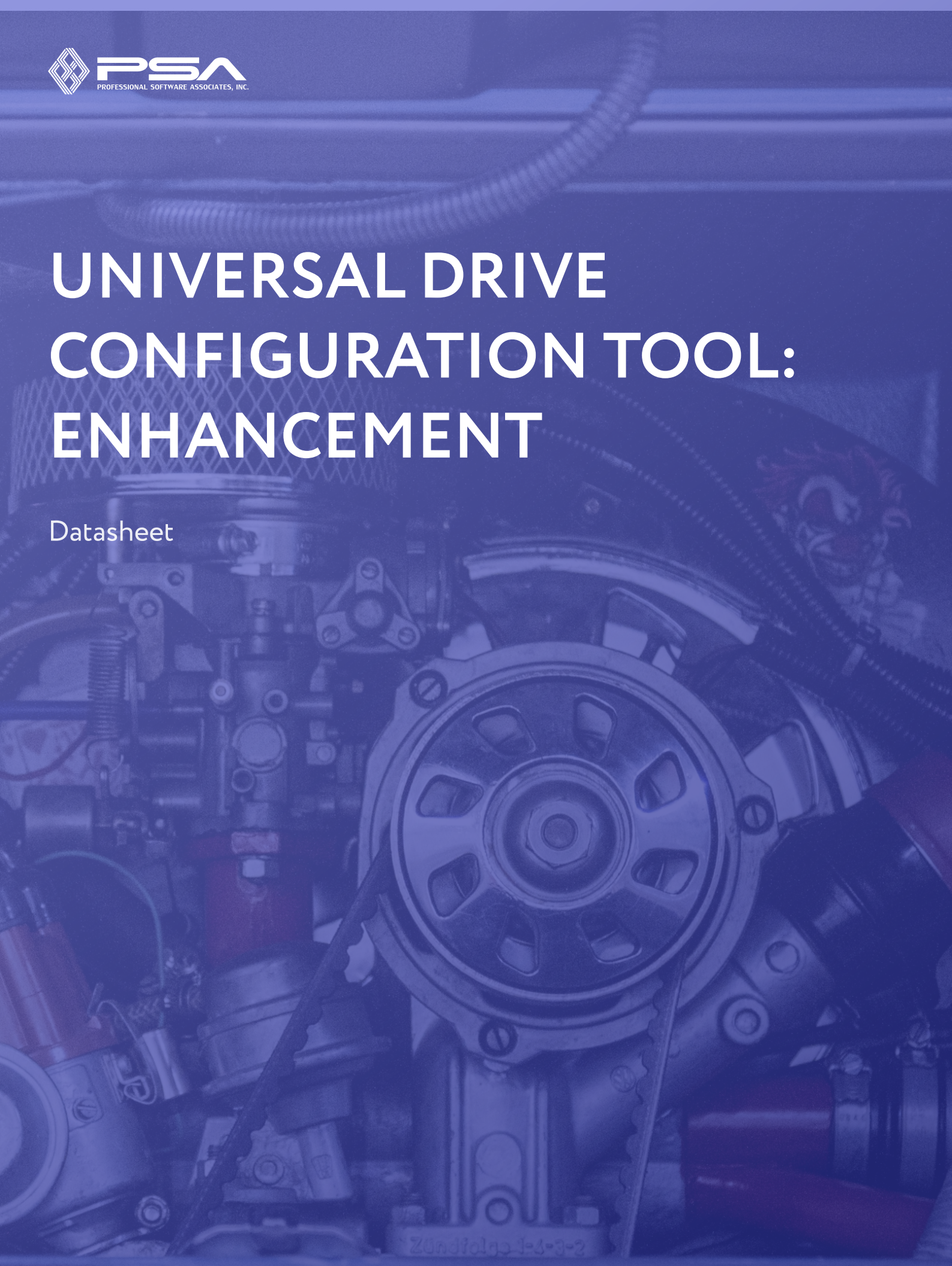
PSA
PROFESSIONAL SOFTWARE ASSOCIATES, INC.

