SOLUTIONS FOR EV CHARGING AND INFRASTRUCTURE

Voice, Vision, AI, IoT

Arcturus
We are Edge.

EV Charging and Infrastructure

Premium Services

Transform a commoditized, low-value experience. Differentiate new value-add services including safety and security features.

Availability

Ensure systems are operational and accessible. Detect obstructions, identify frustrated customers or unsuccessful charging events.

Enhance Experiences

Use analytics to form insights and build personas. Create tailored experiences or share with other platforms.

Our focus

Edge systems for connected vehicles, infrastructure and EV charging.

Machine learning
Edge AI, ML and vision analytics.

Communications
Hardened voice and video communications.

Security
End-to-end trust chain solutions.

Connectivity
Secure ecosystem of devices and gateways.

Our key technologies

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

Brinq™
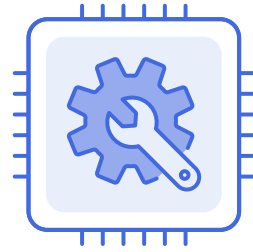
Edge AI and Vision Analytics

SIPxtream™

Hardened Voice and Video Communications
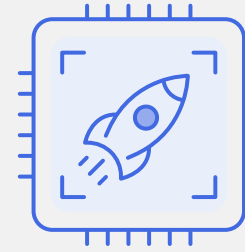

Mbarx™

Secure IoT Endpoints, Tools and Gateways

Brinq™ Edge AI, Vision and ML

ML edge enablement

Model and runtime enablement using a scalable containerized microservices pipeline architecture
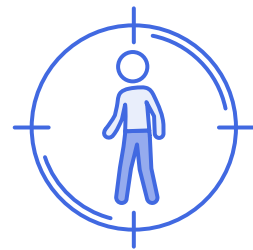
Edge acceleration

Edge NPU and GPU acceleration using NXP, VeriSilicon, Nvidia and Kinara

2D and 3D vision

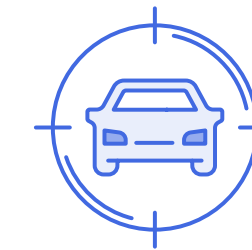RGB and RGBD vision analysis for inspection and analytics

People analytics

Intrusion, counting, proximity, crowd detection, face verification, clothing characterization, PPE, age, gender, emotion, behavior
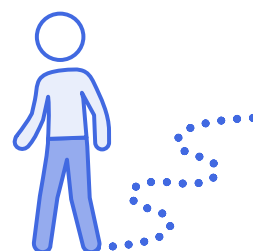
Package analytics

Secured or abandoned packages with owner identification

Vehicle analytics

License Plate Recognition (LPR), vehicle type and make

Tracking and reidentification analytics

Industry leading tracking solutions including long-term and multicamera reidentification
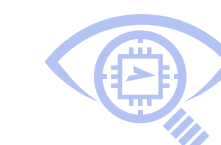
3D / inspection analytics

Real-time depth and volumetric analysis for road, rail or industrial inspection

Full stack solutions

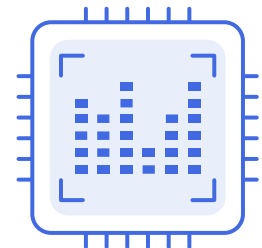Detection zones, boundaries, real-time notifications, timeline visualization and analyst workflows

Learn more >>

SIPxtream™ Communications

Signaling

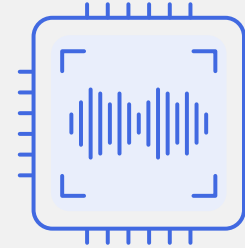SIP (VoIP) signaling stack or simple start/stop media command and control

Media

RTP streaming with RTCP quality metrics including jitter and loss

PA and notification

Local announcement file playback, multicast audio streaming or messaging

Audio

Narrow and wide-band speech codecs; G.711a/u, iLBC, G.726, G.722, OPUS, DTX

Intelligibility enhancements

Echo and noise suppression algorithms with audibility enhancements

Video

Live video using SIP, RTSP or WebRTC with UVC or MIPI camera integration

Security

SIP-TLS signaling and sRTP media including SIPS extensions for end-to-end security

Application integration

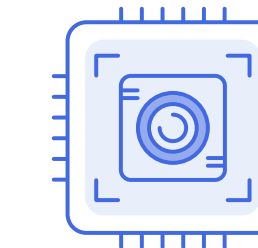Simple command-based host protocol or host application integration using Linux systems
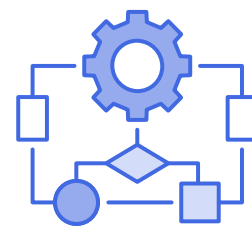
Resilience and redundancy

