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Xilinx is the leading supplier of high reliability programmable logic devices to the aerospace and defense markets. These devices are used in a wide variety of applications such as electronic warfare, missile guidance and targeting, RADAR, SONAR, communications, signal processing, aerospace, and avionics. The Xilinx QPRO family of ceramic and plastic QML products (Qualified Manufacturers Listing), certified to MIL-PRF-38535, provide you with advanced programmable logic solutions for next generation designs.

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

- **QML/Best Commercial Practice-** Commercial manufacturing strengths result in more effective process flows.
- **Performance-based Solution -** Cost effective plastic hermetic packages.
- **Reliability of Supply -** Controlled mask sets and processes insure that you receive quality devices, every time, without variation, which remain in production over the long term.
- **Off-the-Shelf ASIC Solutions -** Devices are readily available.

Unmatched Hi-Rel Product Offering

Xilinx offers a wide variety of devices, delivering the fastest and biggest Hi-Rel devices available. Products up to 130,000 system gates are available today, with even higher densities to come. Xilinx offers multiple product families to allow you to select the right device to meet your design requirements.

This broad range of devices is available in a wide variety of speed and package options. Both military temperature and

full MIL-PRF-38535 QML/SMD versions are available as standard, off-the-shelf products, in through-hole and surface mount hermetic packages and plastic packages.

Radiation Hardened Products

Xilinx also offers a family of radiation hardened products for space and satellite applications. With densities up to 130,000 systems gates, these devices have guaranteed total ionizing dose of 60K Rad(Si), are latch-up immune and have low soft upset rates. They are guaranteed to meet full electrical specifications over -55°C to +125°C.

Committed to the Hi-Rel Market

Xilinx understands that you need to be able to count on your Hi-Rel supplier. Xilinx is committed to our customers and the Hi-Rel market for the long-term, and we are continually expanding our Hi-Rel support and product portfolio. The unique capabilities of the Xilinx FPGA solution provide increased design flexibility, field-upgradability and system feature integration, while eliminating the NREs, lead-time and inventory problems of custom logic and gate arrays. Now more than ever, Xilinx is your Hi-Rel logic solution.

Xilinx Hi-Rel and Radiation Hardened Products

Table 1 summarizes Xilinx high density, high performance and radiation hardened product offerings. The following pages contain a complete listing of current Xilinx QML/SMD (Standard Microcircuit Drawings) devices and “B” grade equivalents. Architectural descriptions for these FPGA products can be found in Chapter 4. For additional information, contact the nearest Xilinx Sales Office or Sales Representative.

Table 1: High Density High Performance and Radiation Hardened Products

Family	Devices	Features
XQ4000/E/EX	XQ4003A XQ4005/E XQ4010/E XQ4013/E XQ4025E XQ4028EX	Highest Density/Most Features Family <ul style="list-style-type: none"> • 3,000-28,000+ gates • Up to 256 user-definable I/Os • Extensive system features include on-chip user RAM, built-in 1149.1 test support and fast carry logic
XQ4000XL	XQ4013XL XQ4036XL XQ4062XL	Most Advanced Family <ul style="list-style-type: none"> • Up to 130,000 system gates • 3.3 V, 5V-compatible I/O
XQR4000XL	XQR4013XL XQR4036XL XQR4062XL	Radiation Hardened Family <ul style="list-style-type: none"> • Up to 130,000 System Gates • 60K Rads total dose, latchup immune

XC1700 Products (Serial PROMS)

SMD Number	XC1700 Products (Serial PROMS)	Speed	Package	Mark Loc
5962-9471701MPA	XC1765DDD8B		DD8	TOP
5962-9561701MPA	XC17256DDD8B		DD8	TOP
5962-9951401QXA	XQ1701LB		SO20	TOP
5962-9951401QYA	XQ1701LB		CC44	TOP

XC3000 Products¹

SMD Number	Equivalent "B" Grade P/N	Speed	Package	Mark Loc
5962-8994801MXC	XC3020-50PG84B ²	-50	PG84	TOP
5962-8994802MXC	XC3020-70PG84B ²	-70	PG84	TOP
5962-8994803MXC	XC3020-100PG84B	-100	PG84	TOP
5962-8994801MNC	XC3020-50CB100B ²	-50	CB100	BASE
5962-8994802MNC	XC3020-70CB100B ²	-70	CB100	BASE
5962-8994803MNC	XC3020-100CB100B	-100	CB100	BASE
5962-8994801MMC	XC3020-50CB100B ²	-50	CB100	LID
5962-8994802MMC	XC3020-70CB100B ²	-70	CB100	LID
5962-8994803MMC	XC3020-100CB100B	-100	CB100	LID
5962-8971301MXC	XC3042-50PG84B ²	-50	PG84	TOP
5962-8971302MXC	XC3042-70PG84B ²	-70	PG84	TOP
5962-8971303MXC	XC3042-100PG84B	-100	PG84	TOP
5962-8971301MZC	XC3042-50PG132B ²	-50	PG132	TOP
5962-8971302MZC	XC3042-70PG132B ²	-70	PG132	TOP
5962-8971303MZC	XC3042-100PG132B	-100	PG132	TOP
5962-8971301M9C	XC3042-50CB100B ²	-50	CB100	BASE
5962-8971302M9C	XC3042-70CB100B ²	-70	CB100	BASE
5962-8971303M9C	XC3042-100CB100B	-100	CB100	BASE
5962-8971301MMC	XC3042-50CB100B ²	-50	CB100	LID
5962-8971302MMC	XC3042-70CB100B ²	-70	CB100	LID
5962-8971303MMC	XC3042-100CB100B	-100	CB100	LID

