



# MICROCHIP USA SOLVES AN OBSOLETE XILINX FPGA CHALLENGE

*Securing a two-year FPGA supply program through creative sourcing, accredited rework, and independent testing.*

## ► CLIENT

Supply Chain Manager in the Weather Intelligence Industry

## ► CHALLENGE

Obsolete Xilinx FPGA (Virtex UltraScale+) required for long-term production with limited availability through authorized channels.

## ► SOLUTION

Open-market sourcing, lead reballing, accredited third-party testing, phased qualification, and excess inventory buyback.

## RESULTS

- Secured a two-year FPGA supply program
- Reduced lead time by 28 weeks
- Provided 70% in cost savings compared to authorized distributor pricing
- Maintained production continuity without compromising quality standards
- Generated additional working capital through excess inventory buyback

# THE CHALLENGE

The client's hardware platform depended on an obsolete Xilinx Virtex UltraScale+ FPGA as a critical component. As production requirements continued beyond the device's availability through authorized distribution channels, the company faced an increasingly complex supply chain challenge. The FPGA had become difficult to source in sufficient quantities and at a viable cost. Extended lead times further threatened the client's ability to maintain production schedules and support long-term manufacturing commitments.

## **Quality and Compliance Requirements**

The client required complete confidence that any alternative sourcing strategy would meet its rigorous quality, reliability, and qualification standards. Any solution would need to provide traceability and assurance without introducing additional risk into the supply chain.

## **Manufacturing Constraints**

Most of the available inventory on the open market consisted of non-leaded BGA devices, while the client's established manufacturing process required leaded components to remain compatible with existing assembly, soldering, and reflow specifications. Transitioning to non-leaded devices would have required process modifications, additional qualification efforts, and potential production delays, making it an undesirable option.

## **Limitations of Traditional Sourcing Channels**

Conventional procurement channels were unable to deliver a solution that addressed all of the client's requirements. The company needed a sourcing partner capable of balancing inventory availability, cost control, lead-time mitigation, quality assurance, and manufacturing compatibility.

# THE SOLUTION

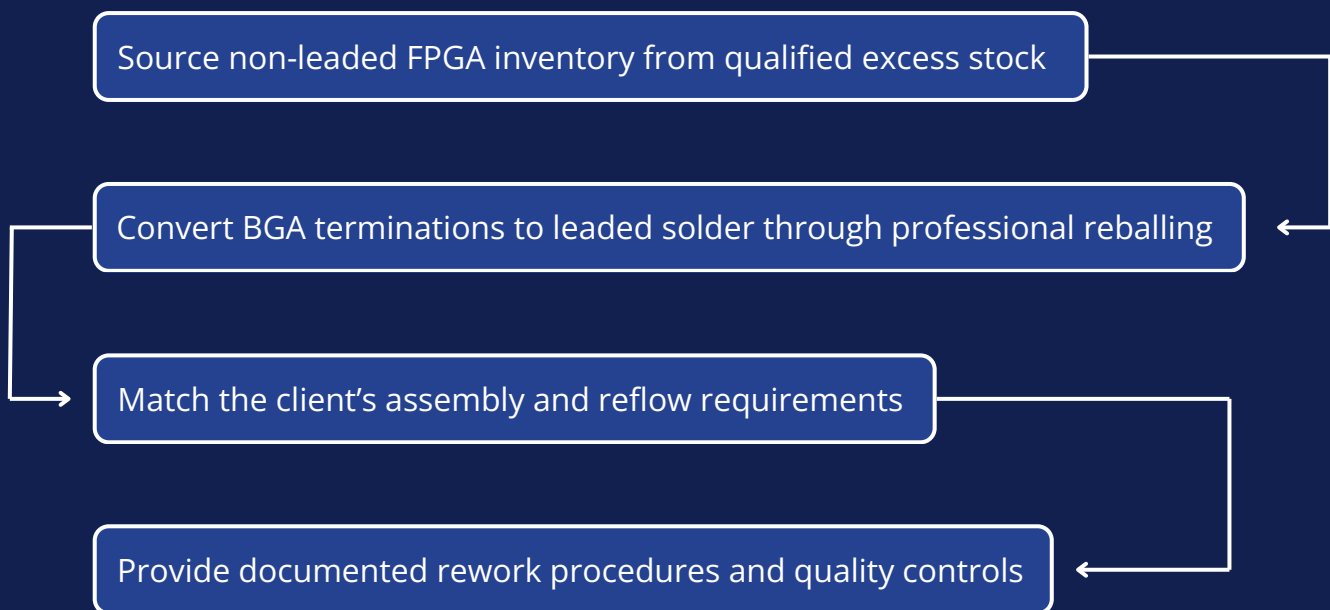
- **OPEN MARKET SOURCING & LEAD REBALLING**
- **INDEPENDENT TESTING**
- **SAMPLE QUALIFICATION**
- **EXCESS INVENTORY BUYBACK**

# OPEN MARKET SOURCING & LEAD REBALLING

Microchip USA sourced qualified excess inventory of the required Xilinx FPGA through our vetted global supply network. Rather than purchasing the significantly more expensive leaded versions available on the market, we identified a cost-saving alternative by sourcing more readily available unleaded BGA devices.