High-availability, active failure detection, call quality analysis and self-test functions

Learn more >>

Mbarx™ Management and Integration

IoT ecosystem
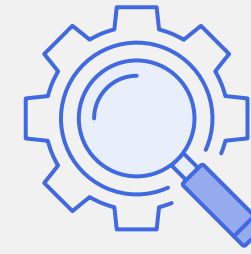Chain-of-trust architecture across endpoints, tools and gateways

Endpoint discovery
Device and service discovery via multicast announcement

Connectivity and resilience
Accept, originate or persist connections for telemetry, updates or management

Workflow tools and visualization
Simple tools for management, deployment and updates

Standards-based security
TLS socket encryption and x509 certificate-based authentication
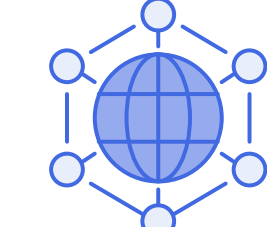
Private remote sites
Remote site access using on-prem and edge gateways

OTA firmware validation
Firmware payload authenticity, compatibility and integrity verification

Firewall traversal
Active firewall traversal without unnecessary keepalives or insecure UPNP
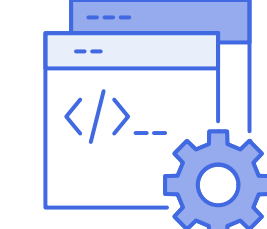
Simple API
Unified command-driven protocol for management and telemetry

Learn more >>

Bringing intelligence to EV charging...
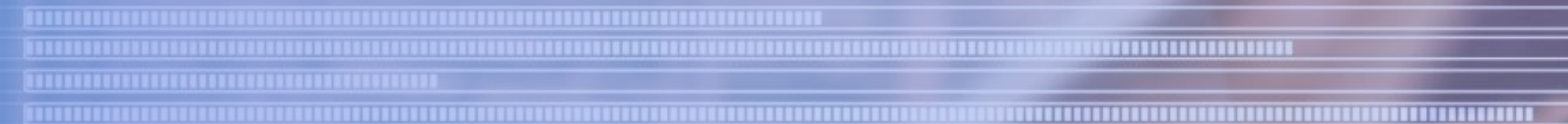
Safety and Security

Vision and ML analytics detect situations that could result in injury, harm or property damage.

Public Safety

Identify vehicle license plates involved in amber or silver alerts.

Enhanced Vigilance

Analyze vehicles for unattended pets or children.

Behaviours and Anomalies

Detect suspicious activities such as loitering or vandalism.

Virtual Zones

Create protection regions around charging vehicles.

A safer experience

License Plate
Recognition Demo

Demographics

Vision and ML data form insights that predict preferences and behaviour.

Age and Gender

Characterize personas based on key demographic insights.

Persona Tracking

Utilize license plates as a method to track unique personas without using personalized data.

Vehicle Characteristics

Use vehicle type and make to provide key prediction data on preferences.

Number of Occupants

Identify if the driver is alone or accompanied.

Data and insights

Age / Gender Demo

Operations

Vision analytics discover mission critical service issues before they impact revenue.

Detect Obstructions

Watch for obstacles blocking charger access, such as snow build up or occupancy by a non-EV vehicle type or make.

User Experience

Monitor user emotion to determine frustration and identify negative experiences or issues operating the system.

Lost Charging Events

Determine when a vehicle has pulled into the charge location but has left without charging.

Revenue generating service.

User Experience / Emotion Demo

Vehicle Type / Make Demo

Live Assistance

Integrated, high-quality, two-way voice and video communications delivers exceptional support and service.

Live Two-way Voice

Provide clear intercom communications using VoIP/SIP technology with audio intelligibility enhancements and wide-band speech processing.

Hardened Operation

Ensure front-line communications is always reliable with self-test functions, call quality reporting, failure detection, server fail-over or redundancy.

Video Integration

Improve situational awareness by adding camera integration with VoIP or WebRTC support.

Mission critical front-line support

Learn more

Personalized Experiences

ML insights get transformed into value by improving experiences and sharing data.

Personas

Use data and insights to build personas based on behavior, routine and demographics.

Personalized Experiences

Use insights to provide tailored nudges and promotions.

Cross-Platform Analytics

Share data and insights with other stakeholder organizations to enhance targeted advertising, search and other personalized experiences.

Insights and experiences

Learn more

Why us?

