

Edge & Generative : The Hybrid AI Revolution

Multi channel Edge AI Video Analysis Solution

Unmatched Stability, Unparalleled Insight!

Using autonomous vehicle semiconductors and our own multi layer algorithms, AI Bridge offers unparalleled reliability and accuracy in AI video analytics.



About Us

Creating a safe future through endless challenges and technological innovation.

EdgeDX Co., Ltd. has over 15 years of experience in video analytics and more than 10 years of expertise in AI, supported by a team of engineers with over 20 years of experience in developing standalone embedded products based on SoC and DSP. Since its establishment in 2021, the company has been dedicated to advancing and producing AI video solutions powered by deep learning technology.

EdgeDX's AI Bridge is a standalone device that utilizes Texas Instruments' autonomous driving-based chipset to analyze up to 16 video streams using AI. With over 50 AI applications, it enhances CCTV capabilities across various industries, offering differentiated performance with a unique algorithm that increases detection accuracy and minimizes false alarms. Its performance and stability have been proven through over 250,000 real-world channel installations across projects in security, retail analytics, safety management, and smart cities.

Under the EdgeDX brand, we continue to innovate, launching Hybrid AI Boost in October 2024—our Generative AI-powered technology designed for more complex and diverse video analysis. EdgeDX Co., Ltd.'s mission is to "deliver Digital Transformations to users through Edge AI." Through diverse AI functionalities, we aim to redefine automation in fields that previously required human oversight.

**Embedded
Engineering
Since Yr 2000**

**Video
Analytics
Since Yr 2010**

**AI Deep
Learning
Since Yr 2015**

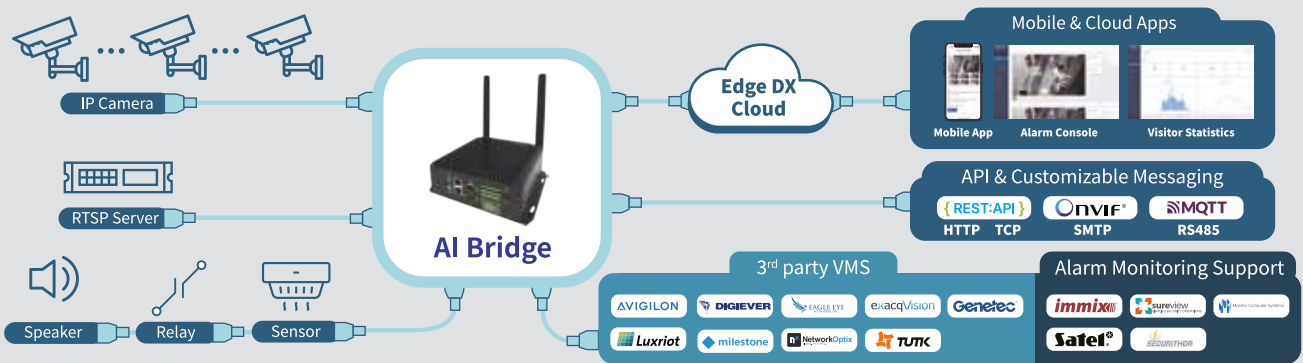
**Full-Stack
Mastery:
End to End
Engineering**

**80%
Engineers**

**250,000ch AI
Deployments**



AI Bridge Edge based Intelligent Video Analysis AIoT Gateway



- Over 50+ intuitive AI apps capable(On-premises)
- Multi AI Algorithms running at single channel
- Advanced human behavior analysis
- Support up to 16 camera channels
- Supports various protocols and VMS
- P2P based mobile alarm viewer
- LTE & GPS support (option)
- Internal recording with M.2 NVME SSD (optional)
- Wide temperature range Without Fan : -22°F (-30°C) ~ 158°F (70°C)
- Cloud based dashboard (option)
- Hybrid AI boost mode support

AI Bridge Series  [\(Click For Details\)](#)



