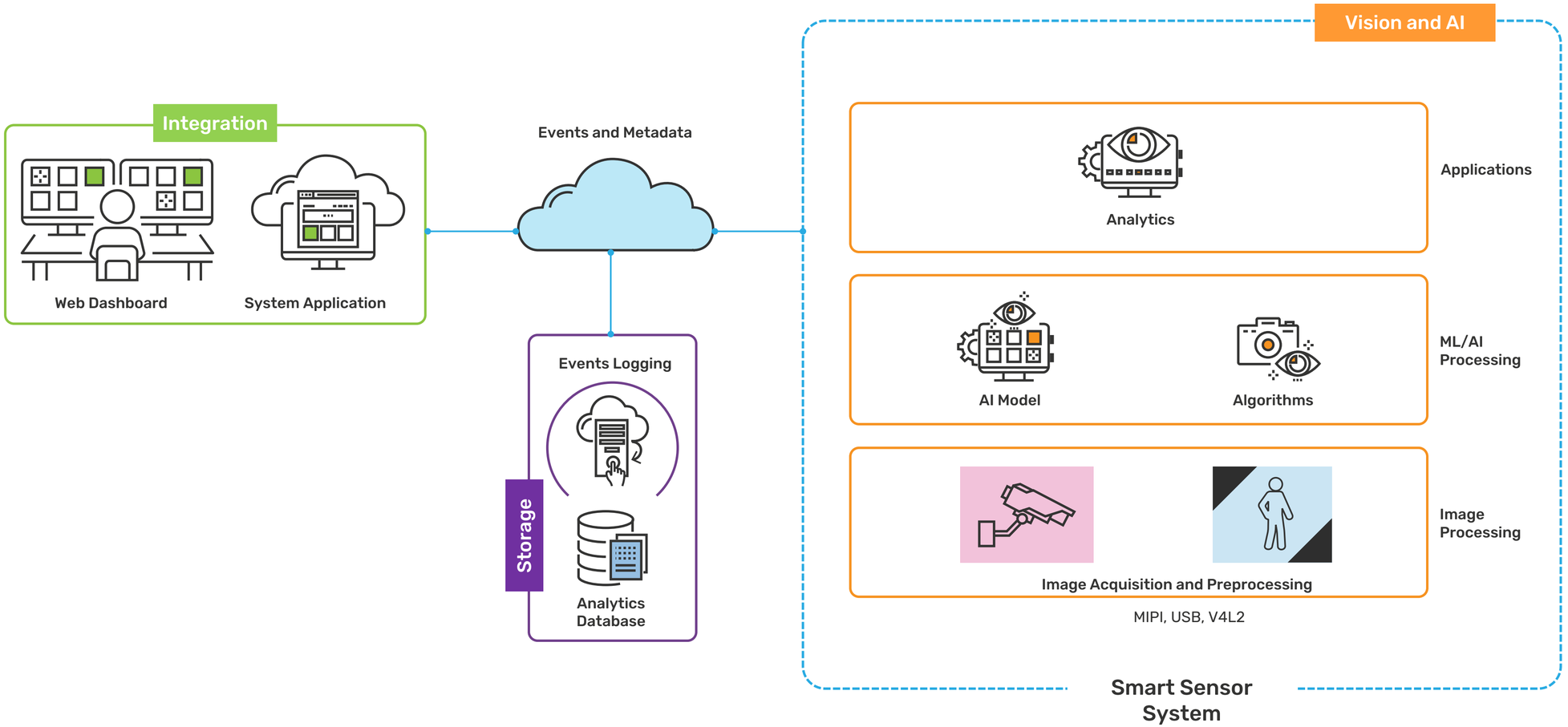
System Diagram



Use Case

A digital billboard in a shopping mall dynamically changes ads based on the demographics of a passersby and provides real-time engagement metrics to advertisers.

Edge AI Analytics and real-time Events

Sensors use AI to determine demographic profile information of each unique person in the field of view.

Real-time Events

Anonymized age and gender information is used to align audience profile with prospective advertising in real-time.

System Integration

Data integrates with backend digital advertising platforms to dynamically rotate ad content, monitor experiments and perform trend analysis.

Audience Demographics and Engagement

Smart Retail

Use Case

A chain of retail stores monitor customer movement and product interaction to help staff manage customer experience, improve planning and adjust inventory.

