

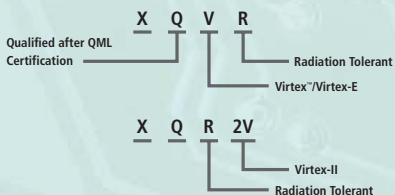
Aerospace & Defense FPGAs

		Device	SMD	Core Voltage	Slices (1)	MULTs	BRAM bits	Configuration bits	Clock DLLs/DCMs	Max I/Os	Manufacturing Grades	Packages	Total Ionizing Dose (krad)	
Defense QPRO FPGAs	QPro Virtex-II Pro	XQ2VP40	None	1.5V	19,392	192	3,456K	15.56M	8	804	N	FG676, FF1152	—	
		QPro Virtex-II	XQ2V1000	TBD	1.5V	5,120	40	720K	3,987K	8	328	N	FG456, BG575 (6)	—
			XQ2V3000	5962-02530	1.5V	14,336	96	1,728K	10,248K	12	516	N, M, B	BG728, CG717 (2) (6)	—
			XQ2V6000	TBD	1.5V	33,792	144	2,592K	21,337K	12	824	M	CF1144 (3) (6)	—
	QPro Virtex-E		XQV600E	None	1.8V	6,912	—	288K	3,869K	8	316	N	BG432	—
			XQV1000E	None	1.8V	12,288	—	384K	6,433K	8	404	M, N	BG560, CG560 (4)	—
			XQV2000E	None	1.8V	19,200	—	640K	9,922K	8	804	N	BG560, FG1156	—
		QPro Virtex		XQV100	None	2.5V	1,200	—	40K	763K	4	180	M, N	PQ240, BG256, CB228 (5)
			XQV300	5962-99572	2.5V	3,072	—	64K	1,711K	4	316	M, N, B	PQ240, BG352, BG432, CB228	—
			XQV600	5962-99573	2.5V	6,912	—	96K	3,523K	4	316	M, N, B	HQ240, BG432, CB228	—
	XQV1000	5962-99574	2.5V	12,288	—	128K	5,984K	4	404	M, N, B	BG560, CG560 (4)	—		
Aerospace QPRO-R Radiation Tolerant FPGAs	QPro-R Virtex-II	XQR2V1000	TBD	1.5V	5,120	40	720K	3,987K	8	328	R	FG456, BG575	200	
			XQR2V3000	5962R02530	1.5V	14,336	96	1,728K	10,248K	12	516	R, M, V	BG728, CG717 (2)	200
			XQR2V6000	TBD	1.5V	33,792	144	2,592K	21,337K	12	824	H	CF1144 (3)	200
	QPro-R Virtex		XQVR300	5962R9957201	2.5V	3,072	—	64K	1,711K	4	162	M, V, B	CB228	100
			XQVR600	5962R9957301	2.5V	6,912	—	96K	3,523K	4	162	M, V, B	CB228	100
			XQVR1000	5962R9957401	2.5V	12,288	—	128K	5,984K	4	404	M, V, B	CG560 (4)	100

Notes:

- (1) Each slice contains two 4-input LUTs, two flip-flops, carry logic and other features.
- (2) The BG728 and CG717 packages are footprint / pin compatible
- (3) The CF1144 and FF1152 packages are footprint / pin compatible
- (4) The CG560 and BG560 packages are footprint / pin compatible
- (5) The HQ240 and the PQ240 packages are footprint / pin compatible
- (6) Call Factory for Ceramic Package Availability

Device Nomenclatures



Aerospace & Defense Configuration PROMs

		Device	SMD	Core Voltage (1)	Storage Bits	Manufacturing Grades	Packages (2)	Guaranteed Total Ionizing Dose (krad)
Defense QPRO Configuration PROMs	QPro PROMs	XQ17V16	None	3.3V	16M	M, N	CC44, VQ44	—
		XQ18V04	None	3.3V	4M	N	VQ44	—
Aerospace QPRO-R Radiation Tolerant Configuration PROMs	QPro-R PROMs	XQ1701L	None	3.3V	1M	M, V	CC44	50
		XQR17V16	None	3.3V	16M	M, V, R	CC44, VQ44	50
		XQR18V04	None	3.3V	4M	M, V	CC44	30/10 (3)

Notes:

- (1) Xilinx Configuration PROMs have adjustable IO voltages for compatibility with all Xilinx FPGAs
- (2) The CC44 and PC44 packages are footprint / pin compatible
- (3) 18V04 TID is 10krads for reprogramming circuitry; 30 krads for data retention

Manufacturing Grades

<http://www.xilinx.com/products/milaero/rpt003.pdf>

Grade	Description	Temperature
V	QPRO-Plus Radiation Tolerant Military Ceramic	Tc = -55C to +125C
H	QPRO-FCC Flip-Chip Radiation Tolerant Ceramic	Tj = -55C to +125C
R	QPRO-Plus PEM Radiation Tolerant PEM Military Plastic	Tj = -55C to +125C
B	SMD Radiation Tolerant and Non-RT SMD Military Ceramic	Tc = -55C to +125C
N	Military Plastic	Tj = -55C to +125C
M	Military Ceramic	Tc = -55C to +125C
I	Industrial Plastic	Tj = -40C to +100C