# QPRO™ QML Certified FPGAs

**X**ilinx is the leading suppler of High-Reliability programmable logic devices to the aerospace and defense markets. These devices are used in a wide range of applications such as electronic warfare, missile guidance and targeting, RADAR, SONAR, communications, signal processing, avionics, and satellites. The Xilinx QPRO family of ceramic and plastic QML products (Qualified Manufacturers Listing), certified to MIL-PRF-38585, provide you with advanced programmable logic solutions for next generation designs, and include select products that are radiation hardened for use in satellite and other space applications.

The Xilinx QPRO family addresses the issues that are critical to the aerospace and defense market:

- **Q**ML/Best commercial practices. Commercial manufacturing strengths result in more efficient process flows.

- **P**erformance-based solutions, including cost-effective plastic packages.

- **R**eliability of supply. Controlled mask sets and processes insure the same quality devices, every time, without variation, which remain in production for an extended time.

- **O**ff-the-shelf ASIC solutions. Standard devices readily available, no need for custom logic and gate arrays.

Being certified to MIL-PRF-35835 QML, complemented by ISO-9000 certification, results in an overall product quality platform that makes Xilinx a world-class supplier of programmable logic devices. You can confidently design with Xilinx for High-Reliability systems with the assurance that you are getting unsurpassed quality and reliability, and a long-term commitment to the aerospace and defense market. **Σ**

See www.xilinx.com/products/hirel_qml.htm for more information.

### QPRO QML-Certified PROMs

| Device | Density | DD8 | SO20 | CC44 | PC44 |
|---|---|---|---|---|---|
| | | Package | | | |
| XC1736D | 36Kb | X | | | |
| XC1765D | 64Kb | X | | | |
| XC17128D | 128Kb | X | | | |
| XC17256D | 256Kb | X | | | |
| XQR/XQ 1701L* | 1Mb | | X | X | |
| XQR/XQ 1704L* | 4Mb | | | X | X** |

\* XQR devices are Radiation Hardened.

\*\* XQ devices only.

### FPGA Product Selection Matrix

| DEVICES | KEY FEATURES | Logic Cells | Maximum Logic Gates | Typical System Gate Range | Max. RAM Bits | CLB Matrix | CLBs | Flip-Flops | Max. I/O | Output Drive (mA) | PCI Compliant | 1.8 Volt | 2.5 Volt | 3 Volt | 5 Volt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | DENSITY | | | | | FEATURES | | | | | | |
| XQ4013XL | XC4000 Series: Density Leadership/ High Performance/ SelectRAM Memory | 1368 | 13K | 10K-30K | 18K | 24x24 | 576 | 1536 | 192 | 12/24 | Y | – | – | X | * |
| XQ4036XL | | 3078 | 36K | 22K-65K | 42K | 36x36 | 1296 | 3168 | 288 | 12/24 | Y | – | – | X | * |
| XQ4062XL | | 5472 | 62K | 40K-130K | 74K | 48x48 | 2304 | 5376 | 384 | 12/24 | Y | – | – | X | * |
| XQ4085XL | | 7448 | 85K | 55K-180K | 100K | 56x56 | 3136 | 7168 | 448 | 12/24 | Y | – | – | X | * |
| XQV100 | Virtex Family: Density/ Performance Leadership BlockRAM Distributed RAM SelectI/O 4 DLLs | 2700 | 32K | 72K-109K | 78K | 20x30 | 600 | 2400 | 180 | 2/24 | Y | – | X | I/O | * |
| **XQVR/XQV300 | | 6912 | 83K | 176K-323K | 160K | 32x48 | 1536 | 6144 | 316 | 2/24 | Y | – | X | I/O | * |
| **XQVR/XQV600 | | 15552 | 187K | 365K-661K | 312K | 48x72 | 3456 | 13824 | 512 | 2/24 | Y | – | X | I/O | * |
| **XQVR/XQV1000 | | 27648 | 332K | 622K-1,124K | 512K | 64x96 | 6144 | 24576 | 512 | 2/24 | Y | – | X | I/O | * |

\* I/Os are tolerant
\*\* XQR and XQVR devices are Radiation Hardened
X = Core and I/O voltage
I/Os = I/O voltage supported