Edge AI Analytics

Vision sensors use AI to analyze dwell and traffic patterns of shoppers in the store.

Real-time Events

Real-time sensor data provides a heatmap visualization of store interaction while alerts identify anomalies such as long queue times or bottlenecks.

System Integration

Sensor data is integrated with inventory, customer management, staff and sales systems to enable specific and measurable KPIs.

Use Case

In a corporate building, vision sensors monitor meeting rooms, hot desks and common areas to provide real-time occupancy data for facilities management, operations and employees.

Edge AI Analytics

Vision sensors detect occupancy and count capacity in regions and zones to provide a granular space utilization data in real-time.

Real-time Events

Alerts triggered from vacant vs occupied hot desks and meeting rooms help employees find available resources quickly.

System Integration

Occupancy data is used by building operations to improve building efficiency by controlling lighting and HVAC systems.

Occupancy Sensing and Space Utilization

Healthcare and Assisted Living

Use Case

At an assisted living facility, vision sensors capture insights on resident's activity, detect falls and provide wellness outcome data.

Edge AI Analytics

Vision sensors monitor occupants for activity, determine sleep patterns and restfulness as well as visitor or care giver presence.

Real-time Events

Real-time metadata provides a continuous journal of activity, while notifications identify when a patient may require caregiver assistance.

System Integration

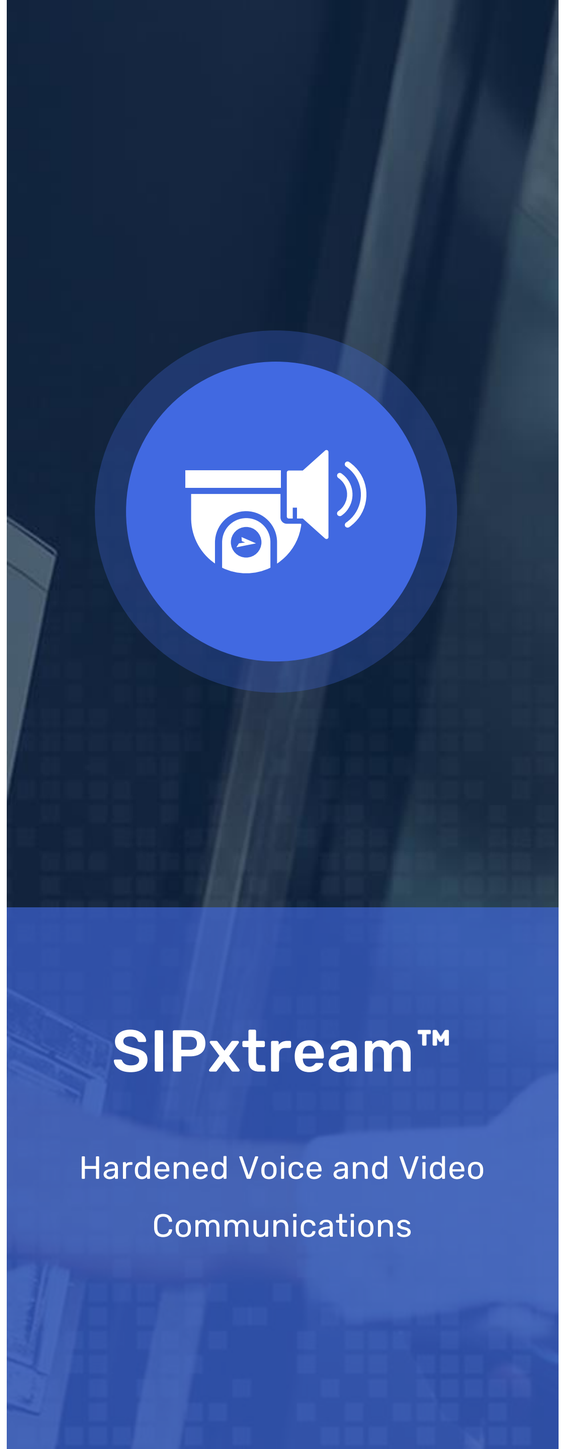
Activity data helps determine the efficacy of a clinical intervention. While early caregiver response results in better overall outcomes.

