FAQ: Substrate Material Change for Virtex®, Virtex®-II, Virtex®-II Pro, Virtex®-4 and Virtex®-5 FPGA Packages

Summary

The purpose of this notification is to communicate FAQs related to substrate material change for Virtex®, Virtex®-II, Virtex®-II Pro, Virtex®-4 and Virtex®-5 FPGA packages.

The manufacturer of the current substrate material is discontinuing production of the substrate material. Therefore, Xilinx qualified new substrate material set to continue supply and shipment of Virtex, Virtex-II, Virtex II-Pro, Virtex-4 and Virtex-5 FPGA packages. This enables Xilinx to better support long-term customer demand. There is no change in the fit, form or function with this change. The new substrate core and build up material have been qualified and shipping in many 7 series, ROHS Lead Free and UltraScale™ packages.

Xilinx will revise the corresponding material declaration data sheet (MDDS) to reflect the new material change (Refer to www.xilinx.com).

FAQs

Q: What is the change?

Substrate material will change.

Q: Why is Xilinx making this change?

The manufacturer of the current substrate material is discontinuing production of the substrate material. Therefore, Xilinx qualified new substrate material set to continue supply and shipment of Virtex, Virtex-II, Virtex II-Pro, Virtex-4 and Virtex-5 FPGA packages as mentioned in **XCN18002**. This enables Xilinx to better support long-term customer demand.

Q: When will this change take effect?

Xilinx will start shipping commercial / industrial “XC” devices 90 days after the PCN release. Estimated Cut-over dates for Defense-grade “XQ” devices are listed below. No delay or exceptions will be allowed once the PCN is released.

Q: Can customer continue with current core/build up material?

No. Substrate material supplier is ending production of current material. There will be no material to continue with current BOM.

Q: Is there any change in shelf life?

No change.

Q: Is there any change in package dimension?

No change.

Q: Is there any change in board mount condition?

No change.

Q: Is there any change in reliability performance?

No change.

Q: Is there any change in coplanarity and/or warpage specification?

No change.

Q: Is there any change in thermal or electrical performance?

No change.

Q: Is there any change in wirebond material or mold material?

No change.

Q: Is there any change in solder ball metallurgy or dimension?

No change.

Q: Where will the new MDDS be available?

Refer to https://www.xilinx.com/ for latest updates.

Q: Will there be a date code cutover during cross shipping?

Commercial / industrial “XC” products – Cross shipping will be done with no cut over date code. Estimated start of cross shipping are mentioned in tables 1 through 5 below.

For Defense-grade “XQ” devices, estimated cut over dates are mentioned in tables 6 through 9 below.

Cut over dates and cross shipping starting months are based on current estimates and subject to change depending on forecast.

Q: Which products are affected?

Refer to tables 1 through 9 below.

Table 1: **Virtex®-II Pro Devices-Packages**

Device	Package-Pin	Estimated cross shipping
XC2VP2	FF(G)672	May 2020
XC2VP4	FF(G)672	May 2020
XC2VP7	FF(G)672	Jan 2019
XC2VP20	FF(G)896	May 2020
XC2VP30	FF(G)896	Jun 2019
XC2VP7	FF(G)896	Dec 2019
XC2VP40	FF(G)1148	Mar 2019
XC2VP50	FF(G)1148	May 2020
XC2VP20	FF(G)1152	Jul 2019
XC2VP30	FF(G)1152	May 2020
XC2VP40	FF(G)1152	May 2020
XC2VP50	FF(G)1152	Sep 2018

Device	Package-Pin	Estimated cross shipping
XC2VP50	FF(G)1517	Jul 2018
XC2VP70	FF(G)1517	Oct 2019
XC2VP100	FF(G)1696	Jul 2018
XC2VP100	FF(G)1704	Mar 2019
XC2VP70	FF(G)1704	Jun 2019

Table 2: **Virtex®-4 Devices-Packages**

Device	Package-Pin	Estimated cross shipping
XC4VSX55	FF(G)1148	Oct 2018
XC4VLX80	FF(G)1148	Oct 2018
XC4VLX60	FF(G)1148	Nov 2018
XC4VLX40	FF(G)1148	Oct 2018
XC4VLX160	FF(G)1148	Jul 2019
XC4VLX100	FF(G)1148	Sep 2018
XC4VFX60	FF(G)1152	Sep 2018
XC4VFX40	FF(G)1152	May 2020
XC4VFX100	FF(G)1152	Feb 2019
XC4VLX100	FF(G)1513	May 2020
XC4VLX160	FF(G)1513	Sep 2019
XC4VLX200	FF(G)1513	Aug 2018
XC4VFX100	FF(G)1517	Oct 2019
XC4VFX140	FF(G)1517	Aug 2018

Device	Package-Pin	Estimated cross shipping
XC4VFX12	FF(G)668	Jan 2019
XC4VLX15	FF(G)668	Oct 2018
XC4VLX25	FF(G)668	Oct 2018
XC4VLX40	FF(G)668	Oct 2018
XC4VLX60	FF(G)668	May 2019
XC4VSX25	FF(G)668	Apr 2019
XC4VSX35	FF(G)668	Oct 2018
XC4VFX20	FF(G)672	Sep 2018
XC4VFX40	FF(G)672	Sep 2018
XC4VFX60	FF(G)672	Sep 2018
XC4VLX15	FF(G)676	Jul 2018
XC4VFX12	SF(G)363	Oct 2018
XC4VLX15	SF(G)363	Oct 2018
XC4VLX25	SF(G)363	Sep 2018