# UNIVERSAL DRIVE CONFIGURATION TOOL: ENHANCEMENT

Datasheet



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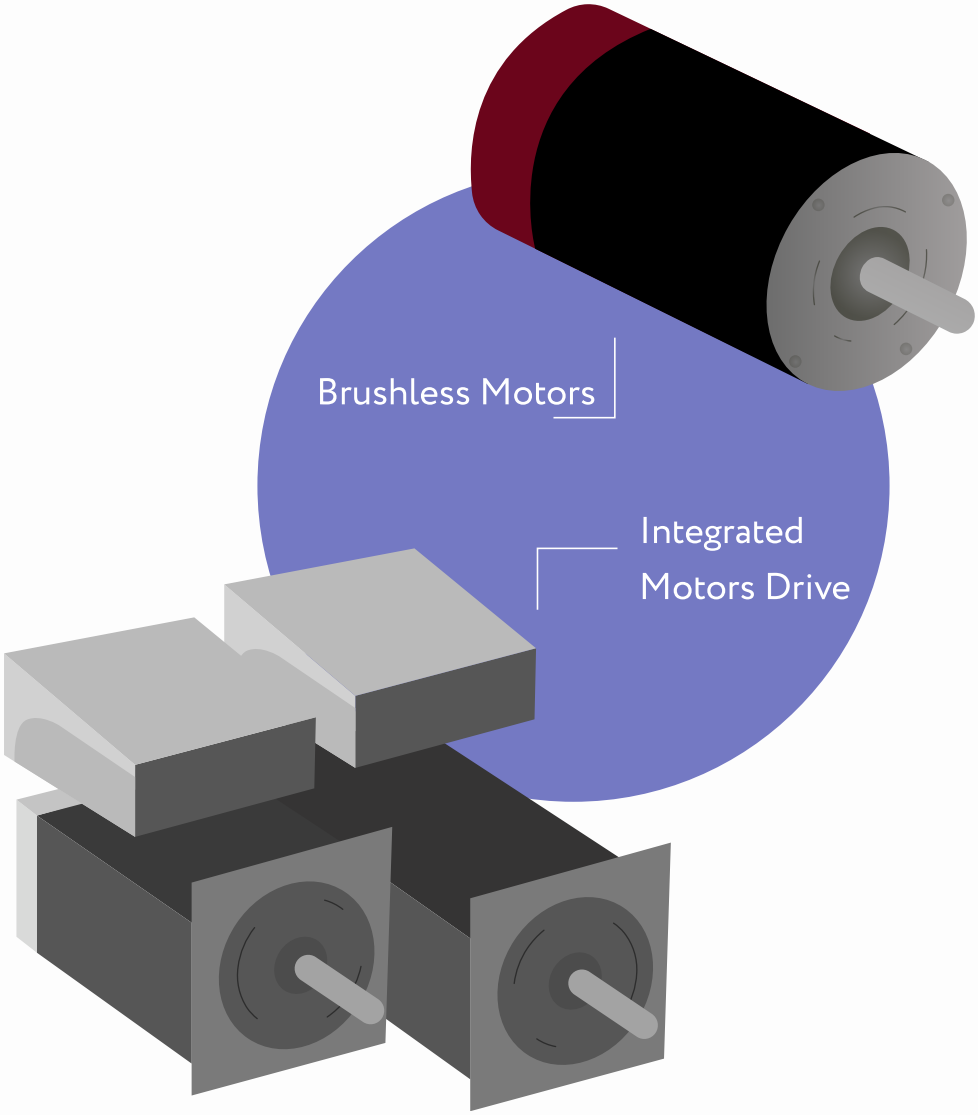
# Project objective

Expand the scope of the application and functionality of the drive configuration tool to meet the customers' industrial requests. We needed to enhance a new generation of software used for configuration of the universal drive to coordinate the performance of various motor types.



# Result

Thanks to improved functionality and advanced GUI, the enhanced drive configuration tool can serve a wider range of manufacturers and their expanded requests. Developing new features and protocols for the application facilitated the firmware development, and allowed our customer to complete their development scope effectively.

## Scope of work

- Create new templates for new firmware versions
- Implement fulfilling of templates by matching parameters from source version and new parameters with default values from new version
- Implement new parameters conversion according to special processing rules
- Implement reading of connected drive's model number and firmware version
- Create new application with template values according to drive type and version number
- Implement packing and unpacking data in CAN data packets
- Implement functionality of Sending/receiving CAN packets through USB interface
- Implement new Messaging tool allowing user to create custom messages
- Add Unlocking Factory Parameters for Write functionality
- Add support of all parameters in CAN protocol
- Add support of different Vendor ID and Product ID for USB HID according to firmware version
- Add support of 10 new Factory and 50 new User parameters in communicational library
- Add visualization and management of 10 new Factory and  50 new User parameters in GUI
- New drives support
- New page parameters: AUX, CAN, Calibration, Protection
- USB Hardware ID assignments and CAN Hardware ID
- Implementing the possibility to set Open Loop Stepper Standby Time

# About the project

## Technologies

- MS Visual Studio
- C++
- USB HID
- Qt
- QT Creator
- MinGW
- Jenkins
- Git

## Activities

- Requirements clarification
- Software design and development
- Communication library development
- GUI development
- Functional and performance testing

## Platforms

- Windows 7+

## Project size

- 1 Technical Coordinator
- 1 Project Manager
- 3 Software Engineer
- 1 QA Engineer
- 1 Technical Assistant

## Duration

25

25 months
October 2019 – January 2022