Related technologies

20 years of dependable solutions, 100,000s of active device installs, cross-domain expertise.

Bringq™

Edge AI and Vision Analytics



SIPxtream™

Hardened Voice and Video Communications

Mbarx™

Secure IoT Endpoints, Tools and Gateways

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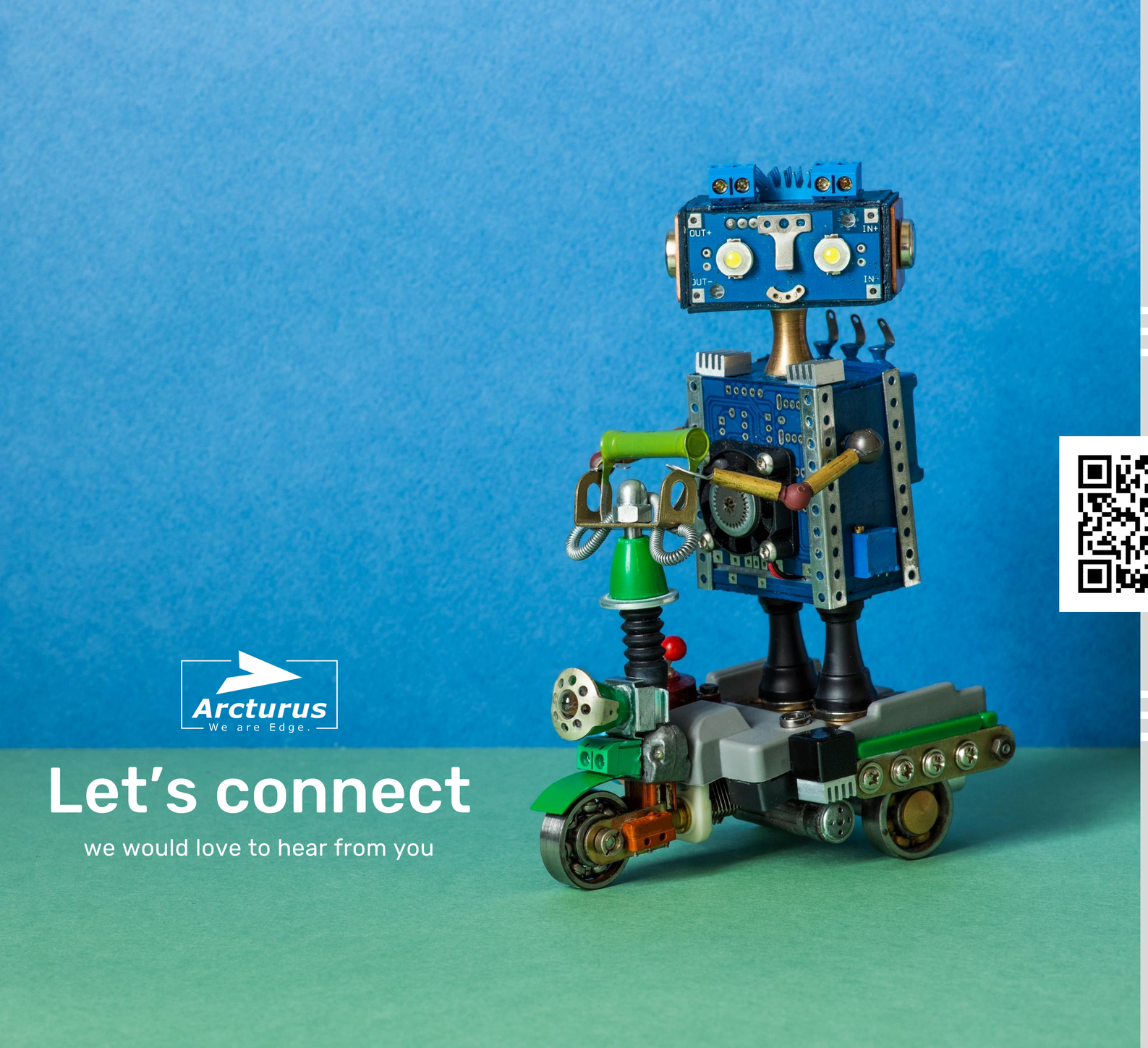

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Let’s connect

we would love to hear from you

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