To meet the client's manufacturing specifications, we managed a specialized lead reballing program in partnership with Global ETS, an internationally accredited electronics testing, inspection, and rework facility. By converting lower-cost unleaded devices to leaded configurations, we delivered components fully compatible with the client's existing assembly and reflow requirements, eliminating costly redesigns while significantly reducing procurement costs.

## ► THE PROCESS



*By leveraging reballing services, Microchip USA accessed a lower-cost supply pool that met production requirements while reducing the cost of sourcing leaded FPGAs.*

# INDEPENDENT TESTING BEFORE AND AFTER IMPORT

To ensure quality and authenticity throughout the supply chain, Microchip USA implemented a dual-stage testing process with trusted third party testing partners.

## ► PRE-IMPORT TESTING

- Counterfeit detection
- Electrical functionality testing
- Visual and physical inspection
- Verification against applicable industry and IPC standards

## ► POST-IMPORT TESTING

After import, the components underwent a second round of testing and inspection to verify condition and functionality following international transit.

This two-stage verification process established documented quality checkpoints at both ends of the supply chain, providing the client with independent validation before the components entered production.

## ► LAB PARTNERS & CERTIFICATIONS

Microchip USA partners with industry-leading third-party testing laboratories:

- White Horse Laboratories
- Global ETS

Lab Partner Certifications:

- |            |             |                       |
|------------|-------------|-----------------------|
| • AS6171   | • ISO 17025 | • QTSL                |
| • AS9120   | • ISO 1725  | • AS9100              |
| • GIDEP    | • ANAB      | • DLA Lab Suitability |
| • ISO 9001 | • ILAC      | • ANSI/ESD S20.20     |

# SAMPLE QUALIFICATION PROGRAM

Before committing to the full production schedule, Microchip USA supplied qualification samples for evaluation. The client conducted its internal validation process, testing the reballed Virtex UltraScale+ components within actual production assemblies and operating environments.

Only after the samples successfully met all performance requirements did the structured long-term supply agreement proceed.



*This phased approach minimized risk and provided confidence that the solution would perform as intended in production.*

## EXCESS INVENTORY BUYBACK

As part of the partnership, Microchip USA also purchased the client's excess electronic component inventory.

### ► BENEFITS

- Reduced carrying costs
- Freed up warehouse space
- Improved inventory efficiency
- Converted surplus inventory into working capital

Microchip USA served as a strategic supply chain partner by delivering value through both proactive sourcing solutions and effective inventory management strategies.

# RESULTS

Microchip USA successfully delivered a complete supply solution that addressed the client's production, quality, and financial objectives.

## ► COST SAVINGS



## ► LEAD TIME IMPROVEMENT



*By leveraging available market inventory and coordinating rework services, **Microchip USA reduced lead time by 28 weeks.***

## ► PRODUCTION CONTINUITY

The program enabled the client to:

- Secure a two-year supply schedule
- Qualify an alternative sourcing strategy
- Maintain uninterrupted production
- Receive independently tested and verified components
- Reduce procurement costs while maintaining quality standards

# KEY TAKEAWAYS

## ► CREATIVE SOURCING OFFERS SIGNIFICANT SAVINGS

Authorized channels are not always the only path to a qualified supply solution. Open-market sourcing combined with rigorous testing can deliver substantial cost and lead-time advantages.

## ► LEAD REBALLING EXPANDS AVAILABLE INVENTORY

Professional lead reballing enables manufacturers to utilize inventory that would otherwise be incompatible with existing assembly requirements, significantly expanding sourcing options.

## ► QUALIFICATION REDUCES RISK

A sample-first qualification strategy provides confidence when introducing alternative sourcing methods into production environments.

## ► INDEPENDENT DISTRIBUTORS DELIVER STRATEGIC VALUE

Beyond component sourcing, independent distributors can provide inventory buybacks, testing coordination, rework management, logistics support, and long-term supply planning.

# ABOUT MICROCHIP USA

Microchip USA is a global full-line supplier that helps companies overcome complex supply chain challenges involving obsolete, allocated, and long-lead-time electronic components. Through flexible, compliant, and cost-effective sourcing strategies, we help customers maintain production continuity.

## ► LEARN MORE

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