Table 3: **Virtex®-5 Devices-Packages**

Device	Package-Pin	Estimated cross shipping
XC5VTX150T	FF(G)1156	Jul 2018
XC5VFX130T	FF(G)1738	Jul 2019
XC5VFX200T	FF(G)1738	Jan 2019
XC5VLX220T	FF(G)1738	Nov 2018
XC5VLX330T	FF(G)1738	Dec 2018
XC5VSX240T	FF(G)1738	Jun 2019
XC5VTX150T	FF(G)1759	Feb 2019
XC5VTX240T	FF(G)1759	Feb 2019
XC5VFX100T	FF1136	May 2020
XC5VFX70T	FF1136	May 2020
XC5VLX110T	FF1136	Dec 2019
XC5VLX155T	FF1136	May 2020
XC5VLX50T	FF1136	May 2020
XC5VLX85T	FF1136	Sep 2019
XC5VSX50T	FF1136	May 2020
XC5VSX95T	FF1136	Apr 2019
XC5VLX110	FF1153	Jan 2020
XC5VLX155	FF1153	Feb 2019
XC5VLX50	FF1153	Aug 2019
XC5VLX85	FF1153	Feb 2019

Device	Package-Pin	Estimated cross shipping
XC5VFX100T	FF1738	May 2020
XC5VLX110T	FF1738	May 2020
XC5VLX155T	FF1738	Jun 2019
XC5VLX110	FF1760	Nov 2019
XC5VLX155	FF1760	Jul 2018
XC5VLX20T	FF323	Jul 2019
XC5VLX30T	FF323	Feb 2019
XC5VLX30	FF324	Jan 2019
XC5VLX50	FF324	Mar 2019
XC5VFX30T	FF665	Oct 2019
XC5VFX70T	FF665	May 2020
XC5VLX30T	FF665	Dec 2019
XC5VLX50T	FF665	Dec 2019
XC5VSX35T	FF665	May 2020
XC5VSX50T	FF665	Jan 2019
XC5VLX110	FF676	Mar 2020
XC5VLX30	FF676	Jan 2019
XC5VLX50	FF676	Aug 2018
XC5VLX85	FF676	Nov 2018
XC5VLX220	FF(G)1760	Nov 2019
XC5VLX330	FF(G)1760	Nov 2018

Table 4: **Virtex®-4 EasyPath™ Devices-Packages**

Device	Package-Pin	Estimated cross shipping
XCE04L6	FF1148	Nov 2018
XCE04S2	FFG668	Apr 2019
XCE04L10	FF(G)1513	May 2020
XCE04L4	FF(G)1148	Oct 2018
XCE04L8	FFG1148	Oct 2018
XCE04F10	FF(G)1152	Feb 2019

Table 5: **Virtex®-5 EasyPath™ Devices-Packages**

Device	Package-Pin	Estimated cross shipping
XCE05T24T	FFG1759	Feb 2019
XCE05L33	FFG1760	Nov 2018
XCE05L22T	FF(G)1738	Nov 2018
XCE05L11T	FF1136	Dec 2019

Table 6: **Virtex®-Q Defense-grade Devices-Packages**

Device	Package-Pin	Estimated cut over dates
XQV100	BG256	1849

Table 7: **Virtex®-IIQ Defense-grade Devices-Packages**

Device	Package-Pin	Estimated cut over dates
XQ2V1000	FG456	1945
XQ2V1000	BG575	1933
XQ2VP40	FG676	2101
XQ2VP40	FF1152	1837
XQ2VP70	EF1704	1837
XQ2VP70	FF1704	1837

Table 8: **Virtex®-4Q Defense-grade Devices-Packages**

Device	Package-Pin	Estimated cut over dates
XQ4VLX60	EF668	1837
XQ4VLX25	FF668	1929
XQ4VLX40	FF668	1837
XQ4VLX60	FF668	1837
XQL4VLX60	FF668	1837
XQ4VSX35	FF(G)668	1837
XQ4VFX60	EF672	1837
XQL4VFX40	FF672	1901
XQL4VFX60	FF672	1837
XQ4VLX100	FF1148	1917
XQ4VLX160	FF1148	1901
XQ4VLX60	FF1148	1837
XQ4VLX80	FF1148	1837
XQ4VSX55	FF1148	1837

Device	Package-Pin	Estimated cutover dates
XQL4VFX100	FF1152	1837
XQL4VFX60	FF1152	2017
XQ4VFX100	FF(G)1152	1837
XQ4VFX60	FF(G)1152	2017
XQL4VLX200	FF(G)1513	1901
XQ4VFX140	FF1517	1901
XQL4VFX140	FF(G)1517	1901
XQ4VLX25	SF363	1837

Table 9: **Virtex®-5Q Defense-grade Devices-Packages**

Device	Package-Pin	Estimated cut over dates
XQ5VFX70T	EF665	1901
XQ5VSX50T	EF665	1837
XQ5VLX110	EF676	1837
XQ5VLX85	EF676	1837
XQ5VFX100T	EF1136	1921
XQ5VFX70T	EF1136	1921
XQ5VLX110T	EF1136	1849
XQ5VLX155T	EF1136	1901
XQ5VSX95T	EF1136	1837
XQ5VLX110	EF1153	1837
XQ5VFX100T	EF1738	1901
XQ5VFX130T	EF1738	1837
XQ5VLX220T	EF1738	1849
XQ5VLX330T	EF1738	1917
XQ5VLX30T	FF323	1901
XQ5VFX200T	FF1738	1837
XQ5VSX240T	FF1738	1837

Q: How do I find out more?

CNB	CNB@xilinx.com
Customer Operations:	Contact your local customer operations representative
Technical & Quality:	Contact your CQE representative
Procurement related questions:	Contact your local customer operations representative

Revision History

The following table shows the revision history for this document:

Date	Version	Description of Revisions
02/05/2018	1.0	Initial Release

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