Quality

Field failure rates as low as 0.1% / 10,000 units

Longevity

Product life-cycles in excess of 20+ years

Time-to-Market

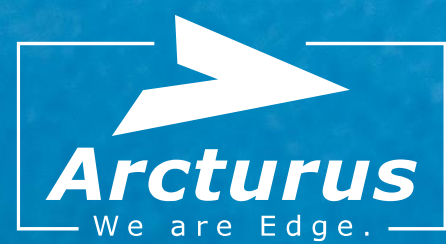Boards and modules ready to integrate

Reduced Risk

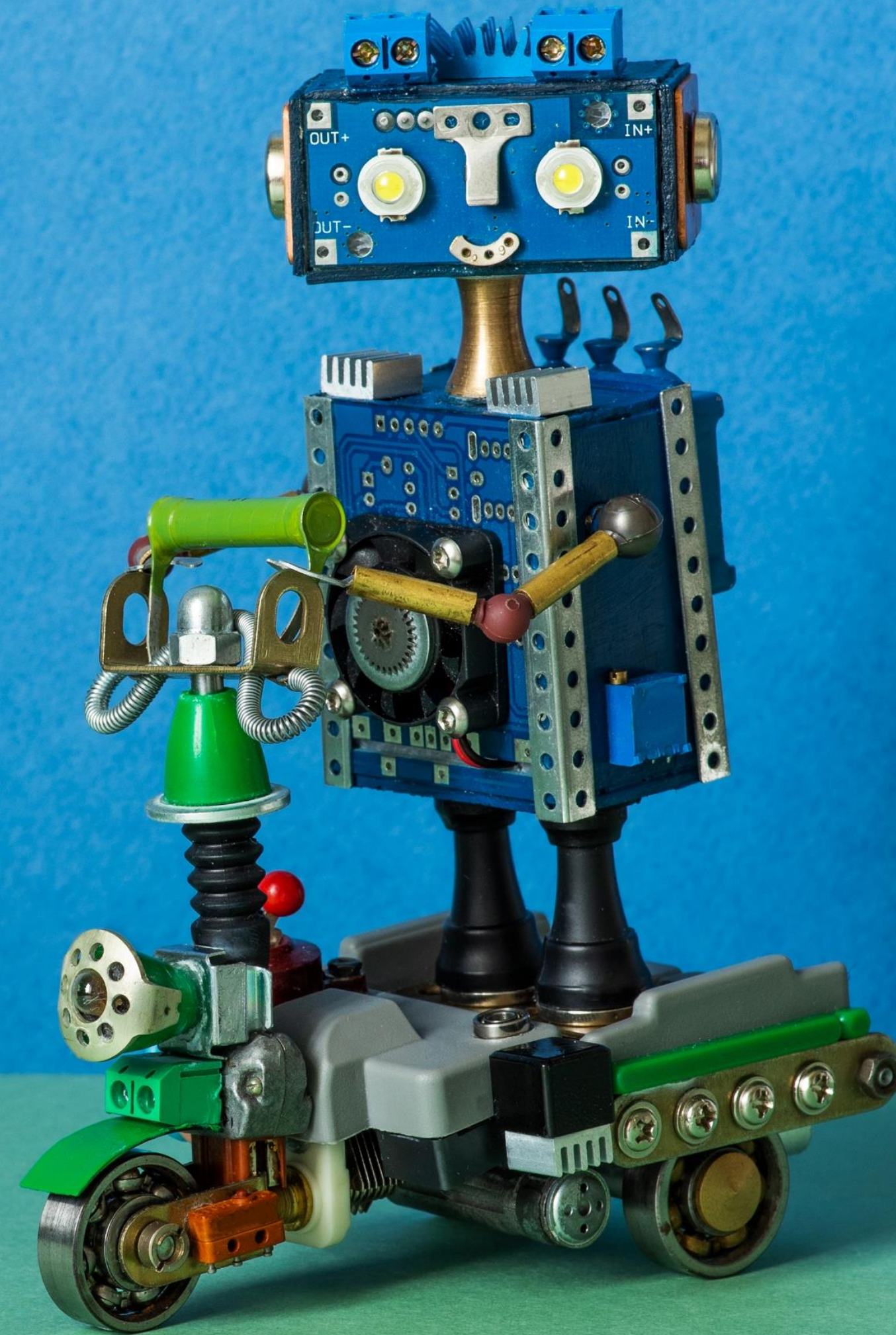Hardware and software expertise, support

Lower Cost of Ownership

Pre-existing software ready for deployment

Let's connect

we would love to hear from you

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