AIB-TE1-04 6Watts (4ch)



AIB-TS2-08 16Watts (16CH)



AIBL-TS2-08 19Watts (LTE/ GPS/ 16CH)

Sector Solutions



Perimeter Security



Retail



Advanced BI



ITS



Public Safety



Hospital



Smart Building

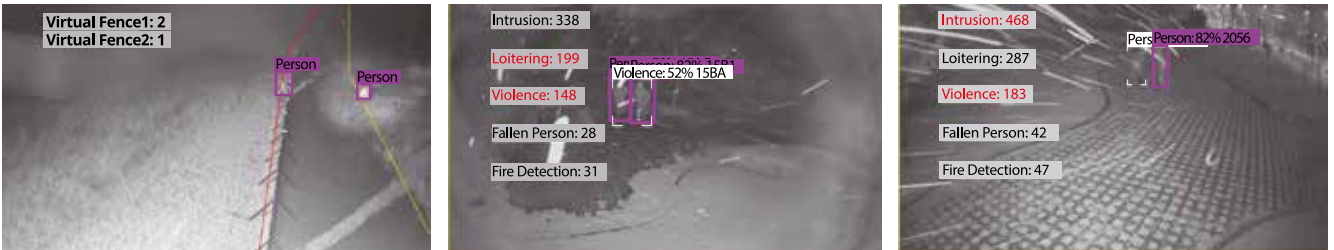


Construction

Next-Generation AI : Precision, Smart filters & Edge-Generative Fusion

Superior Detection

Night or day, near or far, AI Bridge's advanced algorithms ensure intruders cannot slip by unnoticed.



Reduced False Alarms Filters

Say goodbye to the frustration of incessant, unfounded alerts. Our **multi-stage False Alarm Prevention Filter** significantly minimizes false positives, ensuring that you are only notified of real threats.



Edge & Generative: Hybrid AI Boost

Edge AI Bridge & Generative AI Fusion integrates the outstanding and precise performance of AI Bridge with the innovative complementary capabilities of Generative AI, delivering recognition approaching human-level for the rich context and intricate details in video content.

Animal Classification



Precise object analysis in even the most challenging environments.

Object classified as a **'Deer'**

Unsafe Lifting



Phone Use Detection



Theft Detection



Under Age Detection





50+ On-Premise AI Apps and more

Multi AI Algorithms running at single channel [\(Click For Details\)](#)

 Basic Intrusion Detection	 Basic Loitering Detection	 Basic Virtual Fence	 Basic Zone Counting	 Basic Enter/Exit Detection	 Basic Stopping Detection
 Basic Stay & Go	 Basic Speed Anomaly Detection	 Basic Multi Zone Counting	 Extra Licenses Covered Face Detection	 Extra Licenses No Mask	 Advanced Hand & Foot Intrusion
 Advanced Intentional Body Gaze Detector	 Advanced Imminent Threat	 Extra Licenses Bullying Detection	 Advanced Fire & Smoke Detection	 Extra Licenses Aggressive Detection	 Extra Licenses Illegal Dumping
 Advanced Animal Detection	 Basic Occupancy Counting	 Basic Occupancy Car Counting	 Basic People Counting	 Basic Vehicle Counting	 Advanced Advanced Visitor Analysis
 Advanced Vehicle Type Counting	 Basic Queue Management	 Extra Licenses Vehicle Queue Management	 Extra Licenses No PPE	 Advanced Fallen Person Detection	 Extra Licenses LPR-Europe, US, JP, KR
 Advanced Crowd Detection	 Extra Licenses Human Prolonged Stay	 Extra Licenses Staff Exclusion People Counting	 Advanced Thermal Intrusion Detection	 Extra Licenses Vehicle Zone Presence	 Extra Licenses Work Vehicle Hazard Detection
 Extra Licenses Forklift No Helmet	 Extra Licenses Forklift Non-Driver Detection	 Extra Licenses Reverse Movement Detection	 Extra Licenses Road Pedestrian Detection	 Basic Heatmap	 Extra Licenses Advanced Heatmap
 Basic Basic Attribute	 Advanced Advanced Attribute	 Basic Dynamic Privacy Masking	 Basic Dynamic Face Masking	 Advanced Vehicle Type Detection	 Extra Licenses Forklift Detection
 Extra Licenses PTZ Tracking	 Extra Licenses Object Location Tracking				

