

Foam monitoring. Cognitive vision automation.

AI-Powered Precision: Optimizing foam monitoring with edge intelligence

AI-powered edge devices ensure accurate, real-time foam monitoring in bioreactors, enhancing process stability, efficiency, and compliance. By continuously analyzing foam levels with cognitive vision, they detect deviations, optimize antifoam dosing, and minimize human intervention. Seamlessly integrating into existing bioprocess workflows, these intelligent systems prevent contamination risks, reduce material waste, and improve yield consistency, **ensuring reliable and automated bioreactor operations.**

KEY CHALLENGES

Inconsistent Detection

Misdosing of Antifoam Agents

Manual Monitoring Limitations

Lack of Alerts

SOLUTION

Edge AI System

Tracks foam formation, antifoam dosing, and bioreactor conditions in real time.

Real-Time Alerts & Logs

Detects foam-related deviations and logs events for compliance and process optimization.

Edge Processing (IP67 Rated)

Low-latency inference without cloud dependency.

Seamless Integration

Connects with lab management systems.

Privacy-Preserving AI

Processes data locally, ensuring security and compliance.



HOW IT WORKS



Edge camera captures bioreactor status & process conditions.



AI model analyzes activity to ensure effective foam control and prevent contamination.

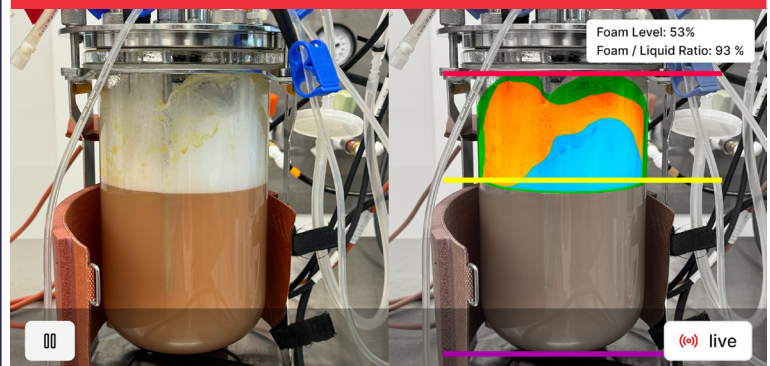


The system generates real-time foam metrics and triggers immediate alerts.



Reports & insights available for regulatory audits and process optimization.

KEY BENEFITS



99% accuracy in foam control.

Real-time foam risk alerts.

Administrative interface available in your network with easy integrations to current systems.

No internet dependency for on-premise AI inference.

Seamless scalability for multiple bioreactor units.

Request a demo today! Visit linque.com or Call 610.495.2769

RISK-FREE INTEGRATION INTO YOUR BUSINESS PROCESS

1 Isolated data collection for risk-free testing

Our plug-and-play edge device is installed **without connecting to your network.**

It starts collecting video data, ensuring **zero risk to existing operations.**

2 AI model calibration & accuracy validation

We analyze your specific bioreactor environment and configure our AI for precise foam control.

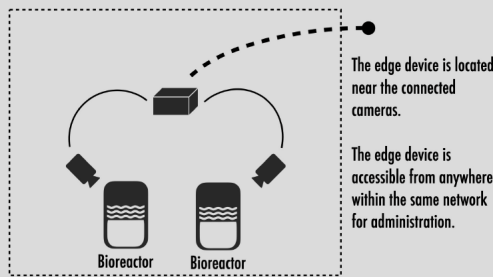
You receive a **real-world accuracy report.**

3 Full deployment & value delivery

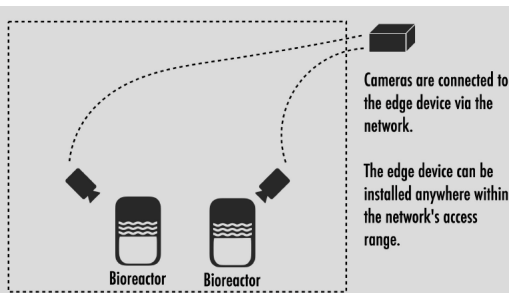
Once validated, we connect the device to your network and lab systems.

The system starts delivering real-time alerts and operational insights.

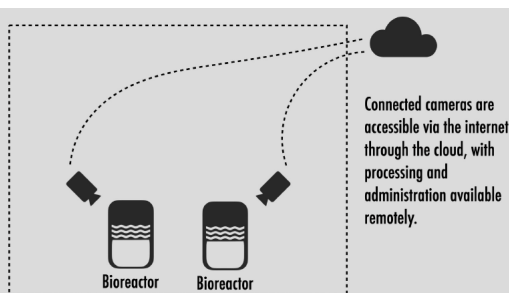
FAQ DEPLOYMENT OPTIONS



"In-room" edge processing with remote administration



"In-facility" edge/server processing with remote administration



Cloud processing with remote administration

USER INTERFACE MONITORING CAPABILITIES

Real-Time Monitoring and Live Data

Alerts Management

Historical Data and Related Operations Video

Integration Management

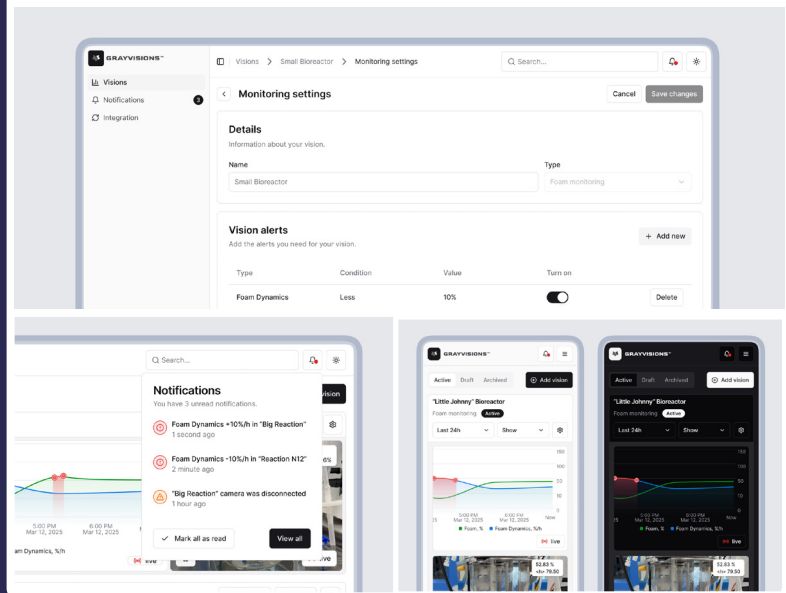
Cameras and Multi-Bioreactor Management

User and Access Control

AI Configurations

System Health Dashboards

Updates Management & Support Tools



Find the right plan for your needs

Whether you operate a small lab or global facility, our solution scales with you:

LITE
Essential foam detection for small-scale applications.

PRO
Advanced multi-camera support with robust analytics.

OMNI
Custom enterprise solution tailored for complex environments.