QML-Certified FPGAs and PROMs

The Xilinx QPro family of Radiation Hardened FPGAs and PROMs are finding homes in many new satellite and space applications. Both the XQR4000XL and XQVR Virtex products are being designed into space systems that will utilize reconfigurable technology. Numerous communications and GPS satellites, space probe, and shuttle missions are included on the growing list of programs that will be flying these devices.

The Virtex QPro family of High Reliability products is experiencing a high degree of success in the defense market. As designers find it more and more difficult to find components suitable for the harsh environments seen by defense systems, they are discovering that they can incorporate the functions of obsolete parts into Virtex QPro products. This has the added long term advantage of significantly reducing the costs of future re-qualifications, because their systems can retain consistent form, fit, and function through the use of Virtex QPro FPGAs. This cannot be achieved with costly and inflexible ASICs or custom logic.

Please visit http://www.xilinx.com/products/hirel_qml.htm for all the latest information about these products, including some new applications notes.

FPGA Product Selection Matrix

		DENSITY							FEATURES						
Device	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
**XQR/XQ4013XL	XC4000 Series: Density Leadership/ High Performance/ SelectRAM Memory	1,368	13K	10K-30K	18K	24x24	576	1,536	192	12/24	Y	–	–	X	*
**XQR/XQ4036XL		3,078	36K	22K-65K	42K	36x36	1,296	3,168	288	12/24	Y	–	–	X	*
**XQR/XQ4062XL		5,472	62K	40K-130K	74K	48x48	2,304	5,376	384	12/24	Y	–	–	X	*
XQ4085XL		7,448	85K	55K-180K	100K	56x56	3,136	7,168	448	12/24	Y	–	–	X	*
XQV100	Virtex Family: Density/ Performance Leadership BlockRAM Distributed RAM SelectI/O 4 DLLs	2,700	32K	72K-109K	78K	20x30	600	2,400	180	2/24	Y	–	X	I/O	*
**XQVR/XQV300		6,912	83K	176K-323K	160K	32x48	1,536	6,144	316	2/24	Y	–	X	I/O	*
**XQVR/XQV600		15,552	187K	365K-661K	312K	48x72	3,456	13,824	512	2/24	Y	–	X	I/O	*
**XQVR/XQV1000		27,648	332K	622K-1,124K	512K	64x96	6,144	24,576	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

(1) Selected XQ4000E/EX devices also available

QPRO QML-certified PROMs

		Package			
Device	Density	DD8	SO20	CC44	VQ44
XC1736D	36Kb	X			
XC1765D	64Kb	X			
XC17128D	128Kb	X			
XC17256D	256Kb	X			
XQR/XQ1701L*	1Mb		X	X	
XQR/XQ18V04*	4Mb			X	X**

* XQR devices are Radiation Hardened.
** XQ devices only.