+ and more Hybrid AI Boost AI Apps

AI App Lists

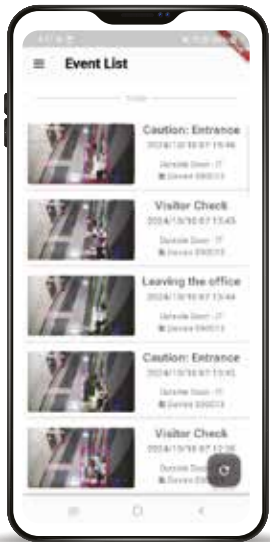
	AI App Title
Basic Package	Dynamic Privacy Masking
	Dynamic Face Masking
	Basic Attribute
	Queue Management
	Heatmap
	Intrusion Detection
	Loitering Detection
	People counting
	Vehicle counting
	Zone counting
	Multi zone counting
	Virtual fence
	Stopping Detection
	Stay & Go
	Enter/Exit Detection
Speed Anomaly Detection	
Occupancy Car counting	
Occupancy Counting	
Advanced Package	Crowd Detection
	Advanced Visitor Analysis
	Hand & Foot Intrusion
	Intentional Body Gaze Detector
	Imminent Threat
	Fallen Person Detection
	Animal Detection
	Fire & Smoke Detection
	Vehicle Type Counting
	Vehicle Type Detection
Thermal Intrusion Detection	
Fisheye Video	
Extra Licenses	Advanced Attribute
	LPR-US, Europe, JP, KR
	Advanced Heatmap
	No PPE
	Illegal Dumping
	Aggressive Detection
	PTZ Tracking
	Human Prolonged Stay
	Bullying Detection
	Forklift No Helmet
	Forklift Detection
	Forklift Non-Driver Detection
	Staff Exclusion People Counting
	Covered Face Detection
	Reverse Movement Detection
	Vehicle Zone Presence
	Road Pedestrian Detection
	Work Vehicle Hazard Detection
	No Mask
	Vehicle Queue Management
Object Location Tracking	



Application Solution

Mobile Viewer

Event List



Live/Playback/Actions

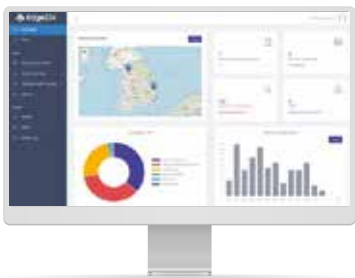


Sharing Snapshots



Cloud based Application service

Dashboard



Alarm Console



Data Visualization





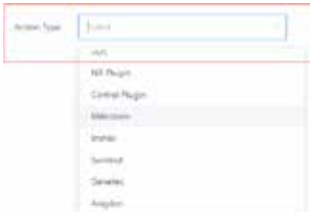
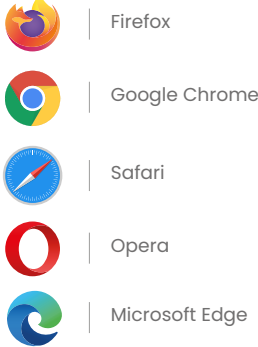

