Developed Industry 4.0 Enabled Welder With Connectivity, Unprecedented Control, and Position Accuracy

CUSTOMER
Tier-1 North American Welding Machine Manufacturer

SCOPE
Conventional welders with high or crushing weld forces inhibit safe welding of small and fragile parts which are now used extensively across industries. Customer wanted to preserve and grow their market share by manufacturing a future-ready Industry 4.0 ready welder with improved connectivity, control, and accuracy. Customer wanted to leverage Sasken’s software expertise in developing the same.

SOLUTION HIGHLIGHTS
• End-to-end software development of the customer’s Industry 4.0 ready welder with an electro-mechanical advanced actuation system
• Developed TI Sitara-based EtherCAT Master-Slave Communication System on VxWorks7.0
• Developed critical drivers for their customized hardware
• Developed next-gen touch-based HMI from scratch
• Developed end-to-end test automation suite

IMPACT
• Improved welding control by 10%
• Improved position accuracy by 30%
• Enabled 60% savings in operator time
• Industry 4.0/IIoT-enabled, providing access to actionable performance, diagnostic data, supporting production efficiency, and traceability