XC3000 Products¹

SMD Number	Equivalent "B" Grade P/N	Speed	Package	Mark Loc
5962-8982301MXC	XC3090-50PG175B ²	-50	PG175	TOP
5962-8982302MXC	XC3090-70PG175B ²	-70	PG175	TOP
5962-8982303MXC	XC3090-100PG175B	-100	PG175	TOP
5962-8982301MZC	XC3090-50CB164B ²	-50	CB164	BASE
5962-8982302MZC	XC3090-70CB164B ²	-70	CB164	BASE
5962-8982303MZC	XC3090-100CB164B	-100	CB164	BASE
5962-8982301MTC	XC3090-50CB164B ²	-50	CB164	LID
5962-8982302MTC	XC3090-70CB164B ²	-70	CB164	LID
5962-8982303MTC	XC3090-100CB164B	-100	CB164	LID

Note 1: All devices listed also available as military temperature only.

Note 2: Do not use for new designs (under obsolescence).

XC3100 Products

SMD Number	Equivalent "B" Grade P/N	Speed	Package	Mark Loc
5962-9561001MXC	XC3142A-5PG84B ¹	-5	PG84	TOP
5962-9561002MXC	XC3142A-4PG84B ¹	-4	PG84	TOP
5962-9561001MUC	XC3142A-5PG132B ¹	-5	PG132	TOP
5962-9561002MUC	XC3142A-4PG132B ¹	-4	PG132	TOP
5962-9561001MYC	XC3142A-5CB100B ¹	-5	CB100	BASE
5962-9561002MYC	XC3142A-4CB100B ¹	-4	CB100	BASE
5962-9561001MZC	XC3142A-5CB100B ¹	-5	CB100	LID
5962-9561002MZC	XC3142A-4CB100B ¹	-4	CB100	LID
5962-9561101MXC	XC3190A-5PG175B ¹	-5	PG175	TOP
5962-9561102MXC	XC3190A-4PG175B ¹	-4	PG175	TOP
5962-9561101MYC	XC3190A-5CB164B ¹	-5	CB164	BASE
5962-9561102MYC	XC3190A-4CB164B ¹	-4	CB164	BASE
5962-9561101MZC	XC3190A-5CB164B ¹	-5	CB164	LID
5962-9561102MZC	XC3190A-4CB164B ¹	-4	CB164	LID
5962-9561201MXC	XC3195A-5PG175B ¹	-5	PG175	TOP
5962-9561202MXC	XC3195A-4PG175B ¹	-4	PG175	TOP
5962-9561201MYC	XC3195A-5CB164B ¹	-5	CB164	BASE
5962-9561202MYC	XC3195A-4CB164B ¹	-4	CB164	BASE
5962-9561201MZC	XC3195A-5CB164B ¹	-5	CB164	LID
5962-9561202MZC	XC3195A-4CB164B ¹	-4	CB164	LID

Note 1: Do not use for new designs (under obsolescence).

XC4000 Products¹

SMD Number	Equivalent "B" Grade P/N	Speed	Package	Mark Loc
5962-9471201MXC	XC4003A-10PG120B ²	-10	PG120	TOP
5962-9471202MXC	XC4003A-6PG120B ²	-6	PG120	TOP
5962-9471201MYC	XC4003A-10CB100B ²	-10	CB100	BASE
5962-9471202MYC	XC4003A-6CB100B ²	-6	CB100	BASE
5962-9471201MZC	XC4003A-10CB100B ²	-10	CB100	LID
5962-9471202MZC	XC4003A-6CB100B ²	-6	CB100	LID
5962-9225201MXC	XC4005-10PG156B ²	-10	PG156	TOP
5962-9225202MXC	XC4005-6PG156B ²	-6	PG156	TOP
5962-9225203MXC	XC4005-5PG156B	-5	PG156	TOP
5962-9225201MYC	XC4005-10CB164B ²	-10	CB164	LID
5962-9225202MYC	XC4005-6CB164B ²	-6	CB164	LID
5962-9225203MYC	XC4005-5CB164B	-5	CB164	LID
5962-9225201MZC	XC4005-10CB164B ²	-10	CB164	BASE
5962-9225202MZC	XC4005-6CB164B ²	-6	CB164	BASE
5962-9225203MZC	XC4005-5CB164B	-5	CB164	BASE
5962-9230501MXC	XC4010-10PG191B ²	-10	PG191	TOP
5962-9230502MXC	XC4010-6PG191B ²	-6	PG191	TOP
5962-9230503MXC	XC4010-5PG191B	-5	PG191	TOP
5962-9230501MYC	XC4010-10CB196B ²	-10	CB196	BASE
5962-9230502MYC	XC4010-6CB196B ²	-6	CB196	BASE
5962-9230503MYC	XC4010-5CB196B	-5	CB196	BASE
5962-9230501MZC	XC4010-10CB196B ²	-10	CB196	LID
5962-9230502MZC	XC4010-6CB196B ²	-6	CB196	LID
5962-9230503MZC	XC4010-5CB196B	-5	CB196	LID
5962-9473001MXC	XC4013-10PG223B ²	-10	PG223	TOP
5962-9473002MXC	XC4013-6PG223B	-6	PG223	TOP
5962-9473001MYC	XC4013-10CB228B ²	-10	CB228	BASE
5962-9473002MYC	XC4013-6CB228B	-6	CB228	BASE
5962-9473001MZC	XC4013-10CB228B ²	-10	CB228	LID
5962-9473002MZC	XC4013-6CB228B	-6	CB228	LID