Device Management & Health Check



SNS Messenger Service


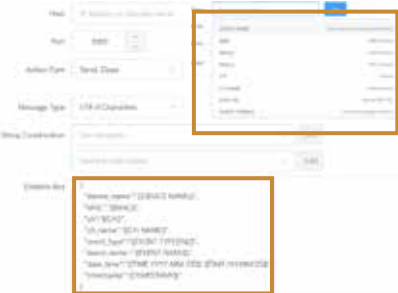



Integration Methods

Customizable Event Transmission via Network & Serial Interfaces	Proprietary Integration	REST API	
<ul style="list-style-type: none"> • Users can customize event messages without coding through an editing UI • Supports HTTP, TCP, MQTT, SMTP, FTP, RS232/485 	<ul style="list-style-type: none"> • Full support though plug-in for major VMS & Alarm 	<ul style="list-style-type: none"> • Various web • Any legacy places • Any devices 	<ul style="list-style-type: none"> • Annotated video streaming • Event metadata • Interoperability with VMS <p>Supports Proprietary Recording</p> <ul style="list-style-type: none"> • M.2 NVMe SSD up to 4TB 

Customizable Event Transmission via Network

HTTP, TCP, SMTP, FTP, MQTT, etc. Seamless integration without customization. Provided Templates and tokens, users can easily send metadata, snapshots, and videos to a receiving server.

Protocol selection	Editing Messages	Adding Snapshots and Video
	<p>Using Tokens for edition</p>  <p>Messages</p>	

Specifications



AI Bridge Pro	AIB-TS2-08	AIB-TE1-04
	8-channel	4-channel
	16-channel extension mode support	
System Events	Tamper Detection, Alarm In, Virtual Alarm In, Video Loss /Recovery, Disarm, Recurrence, Login, System Start	Tamper Detection, Alarm In, Virtual Alarm In, Video Loss /Recovery, Disarm, Recurrence, Login, System Start
Action Handlers	HTTP, TCP, FTP, E-mail, S3, VMS, Onvif, Audio Back Channel (Camera speaker)	HTTP, TCP, FTP, E-mail, S3, VMS, Onvif, Audio Back Channel (Camera speaker)
Event Action		
Combining Rules with Other Events	Yes	Yes
Pre/Post snapshot	Yes	Yes
Annotated Video Stream	Yes	Yes
Max. Video Input resolution	4K @ 60 fps (2M @ 240 fps)	4K @ 30 fps (2M @ 120 fps)
Video Input Method	RTSP, RTSP over HTTP/S, Onvif	RTSP, RTSP over HTTP/S, Onvif
Video		
Supported Input Video Format	H.265 / H.264	H.265 / H.264
Video Output Stream Method	RTSP over TCP/UDP, RTSP over Websocket, RTSP over HTTP/S	RTSP over TCP/UDP, RTSP over Websocket, RTSP over HTTP/S
Recording (Video, Snapshot)	1 x M.2 M-Key Slot (for M.2 2280 NVMe SSD) Recording license 8-ch(OPTION)	1 x M.2 M-Key Slot (for M.2 2280 NVMe SSD) Recording license 4-ch(OPTION)
Audio		
Audio Input	1 x Audio Line-In, (10KOhm, 1Vrms), (3.5mm audio phone jack)	1 x Audio Line-In, (10KOhm, 1Vrms), (3.5mm audio phone jack)
Audio Output	1 x Audio Line-Out, (600Ohm, 1Vrms), (3.5mm audio phone jack)	1 x Audio Line-Out, (600Ohm, 1Vrms), (3.5mm audio phone jack)
USB	1 x USB3.0	1 x USB2.0
RS-485	1 x RS-485 (Full-duplex 4line T/B)	-
RS-232	1 x RS-232 (D-SUB9)	-
Wiegand	1ch input / 1ch output	-
Interface		
LAN	2 x 10/100/1000 BASE-T Ethernet (ETH1/ETH2)	2 x RJ-45 10/100 BASE-T Ethernet (LAN1/LAN2)
mini PCIe Slot (LTE, GPS Module)	1x Mini-PCIe (for LTE-cat4 / GPS(GNSS) Modem module)	-
SIM Slot	1x micro SIM Slot	-
Antenna	2x 50Ω SMA Female for Main Antennas (OPTION) 1x 50Ω SMA Female for GPS(GNSS) Antenna (OPTION)	-
Alarm I/O		
Alarm Input	4CH, DI(0-30V Input), Pulled up to 5V via 10KOhm	4CH, DI(0-30V Input), Pulled up to 5V via 10KOhm
Relay Output	4CH, Dry contact Relay(30VDC), NO/COM/NC(Terminal Block)	1CH, Dry contact Relay(30VDC), NO/COM/NC(Terminal Block)
Watchdog	Yes	Yes
RTC	Yes	Yes
ETC		
Cooling Fan	-	-
Factory Reset button	Yes	Yes
LED Indicators	1 x PWR LED (3 Color) / 1 x Status LED (3 Color) 1 x ALARM IN LED (3 Color) / 1 x ALARM OUT (3 Color)	1 x PWR LED (3 Color) / 1 x Status LED (3 Color)
Power		
Power Supply	12V/3.3A adaptor DC +9V ~ +36V (DC Input Voltage)	12V/3.3A adaptor(TBD) DC +9 ~ +36V (DC Input Voltage)
Power Consumption	16 Watts	6 Watts
Environment		
Temperature/Humidity	-30°C-70°C(-22°F-158°F)/10-90% NC(Without NVMe SSD) -20°C-60°C(-4°F-140°F)/10-90% NC(With commercial NVMe SSD)	-30°C-70°C(-22°F-158°F)/10-90% NC(Without NVMe SSD) -15°C-50°C(5°F-131°F)/10-90% NC(With commercial NVMe SSD)
Chassis		
Dimension(WxDxH)	213.6 x 175.8 x 60 mm	94 x 153 x 28 mm
Weight(Net/Gross,KG)	1.5/2.2	0.45/1.05
Certification	-	CE, UKCA, FCC, KC

