Xilinx Receives QML Certification

The Defense Supply Center Columbus (formerly DESC) has awarded Xilinx transitional certification to MIL-PRF-38535 Qualified Manufacturer Listing (QML). As with our ISO 9000 certification, QML demonstrates our status as a proven, world-class supplier of programmable logic.

About the QML Program

The QML program involves the certification of a quality and manufacturing system applicable to both military and commercial products — a "dual-use" system. Developed in 1988 at the direction of the Defense Science Board, QML calls for the use of "best commercial practices" for manufacturing and testing, allowing the supplier to optimize the manufacturing, assembly, screening and test flows. The QML certification is basically a validation that the company is well-managed and technically sound enough to be "world class" with minimal government interference. As a result, we have greater flexibility in controling the ways that we qualify, manufacture and test our military products.

Suppliers new to the QML program, such as Xilinx, are awarded "transitional" certification as they move from MIL-STD-883 to QML. It is our target to achieve full QML status before the end of 1997, but we will begin operating as a QML supplier immediately.

QML and MIL-STD-883

Xilinx has been qualified to MIL-STD-883 since 1988, and we have been a very active supporter of the Standard Microcircuit Drawing (SMD) Program. Under MIL-STD-883, we have been operating under a system that specifies the manufacturing requirements for our military products. For example, these requirements include temperature cycling and acceleration tests, and full electrical testing both before and after a "burn-in" period. These requirements apply to all products that we supply as SMD-qualified; **each individual product** is subject to the standard's screening and qualification requirements.

The QML program works to ensure the same high quality levels as MIL-STD-833 without all of its onerous testing requirements. The QML program focuses on the generic qualification of an envelope of processes and materials, rather than individual products. It allows for the use of pertinent existing military and commercial reliability data, statistical process controls (SPC), and in-process monitors. In short, the QML program encourages the use of the "best commercial practices" that are commensurate with military performance, quality and reliability.

Benefits of the QML Program.

The benefits of being a QML supplier are significant, both to Xilinx and our users.

➤ ***More Rapid Product Introductions*** — Historically, the MIL-STD-883 standards have caused a significant time lag between the release of new commercial products and their military/hi-rel versions. Under QML, this time lag will be greatly reduced, if not eliminated entirely.

➤ ***Improved Manufacturing Efficiency*** — Since we now have the ability to begin optimizing military screening previously mandated by MIL-STD-883, we will become a more efficient and cost-effective supplier to the military/hi-rel market.

➤ ***Access to Military Programs Requiring QML Product*** — There are some military programs that require the use of QML parts. Xilinx programmable logic solutions will now be available for those programs.

➤ ***Greater Access to New Markets*** — Since the QML program is based on the concept of "best commercial practices," the opportunity exists for Xilinx to explore the possibilities of using commercial pack-

aging technology (i.e., plastic packages) for use in high-reliability applications. More work is required in this area, but we now have the basis for evaluation.

How the program will be implemented

Our QML certification encompasses manufacturing and test processes at Xilinx, Seiko-Epson (wafer fabrication) and Anam Philippines (assembly). Consequently, all of our current Standard Microcircuit Drawing (SMD) products will be immediately transitioned to QML. We will begin marking our SMD parts with a "Q" to indicate QML. SMD documents will be updated to reflect our QML status. The SMD program will continue

— as we introduce new products, they will be included in the SMD program as QML-certified, rather than MIL-STD-883 certified.

Because many of the new products that we intend to introduce for the military/hi-rel market will be produced at another foundry, United Microelectronics Corp. (UMC), it is our intention to seek QML certification for this facility by the end of 1997.

While other manufacturers are abandoning their military/hi-rel users, the participation of Xilinx in the QML program is one more demonstration of our strong commitment to support military and high-reliability applications, as well as a testament to the quality of Xilinx processes and products. ◆