



Why the Authorized Source is the Best Solution

Military



The Customer Challenge

Manufacturers face significant challenges when a critical device becomes obsolete or reaches its "end of life" stage. This scenario almost crippled one transportation manufacturer's nuclear submarine development program.

Octal buffers are vital to numerous military applications. They contain eight discrete buffer amplifiers in a single package, providing logic, speed and drive capabilities, such as memory address drivers, clock drivers, and bus-oriented transmitters and receivers. Logic octal buffers help control a nuclear submarine's nuclear reactor.

Serious difficulties loomed when the transportation manufacturer received an "end of life" notification for logic octal buffers. The company needed to quickly find an alternative source for the control devices to supply its nuclear submarine development program.

It also needed to avoid two potential pitfalls. First, the manufacturer's products needed to meet all military-grade specifications. This meant the components needed to be high-quality and reliable. Acquiring substandard or counterfeit components on the "gray market" wasn't an option.

Second, the company couldn't afford significant costs or delays in production to reengineer or redesign the nuclear reactor hardware or software. The manufacturer needed a drop-in, duplicate replacement for the original, obsoleted components, and fast.

The Rochester Solution

The manufacturer had a long-term, productive partnership with semiconductor manufacturer Rochester Electronics. This gave the manufacturer complete confidence that Rochester Electronics would come through with a viable solution, based on its unmatched capabilities and experience.

Rochester Electronics' solution was to replicate the control devices using the same parts from the original component manufacturer (OCM). It secured the necessary wafers, die and intellectual property needed from the OCM as part of the end-of-life manufacturing agreement. Rochester Electronics developed a drop-in replacement of the original components – in the required military-grade packages – in less than 30 weeks, including the time required for the test program through the first-time build. Rochester further saved time by packaging the parts for the program to easily distribute the parts to design teams.

Rochester Electronics' ability to replicate the parts as drop-in replacements saved hundreds of thousands of dollars in engineering expenses for board replacements, redesigns, and requalifications of the submarine nuclear reactors. Without Rochester Electronics' quick, high-quality work, the program could have been without vital logic control components for existing and developing projects, setting projects back an unacceptable 12 to 18 months at minimum.

Many transportation manufacturers are facing supply chain disruption challenges as semiconductors embedded in critical systems are being obsoleted. These companies turn to Rochester Electronics to ensure a continuous, authorized source of supply for both active and end-of-life semiconductors.

About Rochester Electronics

Rochester Electronics is the world's largest continuous source of semiconductors—100% Authorized by over 70 leading semiconductor manufacturers. As an original manufacturer stocking distributor, Rochester has over 15 billion devices in stock encompassing more than 200,000 part numbers, providing the world's most extensive range of end-of-life (EOL) semiconductors and broadest range of active semiconductors. As a licensed semiconductor manufacturer, Rochester has manufactured over 20,000 device types. With over 12 billion die in stock, Rochester has the capability to manufacture over 70,000 device types. Rochester offers a full range of manufacturing services including Design, Wafer Processing, Assembly, Test, Reliability, and IP Archiving providing single solutions through to full turnkey manufacturing, enabling faster time-to-market. Rochester is The Semiconductor Lifecycle Solution™. No other company compares to the breadth of Rochester's product selection, value-added services, and manufacturing solutions.

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