Various Use Cases

Perimeter security & safeguard assets



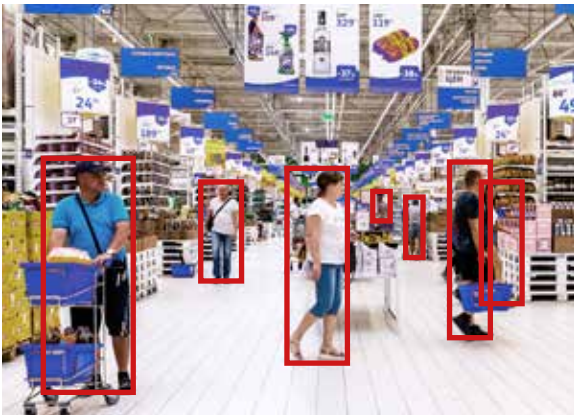
Overview

We utilize AI video analysis to promote the safety and protection of residential buildings, government facilities, and critical infrastructure, enabling proactive management by detecting abnormal behavior and allowing for a proactive response from administrators to ensure the safety of the facilities and safeguard assets.

Benefits

- Real-time risk perception accident prevention through residential occupant protection
- Intrusion alarms
- Broadcasting warnings through IP camera microphone
- Effective management of critical assets
- Boundary management of specialized facilities like prisons

Efficient store management



Overview

Our system provides more sophisticated heatmaps based on the specific interests of visiting customers, enabling precise analysis for efficient store management. It accurately tracks the number of customers entering the store, allowing for density adjustment and better resource allocation. It can identify unoccupied tables and establish restricted areas to prevent unauthorized access. Moreover, it captures the moment a customer enters the store, facilitating prompt customer assistance. Leveraging diverse analytical data, it enhances store management efficiency and optimizes product layout based on customer preferences.

Benefits

- Layout optimization based on enhanced heatmaps
- Density adjustment by monitoring the number of entering customers
- Prompt customer assistance through identification of unoccupied areas
- Enhanced security and prevention of intrusions
- Efficient resource allocation based on data insights

Public safety management



Overview

AI is highly effective in ensuring public safety through the management of crowd density, personnel control, establishment of secure zones, intrusion monitoring, detection of violence, and identifying instances of falling, among others.

