

# Evoqua

## Value Proposition 1169

Product: UPW system

Industry: semiconductor

Value Proposition: Assembly on skids and testing prior to shipment  
saved time and money

# Complete system for Silanna Semiconductor

- UPW system using municipal water

In 2020 to address Silanna Semiconductor's need for UPW, Evoqua proposed a customized multi-stage solution that would produce UPW from readily available municipal town water. The process was divided into three stages: pre-treatment; primary deionization; and finally, the UPW polishing loop.

The Evoqua team managed all aspects of the project, including design, equipment, installation, commissioning, and servicing, using its in-house technology and expertise. The equipment supplied by Evoqua for the advanced multistage treatment process included Vantage® PTC Multimedia Filtration, Vantage PTC Activated Carbon Filtration, Vantage Reverse Osmosis, Ionpure® CEDI, ATG™ UV - VT TOC reduction system, and SDI polishing mixed beds.

# Optimal Water Efficiency

- Responsible for all key equipment in the UPW system, Evoqua optimized each stage during the design process to ensure optimal performance and water efficiency. However, the COVID-19 pandemic, subsequent lockdowns, and travel restrictions led to significant delays in onsite construction.
- To mitigate these delays, Evoqua provided equipment assembly and factory testing of the process skids prior to shipping. During pre-commissioning, sampling results showed that the system had already achieved one of the key milestones: producing water with a resistivity of 18.1 M $\Omega$ .cm directly from the Ionpure CEDI system. This accomplishment allowed UPW to be directed into the polishing loop for the commissioning of the ATG VT TOC UV system and SDI polishing mixed beds.