

# IQAX Universal



**Carriers or Reefer owners** who run any shipment cycle must ensure reefers are in good operating condition. This is to safeguard that the cargo can be maintained under reliable conditions that uphold the quality of the perishable or temperature-sensitive products shipped. As such, carriers and reefer owners must pay attention to the assets maintenance before the journey by carrying out a Pre-trip inspection (PTI).

In addition, during the journey they must execute and retain the customers' operational instructions and avoid any impacts to the cargo's condition from loading, through mode changes and final delivery. All this requires disruption monitoring, prompt response and corrective actions to avoid liability if the refrigerated contents lose value.

Reefer asset maintenance and monitoring to support shipment can be costly, labor intensive and time-consuming.

With advances in technology, not only do we have sensors to provide continuous updates for cargo monitoring throughout the journey, we can also leverage AI and Machine Learning to predict deviations to settings.

The result is a more accurate and optimized plan to enhance PTI. Instead of doing traditional manual PTI, carriers and reefer owners can offer an even more intelligent PTI at a lower cost and ultimately deliver cargo intact to customers.



## Comprehensive Real-time Reefer Container Status Updates

IQAX has partnered with BoxPlus to provide the sophisticated BoxPlus BPRDC300 (compliant and interoperable with Container Owners Association UDM standard) reefer container monitoring devices along with a platform for ocean carriers and reefer owners to leverage the power of AI and machine learning to manage their reefer containers.

The devices can provide frequent updates while maintaining battery power for a long period. In addition, IQAX integrates the device data with your shipment data so that you can easily locate and assess your customers specific shipments or enable your customer to do so.

With granular visibility throughout the end-to-end journey and AI and machine learning backed inspections, you can drastically save PTI cost while providing better support to your customers.



SCAN QR CODE  
TO REQUEST DEMO AT  
[ENGAGEMENT@IQAX.COM](mailto:ENGAGEMENT@IQAX.COM)



## Reefer Asset Maintenance – Better Maintenance Planning and Execution

- Capture Pre-Trip Inspection supporting data remotely during the trip, applying AI and Machine Learning to formulate a PTI plan to save time and reduce error,
- Identify operating hours of the reefer engine periodically as well as any irregularities in performance,
- Identify problematic reefer components in advance,
- Plan equipment optimization processes.



## Reefer Container Monitoring

- Identify the handover of equipment and responsible parties based on location and time
- Monitor the execution of completed transport and compare with the initial estimation
- Visualize the closest available smart reefer containers for equipment optimization
- Visualize sensor readings (e.g. temperature, O2 & CO2 readings, humidity level) change and trends
- Better understand the reefer situation by combining IoT data & shipment data, and resolve conflicts from different sources and considered IoT data with harmonized shipment information
- Receive filtered smart notifications when reefer conditions change from pre-defined thresholds
- Identify operational exceptions on reefer settings (temperature, O2, CO2, power supply)
- Identify sensor enabled alerts (e.g. Shock/door open, etc.)
- Identify the reasons and causes of unexpected change of reefer conditions and movements
- Reduce false alarms to focus on operational monitoring
- Identify bottlenecks in operations

# IQAX Universal is your perfect solution for...

## 01

Continuous coverage without draining battery power to continuously monitor your reefer containers for operations management

## 02

AI-enhanced insights about your reefer devices to save time and costs on Pre-Trip Inspections (PTIs)

## 03

Avoiding time and resources spent on false alarms and view predictive ETAs for forward planning

## 04

Linked shipment information to not only monitor equipment, but to easily associate them with your customers cargo for enhanced customer support

## Reduce Operation Costs and Optimize Resources

- Save time and labor costs with effective and efficient execution of PTIs
- View unused containers on a dashboard to make decisions for operation planning
- Better predict future container positions and locations

## Increase Visibility to Container Status

- Gain end-to-end visibility on reefer container condition and location information over both land and sea
- Receive standard alerts to temperature, set point, O<sub>2</sub>/CO<sub>2</sub>, humidity, in-out zones and open-door exceptions
- Check and update container temperatures with 2-way remote control

## Increase Customer Satisfaction

- Quickly look up precise container locations upon customer request
- Check container conditions on demand and save a log of records for accountability in the event of product spoilage
- Reduce time spent searching for shipment status for customers to speed up customer response times