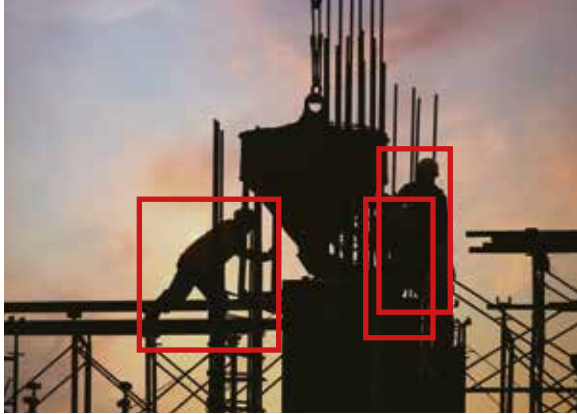
By utilizing AI technology, public safety measures can be enhanced and strengthened, allowing for proactive monitoring and rapid response to potential threats. The capabilities of AI enable the identification and classification of various safety-related incidents, facilitating the protection and well-being of individuals in public spaces.

Benefits

- Efficient crowd management
- Timely response to emergencies
- Minimized risks to public safety
- Establishment of safe zones
- Reduced accidents and injuries
- Prevention of unauthorized access
- Proactive monitoring of public spaces



Construction safety & incoming material management



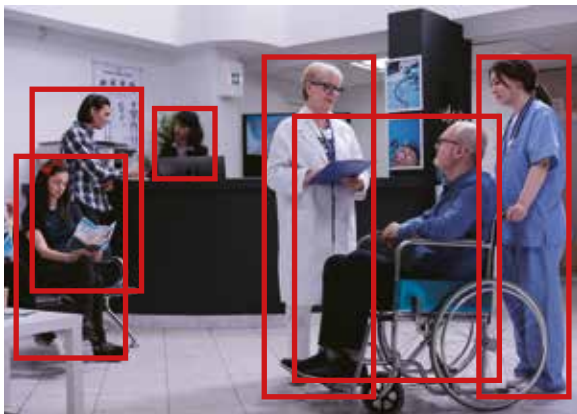
Overview

Implementing AI video analysis on construction sites can significantly enhance worker safety. Moreover, it enables more streamlined management of construction material delivery and inventory, fostering greater efficiency on-site.

Benefits

- Worker Safety
- Risk Mitigation
- Incident Response
- Inventory Management
- Regulatory Compliance
- Cost-saving effect on manpower for management

Retirement Homes and Assisted Living Facilities



Overview

AI video analysis enhances safety management in elderly care by addressing falls, wandering, intrusion, and violence. It promptly detects falls, monitors movements to prevent wandering, identifies unauthorized access, and detects signs of violence. This ensures a safer environment for elderly residents.

Benefits

- Immediate bed fall response
- Dementia patient management
- Emergency detection
- Fall prevention and assistance
- Enhanced security measures

Smart intersection & crosswalk



Overview

Integration with traffic management systems allows for safer intersection and crosswalk management through features such as left-turn vehicle volume control, lane-specific waiting vehicle control, pedestrian control on the crosswalk, detection of pedestrians on the crosswalk, and warning alerts or audio broadcasts through signal or audio broadcast systems. It also enables the detection of pedestrians and children in specific zones, enhancing overall safety and management of intersections and crosswalks.

Benefits

- Enhanced safety
- Efficient intersection management
- Improved pedestrian control
- Accurate detection of pedestrians
- Real-time warning alerts
- Specific zone detection (pedestrians, children)
- Optimal crosswalk management
- Advanced traffic monitoring
- Incident monitoring - stop, reverse, pedestrian
- Enable PTZ auto-tracking on evented object with separated PTZ



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