Note 1: All devices listed also available as military temperature only.

Note 2: Do not use for new designs (under obsolescence).

XC4000E Products¹

SMD Number	Equivalent "B" Grade P/N	Speed	Package	Mark Loc
5962-9752201QXC	XC4005E-4PG156B	-4	PG156	TOP
5962-9752201QYC	XC4005E-4CB164B	-4	CB164	BASE
5962-9752201QZC	XC4005E-4CB164B	-4	CB164	LID
5962-9752301QXC	XC4010E-4PG191B	-4	PG191	TOP
5962-9752301QYC	XC4010E-4CB164B	-4	CB196	BASE
5962-9752301QZC	XC4010E-4CB164B	-4	CB196	LID
5962-9752401QXC	XC4013E-4PG223B	-4	PG223	TOP
5962-9752401QYC	XC4013E-4CB228B	-4	CB228	BASE
5962-9752401QZC	XC4013E-4CB228B	-4	CB228	LID
5962-9752501QXC	XC4025E-4PG299B	-4	PG299	TOP
5962-9752501QYC	XC4025E-4CB228B	-4	CB228	BASE
5962-9752501QZC	XC4025E-4CB228B	-4	CB228	LID

Note 1: All devices listed also available as military temperature only.

XQ4000EX Products¹

SMD Number	Equivalent "B" Grade P/N	Speed	Package	Mark Loc
5962-985901QTB	XQ4028EX-4HG240N ²	-4	HG240	TOP
5962-985901QUA	XQ4028EX-4BG352N ²	-4	BG352	TOP
5962-985901QXC	XQ4028EX-4PG299B	-4	PG299	TOP
5962-985901QYC	XQ4028EX-4CB228B	-4	CB228	BASE
5962-985901QZC	XQ4028EX-44CB228B	-4	CB228	LID

Note 1: All devices listed also available as military temperature only.

Note 2: Plastic package.

XQ4000XL Products¹

SMD Number	Equivalent "B" Grade P/N	Speed	Package	Mark Loc
5962-9851301QTB	XQ4013XL-3PQ240N ²	-3	PG240	TOP
5962-9851301QVA	XQ4013XL-3BG256B ²	-3	BG256	TOP
5962-9851301QXC	XQ4013XL-3PG223B	-3	PG223	TOP
5962-9851301QYC	XQ4013XL-3CB228B	-3	CB228	BASE
5962-9851301QZC	XQ4013XL-3CB228B	-3	CB288	LID
5962-9851001QTB	XQ4036XL-3HQ240N ²	-3	HQ240	TOP
5962-9851001QVA	XQ4036XL-3BG352N ²	-3	BG352	TOP
5962-9851001QXC	XQ4036XL-3PG411B	-3	PG411	TOP
5962-9851001QYC	XQ4036XL-3CB228B	-3	PG228	BASE
5962-9851001QZC	XQ4036XL-3CB228B	-3	CB228	LID
5962-9851101QTB	XQ4062XL-3HQ240N ²	-3	HQ240	TOP
5962-9851101QVA	XQ4062XL-3BG432N ²	-3	BG432	TOP
5962-9851101QXC	XQ4062XL-3PG475B	-3	PG475	TOP
5962-9851101QYC	XQ4062XL-3CB228B	-3	CB228	BASE
5962-9851101QZC	XQ4062XL-3CB228B	-3	CB228	LID

Note 1: All devices listed also available as military temperature only.

Note 2: Plastic Package

Revision History

Version	Description
1/98	Version 1.1 -- High-Reliability and QML Military Products, correct erroneous information page 2 "XC3000 Products", delete last page, table - "Mil-PRF-3853 QML, Xilinx M Grade and Plastic Commercial Flows"
11/98	Version 1.2 - Added new products, corrected XC3000, XC4000 products.