

# SMART SOLDERING & DESOLDERING PROFILE FOR REWORK OF ELECTRONIC ASSEMBLIES



Mastery in  
Software  
Engineering



## Key Facts



Industry: Industrial Manufacturing



Team Size: 2 People



Duration: 6+ Years (ongoing)



Technologies:

- .NET, WPF.NET, MahApps, VuePress, MVVMLight



Services:

- Software Development
- Software Architecture
- Manual Testing
- Automatic Testing
- Maintenance
- Deployment



Trends:

- Industrial Control System

## Highlights

- The touch-enabled interface provides easy access to all functions (soldering and desoldering of components, placement of new components, removal of old solder, etc.).
- Improved calibration process and increased speed and accuracy during the placement procedure.
- Follows Industry 4.0 standards as it allows the user to create protocols and analysis of results.





## Solution

The manufacturing software development team at Fortech re-built from scratch a tailored application used to control rework stations. To enhance our client's rework systems equipped with this software, our engineers focused on two main directions: a straightforward, modern-looking, and touch-friendly UI and improved core functionalities.

The software assists and guides the user through the rework process. Due to the intuitive UI for the end-user the rework station is now easier to use. The application also offers an auto function that creates a soldering and desoldering profile by analyzing data points and temperature sensors.

Our team not only transformed the previous desktop-only application but improved critical core functionalities:

- increase the speed and accuracy during the placement procedure.
- simplify and improve the flow of the soldering-desoldering process.
- secure the workspace with a password along with its profiles.
- implement a system that monitors device connection
- implement a mechanism that supports real-time application localization

In the future, the software will support additional device connection and communication protocols (such as HTTP).

## Collaboration

The collaboration started in 2016 when our client, a supplier of industrial solutions for SMD assembly repair, was looking for a software development partner to update a two-decade-old application used to coordinate rework stations.

After a thorough assessment and a cost-efficiency analysis of the existing solution, the development team decided to start from scratch and built an entirely new software. For the design solution, they've chosen .NET's WPF as the requirements included a professional-looking UI and that it could be used by all touch-enabled devices.

Throughout the collaboration, the Agile software development methodology was adopted. It enables the team to focus on the high-priority issues first and meet the client's expectations at every step.

The team at Fortech now works on the entire software suite for our client. This also includes software for precise dispensing devices control and editing and processing software.

## Client Benefits

Major improvements of the core functionalities in terms of speed and accuracy from the previous software version.

User documentation is available online (*static web pages are created with VuePress and uploaded to the project's GitHub repository*).



Long-term collaboration with a dedicated team.





# ABOUT FORTECH

Fortech is a top Romanian software development company headquartered in Cluj-Napoca. With a workforce of 1150+ people, Fortech has been repeatedly recognized by Deloitte, IAOP®, EY, and Forbes for its fast-growing, entrepreneurial journey.

With expertise and a strategic focus across healthcare, financial services, automotive sectors, and more, we cover the end-to-end software life-cycle development to deliver the innovation, scalability, quality and speed our clients need.

Our approach to software engineering combines strong technology and process know-how, Agile delivery methods, and a blend of code quality practices and metrics refined in almost two decades. Since 2003, over two hundred fifty clients chose Fortech as their tech partner.

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