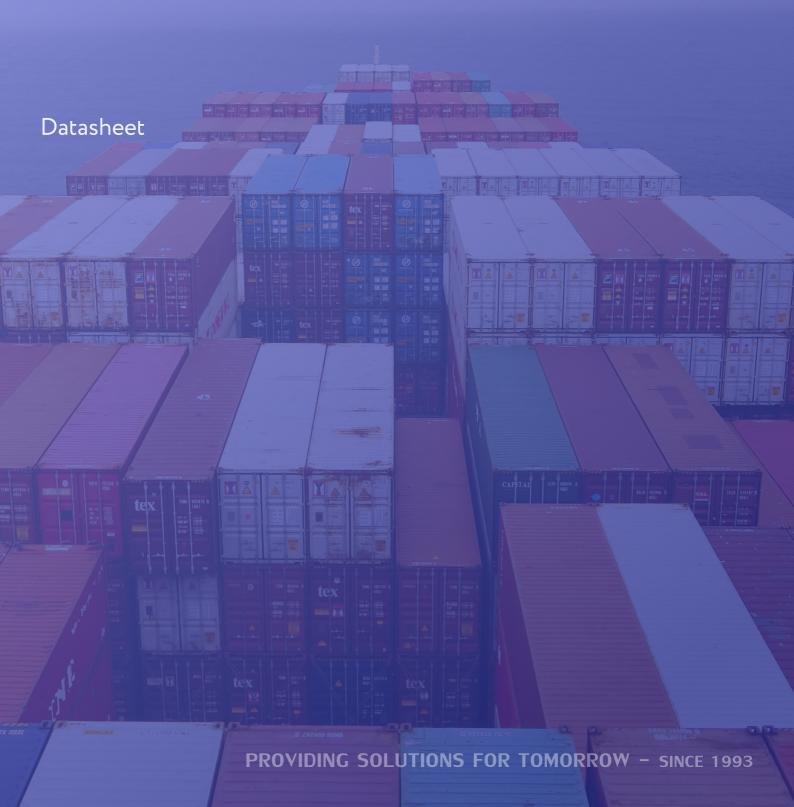# SHIPPING CONTAINER MONITORING PRODUCT

Datasheet

Project objective

Prepare the integrated hardware and software shipping container monitoring product for further development and manufacturing. Execute a successful transfer of all intellectual property to the client that was needed due to sudden termination of relationship with both vendors. Upgrade the product to contribute to its promotion globally.

Result

The customer got control over their intellectual property in much shorter terms as planned initially and with budget saving. Transfer to Azure cloud was done smoothly without interrupting service to end users of the product. The client received an improved product with new features and updated business logic according to his business priorities and looking forward to continue cooperation on product enhancement.

Scope of work

- Gather, sort, and validate the mechanical, schematics, and PCB documentation for devices and manufacturing fixtures

- Perform a complete build of the firmware and match the build to the production code

- Collect and analyze the server application source code and DevOps environment

- Perform the build of objects/executables and compare them to the production code

- Define the baseline versions of SW and HW documentation to provide continuation of the product development and manufacturing

- Create git repositories to store product documentation

- Design new cloud infrastructure and redeploy service on Azure

- Continuous support for bug fixing

- Creation of general system documentation

- Redesign of electronics and PCB to improve devices' efficiency

- New firmware for better maintainability, reliability, and extensibility

- Updates for mechanical design due to PCB redesign

- A new communication protocol for improved security

- Improve Azure cloud infrastructure for better stability and performance

- User roles and permissions for devices' distributors

- Possibility to log into the recovered account via email

- Limit login attempts

- Create additional filter, view of details on shipment, and device events for specific shipment

- Implement reporting service for shipment list

- Redesign database, add new code for realization new business logic

- Infrastructure support for the software in Azure cloud

- Engineering support for devices manufacturing and integration in 3rd party systems

Activities

- Requirements definition
- Documentation validation
- Firmware build and validation
- Deploying in cloud
- CI/CD

- Software development
- Firmware development
- Hardware development
- UI updates
- Functional testing

About the project

Technologies

- .NET
- .NET core 2.2
- VueJS
- MS SQL
- Git
- Azure cloud
- C/C++
- Python

- OrCAD
- SolidWorks
- Microsoft Azure cloud
- Identity
- Kibana
- Rabbit
- Elastic

Project size

- 2.5 people

Duration

15+
months

From April 2022

Platforms

- Embedded
- Cloud
- Web